Statistical Report on Internet Development in China

(January 2013)

China Internet Network Information Center

Preface

In 1997, state competent departments decided through discussion to let China Internet Network Information Center (CNNIC) organize relevant Internet entities to jointly carry out Internet development survey. Ever since then, CNNIC has published 30 statistical reports on Internet development in China, and this report is the 31st report. Internet has become a key sector that affects the development of our society and economy and changes people's lifestyle. All the reports of CNNIC have witnessed the whole development process of China's soaring Internet industry. With precise and objective data, the reports provide significant basis for government departments and companies to understand the development of Internet in China and make relevant decisions. Therefore, they have attracted much attention from all circles and have been cited widely both at home and abroad.

Since 1998, CNNIC has been issuing the Statistical Report on Internet Development in China every January and July by convention. The continuous survey and study on the scale of Internet users, structural features, access modes and network applications were provided in the 31st report, which follows regular contents and style.

Data collection in this Report also received great support from the government, enterprises and all walks of life. All surveys went smoothly under the guidance of the Ministry of Industry and Information Technology, and data collection of basic resources was completed in time with the close cooperation of Internet organizations, survey websites and media. We hereby express our sincere gratitude to all of them. Meanwhile, we would like to extend our sincere thanks to Internet users who have participated in our 31st statistical survey on Internet development.

China Internet Network Information Center

January 2013

Contents

Abstract

1. Basic Information

◇ By the end of December 2012, China has had 564 million Internet users, with a total of 50.9 million new ones. The Internet penetration rate of 42.1%, a growth of 3.8% compared with the end of 2011.

◇ By the end of December 2012, China has had 420 million mobile Internet users, 64.4 million more than that at the end of 2011. Among all the Internet users, those using mobile phones to access Internet increased from 69.3% at the end of 2011 to 74.5%.

◇ The rural Internet users accounted for 27.6% of the total in China, reaching 156 million, which rose slightly compared with the figure in 2011, with an increase of 19.6 million over the end of 2011.

◇ The ratio of Internet users using desktops dropped to 70.6% by nearly 3% over the end of last year. The ratio of Internet users using laptops dropped slightly to 45.9% compared with the figure at the end of last year. The ratio of Internet users using mobile phones rose quickly from 69.3% to 74.5%.

◇ China had a total of 13.41 million domain names, including 7.51 million ".CN" domain names, a proportion of 56.0%, and 280,000 ".中国" domain names. The total number of websites, namely the number of websites registered by the registrants of website domain names (including accessions both from home and abroad) continued growing, reaching 2.68 million.

◇ By the end of December 2012, the ratio of the interviewed small- and medium-sized enterprises (SMEs) depending on computer-based offices reached 91.3%, and that having access to Internet 78.5%. The penetration rate of fixed broadband hit 71.0%, the proportions of online sale and online purchase 25.3% and 26.5% respectively, and the ratio employing

internet to carry out marketing and promotion 23.0%.

2. Trends and Features

The growth of Internet users continued the slow-down tendency, and mobile phone Internet users kept growing vigorously

In 2012, the Internet penetration rate reached 42.1% in China, rising 3.8% over the previous year. The growth extent further contracted compared with the last year. Mobile phone Internet users hit 420 million, growing at the annual rate of 18.1%. Of all Internet users, the proportion of those using mobile phone to access the Internet kept rising, further strengthening its position as the top Internet access terminal. However, compared with PC Internet users (including both desktops and laptops), the scale of mobile phone Internet users still had a big gap to fill.

The growth rate of .CN domain names attained 112.8%, accounting for more than half of the total number of domain names across China.

By the end of December 2012, China has had a total of 7.51 million .CN domain names, a big increase of 112.8% compared with the same period of last year, accounting for 56.0% of the total number of domain names in the country. The number of .COM domain names hit 4.83 million, accounting for a proportion of 36.0%.

Users of microblog kept growing, and mobile users saw a gradually dominating trend

By the end of December 2012, China has had a total of 309 million microblog users, an increase of 58.73 million. Of the internet users, microblog users accounted for 54.7%, up by 6% over the end of last year. A considerable number of users accessed microblogs and published microposts via mobile phones. By the end of 2012, the mobile phone microblog users has hit 202 million, namely 65.6% of microblog users used their mobile phones to access microblogs.

Online shopping and group shopping kept growing at a high rate

By the end of December 2012, China has had a total of 242 million online shoppers, and the utilization ratio of online shopping rose to 42.9%. Compared with 2011, online shoppers grew by 48.07 million at a rate of 24.8%. Against the background that the growth of Internet users slowed

down gradually, the application of online shopping still kept a momentum of rapid growth. The absolute growth of Internet users outperformed that in 2011, 4% higher than the growth rate in the same period of last year. China had a total of 83.27 million group shopping users, and the utilization ratio rose to 14.8% by 2.2% over the end of the 2011. The number of group shopping users increased by 28.8% across the year, keeping a relatively high growth rate.

E-commerce applications on mobile phones witnesses an all-round significant growth in utilization ratio

E-commerce applications witnessed fast development in the field of mobile phone terminal, growing in an all-sided manner. Compared with 2011, the proportion of mobile phone Internet users shopping online via mobile phones grew by 6.6%, and the total number was 2.36 times as great as that at the end of last year. In addition, the proportion of mobile phone group shopping users in the total number of mobile phone Internet users went up 1.7% over the end of last year, that of mobile phone online payment up 4.6%, and that of mobile phone online banking up 4.7%. The users of the three mobile applications all grew by more than 80%.

The construction of Internet infrastructure for SMEs required further improvement and the application level of Internet needed further enhancement

At present, the Internet penetration rate among SMEs in China still remained at a low level, and the broadband construction needed to be pushed forward further. Meanwhile, compared with the penetration rates of online purchase and online sale of some member countries at the end of 2011 published by OECD, the portion of online sale among SMEs in China was 25.3%, and that of online sale was 26.5%, both remaining at a low level. Apart from lacking the information-based driving force, China’s SMEs had a limited understanding to online purchase, and the environments of laws and regulations and systems of logistics and payment could only provide restricted supports, so we still lagged far behind the world advanced level in terms of the penetration rate of online purchase.

Chapter I Introduction

I. Survey Methodology

(I) Survey on Individual Internet Users

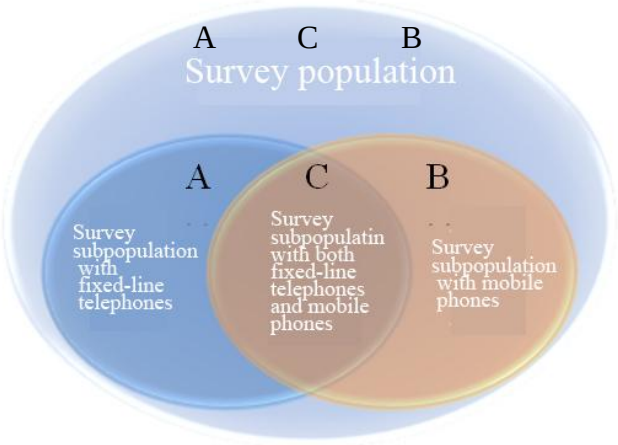
1.1 Survey Population

Permanent residents at the age of 6 or above who have fixed-line telephones (including home phones, PHS and dormitory telephones) or mobile phones.

◇ Sample size

Totally 60,000 survey samples in which 30,000 for fixed-line telephones and the other 30,000 for mobile phones, covering 31 provinces, autonomous regions and municipalities directly under the Central Government in Mainland China.

◇ Division of survey population



The survey population can be divided into three categories:

Subpopulation A: Survey subpopulation using fixed-line telephones (including residents with home phones, PHS users, students with dormitory telephones, and other users with dormitory telephones);

Subpopulation B: Survey subpopulation with mobile phones;

Subpopulation C: Survey subpopulation with both fixed-line telephones and mobile phones (there is overlap between subpopulation A and subpopulation B, the overlapped part is subpopulation C), $C=A \cap B$.

1.2 Sampling method

CNNIC surveys subpopulation A, B and C. Double sampling is adopted for the survey so as to cover more Internet users. The first sampling frame is subpopulation A, the people with fixed-line telephones. The second sampling frame is subpopulation B, the people with mobile phones.

For the survey population with fixed-line telephones, stratified two-stage sampling is adopted. To ensure the sufficient representativeness of samples, the whole country is divided into 31 tiers according to the province, autonomous region and municipality directly under the central government and the sampling is made independently at each tier.

The self-weighted sampling method is adopted for each province. The sample sizes are allocated for each district, city and prefecture (including the governed districts and counties) in accordance with the proportion of the people at the age of 6 or above in the city covered by fixed-line telephones in the total population covered in the whole province.

Sampling in subpopulation B is similar to that in subpopulation A. The whole country is divided into 31 tiers according to the provinces, autonomous regions and municipalities directly under the central government, and sampling is made independently in each tier. Samples are allocated in accordance with the proportion of the residents in each district or city to make the sample allocation in each province conform to the self-weighting method.

To ensure the residence fixed-line telephones are taken in almost identical opportunities in each district, city or prefecture, that is, the local number with more

residence fixed-line telephones will more likely be taken, and for easier operability in the visit and implementation work, the residence fixed-line telephone numbers in each district, city and prefecture are taken according to the following procedures:

The survey of the subpopulation with mobile phones is to take all mobile phone local numbers in each district, city and prefecture; then certain 4-digit numbers are generated randomly in combination with the valid sample size in each district, city or prefecture, and then combined with the mobile phone numbers in each district, city or prefecture to form a number library (local number + the random 4-digit number); randomly order the number library; dial and visit the randomly ordered number library. Survey of the subpopulation with fixed-line telephones is similar to that of the subpopulation with mobile phones: a random number is generated to form a telephone number with the local number, then these numbers are dialed and visited. To avoid repeated sampling, only the people with fixed-line telephones are visited.

1.3 Survey method

The computer-assisted telephone interviewing (CATI) system is adopted for the survey.

1.4 Differences between survey population and targeted population

A study for the population who are not covered by telephones in 2005 by CNNIC shows that Internet users are very few in this subpopulation. Currently, the subpopulation is downsizing gradually with the development of our telecom industry. In this survey, there is an assumption, i.e.

Internet users who are not covered by fixed-line telephones and mobile phones are negligible.

(II) Enterprise Survey

2.1 Survey target

The target population of telephone survey is small and medium-sized enterprises with legal personality in Mainland China, excluding privately-owned businesses.

2.2 Sampling method

Stratified random sampling is adopted in the survey. The sampling size in each province is based on the economic census data and random sampling is carried out in accordance with the enterprise yellow page data of each province. The number of final valid samples is 4,500.

2.3 Implementation method of the survey

The method of telephone survey (CATI) is adopted in this project. The methods for controlling the randomness and accuracy are as follows:

1) Calls are made from 9 am to 6 pm on working days.

2) The SME libraries are visited by random dialing by province, city and industry. After the survey is accomplished, the telephone investigation company is asked to provide the detailed dialing information of all the phones for random checks.

3) To avoid the randomness being influenced by the put-through rate, numbers that cannot be connected will be dialed for at least three times.

4) To avoid the influence of investigator's personal perspective to the investigation, it is stated that items that are not needed to be read out cannot be given any prompt and the questions should be asked properly.

5) After telephone survey, the data are pre-processed to check the logical relation between the value of a variable and the variable itself. Unqualified samplings shall be all deleted.

(III) Online Survey

Online survey focuses on the use of typical Internet applications. CNNIC conducted

online survey from November 1 to December 31, 2012. The questionnaire is on the CNNIC website, and the links are available on government websites and major websites of China. Internet users voluntarily participated in and filled out the questionnaire. After the questionnaires were returned, questionnaires' validity was verified and invalid questionnaires were sieved out by special techniques. Totally 157,172 valid questionnaires were received.

(IV) Automatic Online Search and Data Report

Automatic online search is used to conduct technical statistics about quantity of domain names and websites, and their geographical distribution. Statistical data for reporting mainly includes the number of IP addresses and international Internet bandwidth.

4.1. Total number of IP addresses

The data of IP addresses counted by provinces come from the IP address databases of Asia-Pacific Network Information Center (APNIC) and CNNIC. Registered data that can clearly distinguish the provinces of the addresses in each database can be added respectively by provinces to generate data of each province. As address allocation is a dynamic process, the statistical data are only for reference. The Ministry of Industry and Information Technology, as the national competent department of IP addresses, will require our IP address allocation organizations (such as China Telecom) to report the IP addresses they own biannually. To ensure accuracy of IP data, CNNIC will compare and verify APNIC statistical data and the reported data to confirm the final quantity of IP addresses.

4.2. Total number of domain names and websites in China

Total number of domain names and websites in China can be attained by adding the following two portions of data:

The first portion is the number of domain names and websites with ".CN", which was obtained by CNNIC through automatic online search on computers; the second portion is the number of China gTLD and websites provided by domestic registries of top level domains. The data include: number of all gTLD and the relevant websites; number of gTLD classified by ".COM", ".NET" and ".ORG" and corresponding websites; and number of gTLD classified by the province where the registrar is and corresponding websites.

4.3. International Internet bandwidth

The Ministry of Industry and Information Technology can obtain regularly the number of total bandwidth of Internet connecting Chinese carriers with other countries and regions through the report system of telecom enterprises. The reported data are included in the Statistical Report on Internet Development in China.

II. Definitions of Terms in the Report

◇ **INTERNET USERS:** Chinese residents at the age of six or above who have used Internet in the past 6 months.

◇ **Mobile INTERNET USERS:** Internet users who have used mobile phones to access and surf Internet in the past 6 months, but not limited to those surfing Internet via mobile phones only.

◇ **Computer INTERNET USERS:** Internet users who have used computer to access and surf Internet in the past 6 months, but not limited to those surfing Internet via computers only.

◇ **Rural INTERNET USERS: Internet users who have been living in rural areas of China in the past 6 months.**

◇ **Urban INTERNET USERS: Internet users who have been living in urban areas of China in the past 6 months.**

◇ **IP ADDRESS:** as the basic resource in Internet, the IP address functions to indentify online computers, servers and other devices on Internet. Connection with the

Internet can be realized only when an IP address (in any form) is acquired.

◇ **DOMAIN NAME:** Domain name in the Report only refers to the English domain name, which is a string comprised of numbers, letters, and hyphens (-) and separated by dots (.). It is a hierarchical structural Internet address identifier corresponding to the IP address. The common domain names are divided into two categories: country code top-level domain (ccTLD), such as the domain names ended with ".CN" which represents China; and generic top-level domain (gTLD), such as the domain names ended with ".COM", ".NET" and ".ORG".

◇ **WEBSITE:** It refers to the web sites with domain name itself or "WWW. + domain name" as the web address, including the web sites under our top-level domain name ".CN" and gTLD. The registrant of the website is within the territory of P.R.C. For example: for the domain name of "cnnic.cn", it has only one website and the corresponding web address is "cnnic.cn" or "www.cnnic.cn". Other web addresses like "whois.cnnic.cn" and "mail.cnnic.cn" with such domain name as the suffix are regarded as different channels of the website.

◇ **Enterprises/ SMEs: The enterprises mentioned in this report all refer to small- and medium-sized enterprises (SMEs), and privately-owned businesses are excluded in accordance with the definition stated in the *Regulations on the Standard for the Classification of Small- and Medium-sized Enterprises* jointly issued by the Ministry of Industry and Information Technology, the National Bureau of Statistics of China, the National Development and Reform Commission and the Ministry of Finance. In the *Regulations on the Standard for the Classification of Small- and Medium-sized Enterprises*, SMEs are classified into three types: medium-sized, small-sized and mini-sized. The specific standards are stipulated in accordance with such indicators as enterprises' practitioners, operating income and total assets and in combination with the industry characteristics.**

◇ **Scope of survey:** Unless otherwise expressly indicated, data in this Report only refer to mainland China, excluding Hong Kong, Macao and Taiwan.

◇ **Deadline of survey data:** The deadline of the statistical survey data is

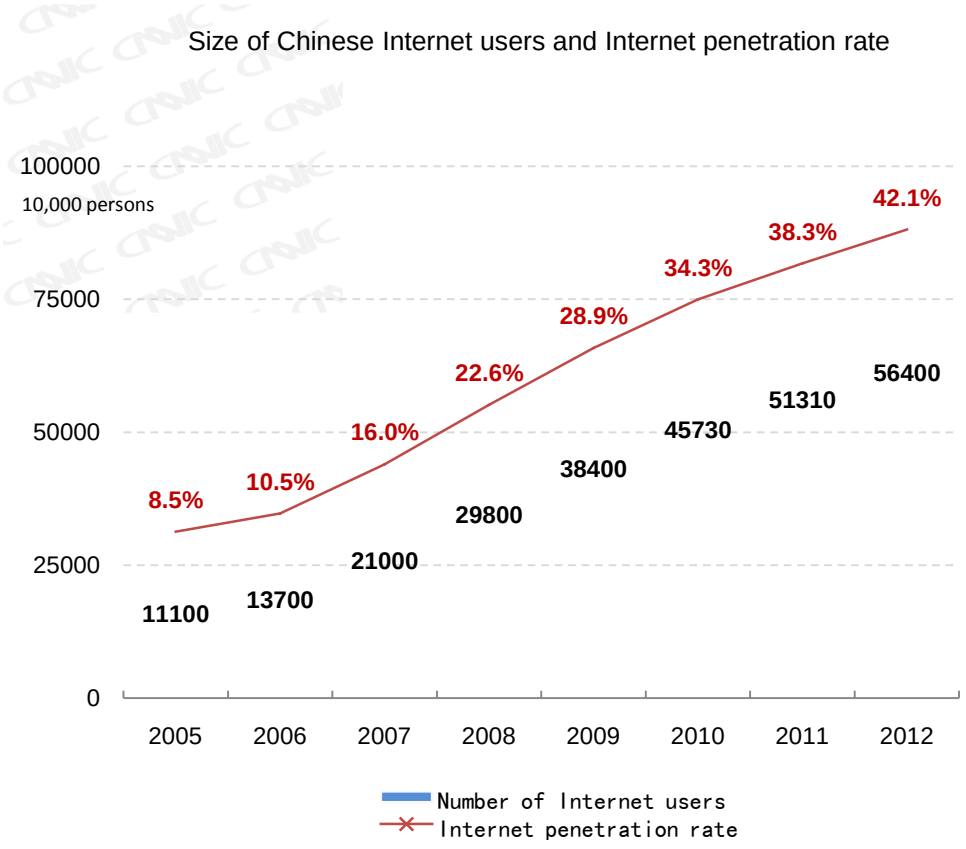
December 31, 2012.

Chapter II Size and Structural Features of Internet Users

I. Size of Internet Users

(I) Overall Size of Internet Users

By the end of December 2012, China has had 564 million Internet users, with a total of 50.9 million new ones. The Internet penetration rate reached 42.1% in China, rising 3.8% over the previous year. The growth extent further contracted compared with the last year.



Source: CNNIC Statistical Survey on Internet Development in China

Figure 1 Size of Chinese Internet users and Internet penetration rate

After analyzing the willingness of non-Internet users to use Internet, it can be concluded that Internet development in China will keep the trend of slowing-down growth in the future. In the mid-year research conducted in 2011, 65.0% of non-Internet users said that it was sure or it was highly possible that they would not use Internet in the next six months; however, by the end of 2012, the percentage had raised to 77.3%. In comparison, potential Internet users who do not use Internet currently but will consider it in the next six months only occupy 13.4%, keeping a gradually declining trend. The result indicates that potential Internet users who have intention to use Internet are gradually becoming Internet users while for those who have no intention to use Internet, there is not a remarkable increase in Internet-accessing intention.

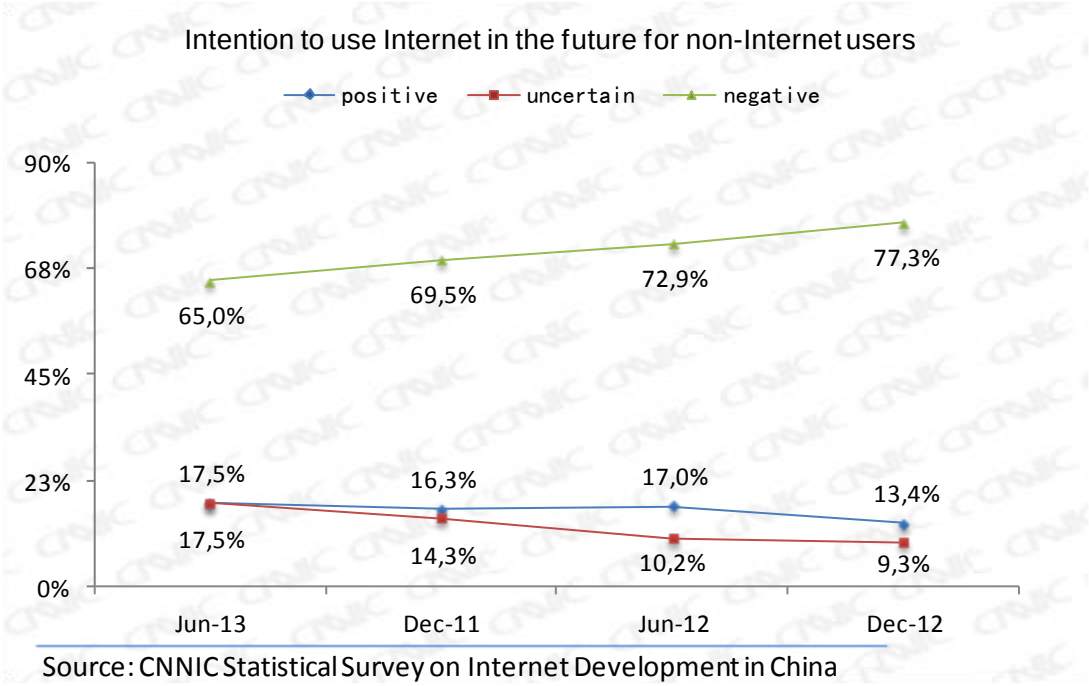


Figure 2 Intention to use Internet in the future for non-Internet users

Among non-Internet users with different intentions to use Internet in the future, they have different reasons for not using Internet. For those with strong intention to use Internet (i.e. potential Internet users), restrictions from life style (lack of time) and hardware condition (without device to access Internet, Internet is not available at the local area) are comparatively more apparent (see Figure 3). As the infrastructure construction for Internet is improving, charges for Internet access and Internet terminals gradually declines, restrictions can be removed in the external environment, thus the momentum for the growth of Internet users in the future lies mainly

in those potential users with the joint efforts from the government and Internet industry and the development of technology.

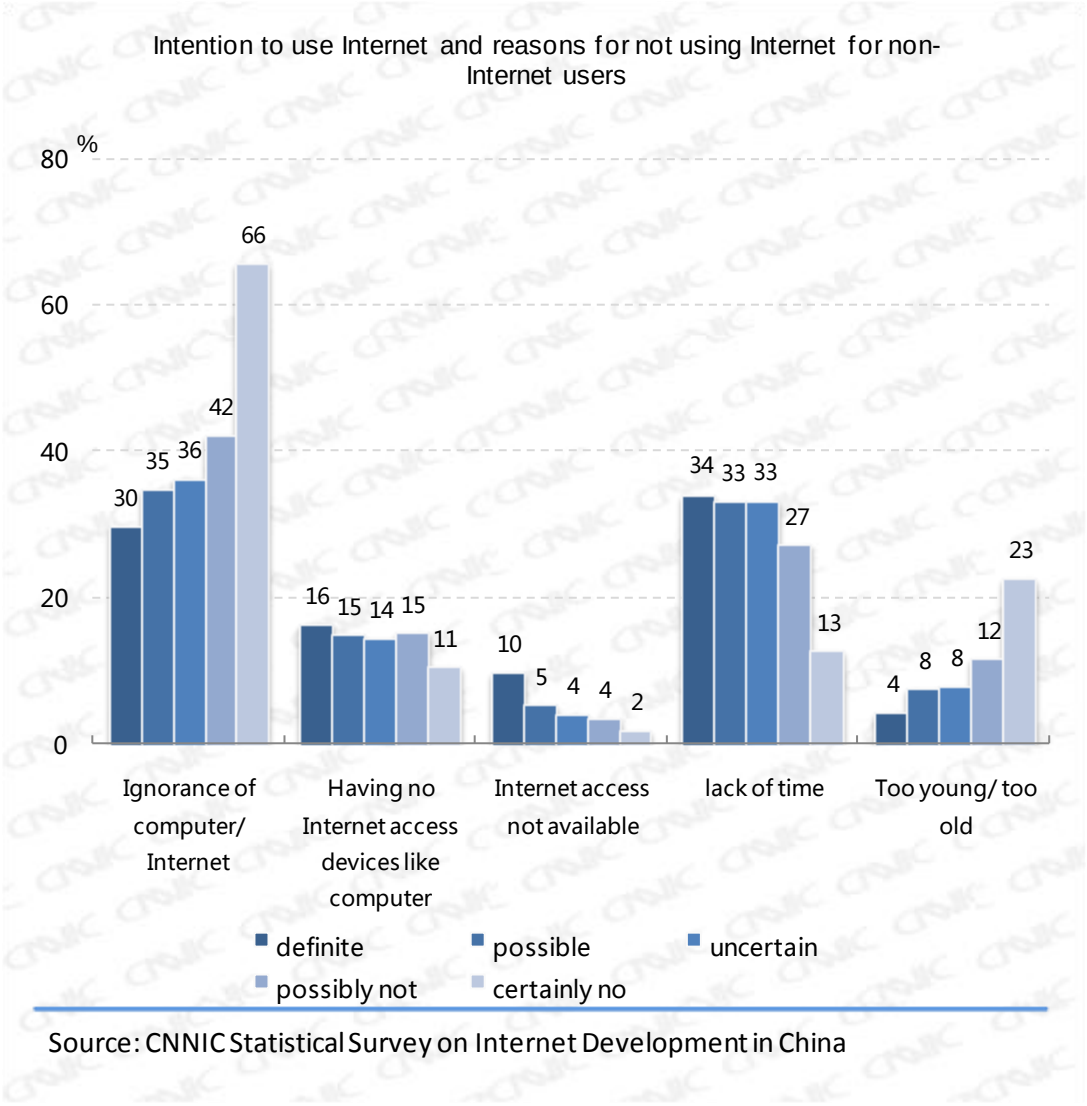


Figure 3 Intention to use Internet and reasons for not using Internet for non-Internet users

For non-Internet users who have no intention to use Internet in the future, their main reasons lie in that they are ignorant of computer and Internet, or they are too old. It is a complicated situation: for some, applications on Internet are distant from their daily life, therefore, they do not have enough impetus to learn and accept new things and their demand for Internet is not strong; there is a technological threshold for using Internet, with requirements for certain knowledge and skills. No matter it is because the lack of demand, or because there is a threshold, the solutions for those problems not only lie in the measures of infrastructure construction and downturn of charges, but also innovation for the application of Internet, targeted service modes for different groups of

people, closer connection between online and offline worlds, and intelligent and easy Internet hardware.

The development of next generation Internet and mobile Internet brings opportunities for the fulfillment of those changes. In 2012, the Chinese Government formulated a series of policies for the research, development and application of these technologies: in February, the path and timetable for the development of IPv6 were finalized; in March, the Ministry of Industry and Information Technology held a meeting on the popularization and speed acceleration of broadband and proposed the strategy of "Broadband China"; and in May, the *12th Five-Year Development Plan for Communications Industry* was issued, which set development targets and plans for new services such as popularization of broadband, Internet of things, and cloud computing. Accelerating the application of new technologies, these policies will boost consecutive innovation of Internet.

(II) Size of Mobile phone Internet users

By the end of December 2012, China has had 422 million mobile phone Internet users, 64.4 million more than that of the end of 2011. Among all the Internet users, those using mobile phones to access Internet increased from 69.3% at the end of 2011 to 74.5%.

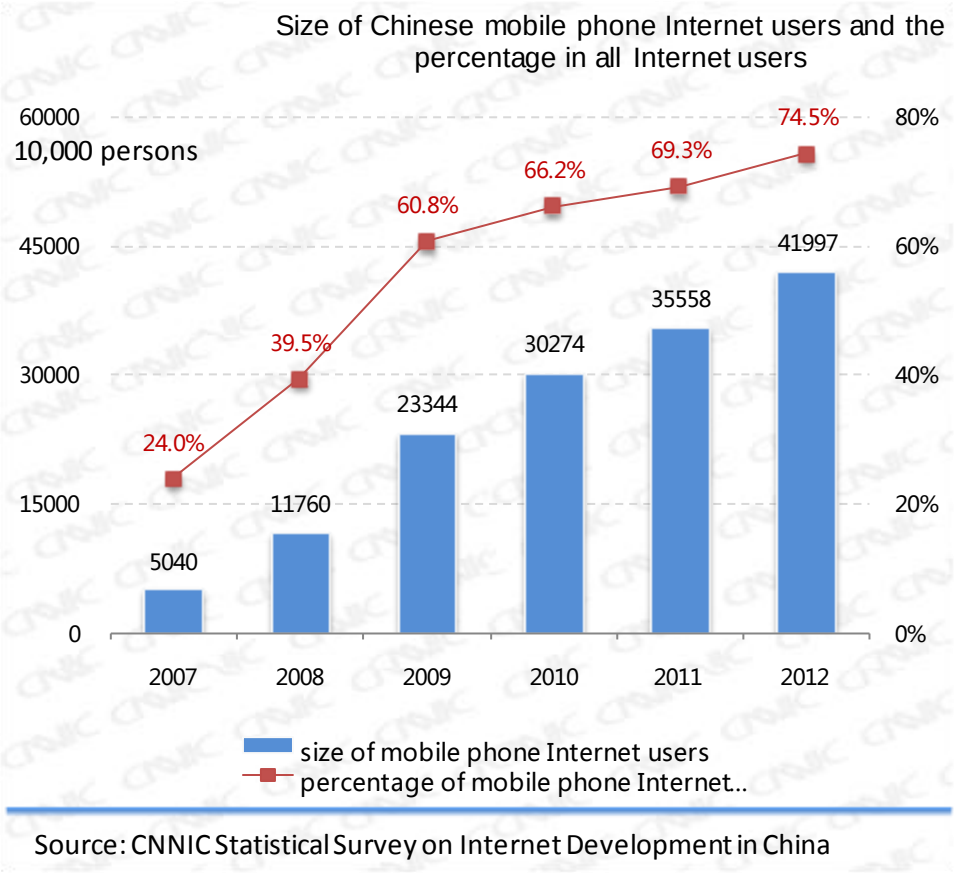


Figure 4 Size of mobile phone Internet users

The size of mobile phone Internet users increased sharply in 2012, surpassing the number of users who use desktops in the middle of the year. Meanwhile, as the majority of mobile phone Internet users use feature phones rather than smart phones, they are left behind by users with PC terminals in terms of time spent on Internet, depth of application, and abundance in functions.

The meanings of fast penetration of mobile Internet lie in that, on the one hand, it brings a great upsurge of mobile Internet innovation. Smart mobile terminals where smart phones play the main role provide large innovation space for practitioners in Internet with its novel terminal interactive mode and usage environment and habit. A large amount of popular mobile applications appeared in 2012 and attracted more and more Internet users to access into mobile Internet. On the other hand, the development of mobile Internet makes it possible to use Internet for people and areas where Internet access and terminal availability are limited, including residents living in distant rural areas, migrant workers, and groups with low income and poor education background. Terminals that are inexpensive and easy to operate meet their primary demands to use Internet,

and boost further popularization of Internet. With the prices for smart terminals decreasing, a huge amount of low-end smart phones were introduced to the market. And as the rate for traffic flow decreases, these groups of people would turn to smart phone users gradually. Great potentials wait ahead for the mobile Internet market, especially with people who were not able to access to Internet in the age of traditional Internet.

(III) Size of Internet Users in Provinces

The sizes of Internet users in 31 provinces (municipalities directly under the central government and autonomous regions) in the Mainland China experienced growth at different levels in 2012 where Guizhou, Anhui, Guangxi and Jiangxi, provinces with lower penetration rate of Internet, witnessed the highest growth. While the growth rates in Beijing, Shanghai, and Guangdong, where the penetration rate were comparatively high, slowed down.

By the end of 2012, 8 provinces and municipalities had Internet users accounting for at least half of their residents. Among which, the penetration rate of Internet in Beijing and Shanghai attained to about 70%, reaching the level of countries with high penetration rate such as North American countries, most Western European counties, Japan and South Korea. And penetration rate in Guangdong, Fujian, Zhejiang and Tianjin reached about 60%. In Liaoning and Jiangsu, it attained 50% in 2012, sharing a similar level with Russia and Brazil, two emerging market economies. In terms of the growth rate of Internet users, except in Tianjin, the growth rates in other 7 provinces were below the national average level.

The penetration rates in Shanxi, Hainan, Xinjiang, Qinghai, Hebei, Shaanxi, Chongqing, Ningxia, Shandong and Hubei were between 40% and 50%. Specifically, the penetration rates in Hebei and Ningxia grew by over 4%, making them top two with the highest growth rate.

However, Internet penetration rates in Inner Mongolia, Jilin, Heilongjiang, Guangxi, Hunan, Tibet, Sichuan, Anhui, Gansu, Henan, Guizhou, Yunnan, and Jiangxi were all below 40%, indicating that penetration rate in different regions and areas differs a lot from each other.

Table 1 Size of Internet users and penetration rate of Internet in provinces (municipalities directly

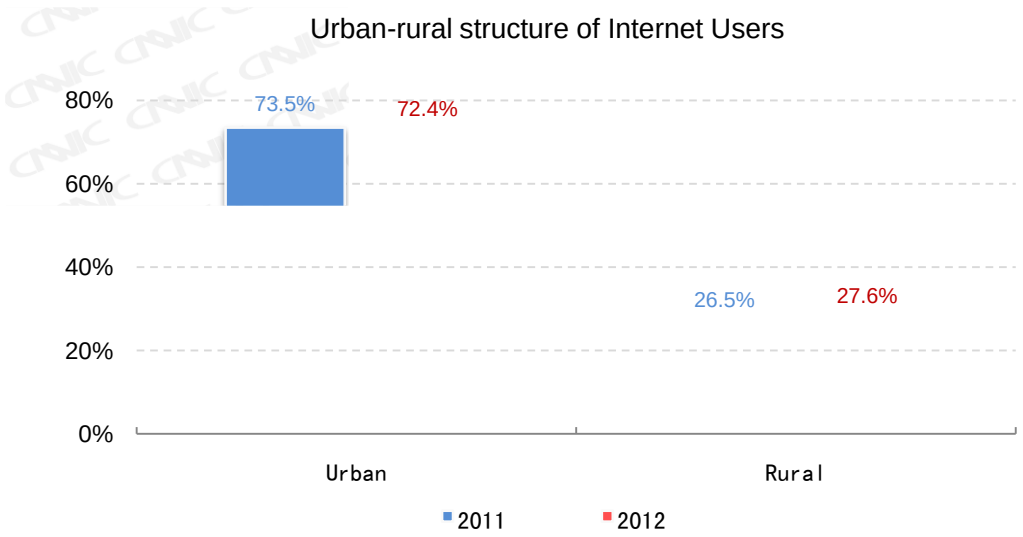
under the central government and autonomous regions) of the Mainland China between 2011 and 2012

Province	Size (10,000 persons)	Penetration rate	Growth rate	Ranking of penetration rate	Ranking of growth rate
Beijing	1458	72.2%	5.8%	1	27
Shanghai	1606	68.4%	5.3%	2	29
Guangdong	6627	63.1%	5.2%	3	30
Fujian	2280	61.3%	8.5%	4	23
Zhejiang	3221	59.0%	5.5%	5	28
Tianjin	793	58.5%	10.3%	6	18
Liaoning	2199	50.2%	5.1%	7	31
Jiangsu	3952	50.0%	7.2%	8	25
Shanxi	1589	44.2%	13.1%	9	13
Hainan	384	43.7%	13.6%	10	12
Xinjiang	962	43.6%	9.1%	11	21
Qinghai	238	41.9%	14.7%	12	9
Hebei	3008	41.5%	15.9%	13	7
Shaanxi	1551	41.5%	8.6%	13	22
Chongqing	1195	40.9%	11.9%	15	16
Ningxia	258	40.3%	24.5%	16	1
Shandong	3866	40.1%	6.7%	17	26
Hubei	2309	40.1%	8.5%	17	24
Inner Mongolia	965	38.9%	12.9%	19	14
Jilin	1062	38.6%	10.0%	20	20
Heilongjiang	1329	34.7%	10.2%	21	19
Guangxi	1586	34.2%	17.2%	22	4
Hunan	2200	33.3%	13.6%	23	10
Tibet	101	33.3%	12.7%	23	15
Sichuan	2562	31.8%	14.9%	25	8
Anhui	1869	31.3%	17.9%	26	3
Gansu	795	31.0%	13.6%	27	11
Henan	2856	30.4%	10.6%	28	17
Guizhou	991	28.6%	17.9%	29	2
Yunnan	1321	28.5%	15.9%	30	6
Jiangxi	1267	28.5%	16.5%	30	5

The whole country	**56400**	**42.1%**	**9.9%**	-	-

(IV) Size of Rural Internet Users

By the end of December 2012, the rural Internet users accounted for 27.6% of the total in China, reaching 156 million, which rose slightly compared with the figure in 2011, with an increase of 19.6 million over the end of 2011.



Source: CNNIC Statistical Survey on Internet Development in China

Figure 5 Urban-rural structure of Internet users

In recent years, changes of urban-rural structure among Internet users have remained stable. It connects to the rapid urbanization advanced by our country. Permanent population in urban areas surpassed that in rural areas in 2011, making the urbanization rate break the threshold of 50%. Rural population have declined to 657 million from 728 million in 2008, therefore, the percentage of rural Internet users did not increase remarkably. Currently, gaps remain in Internet penetration rate in rural and urban areas: by the end of 2012, the rate among urban residents has reached about 60% while it was 23.7% in rural area. However, the growth rate in rural area has become slightly higher than that in urban areas starting from 2011. The trend of enlarging gaps of Internet penetration was over, reflecting achievement of the popularization work in rural area.

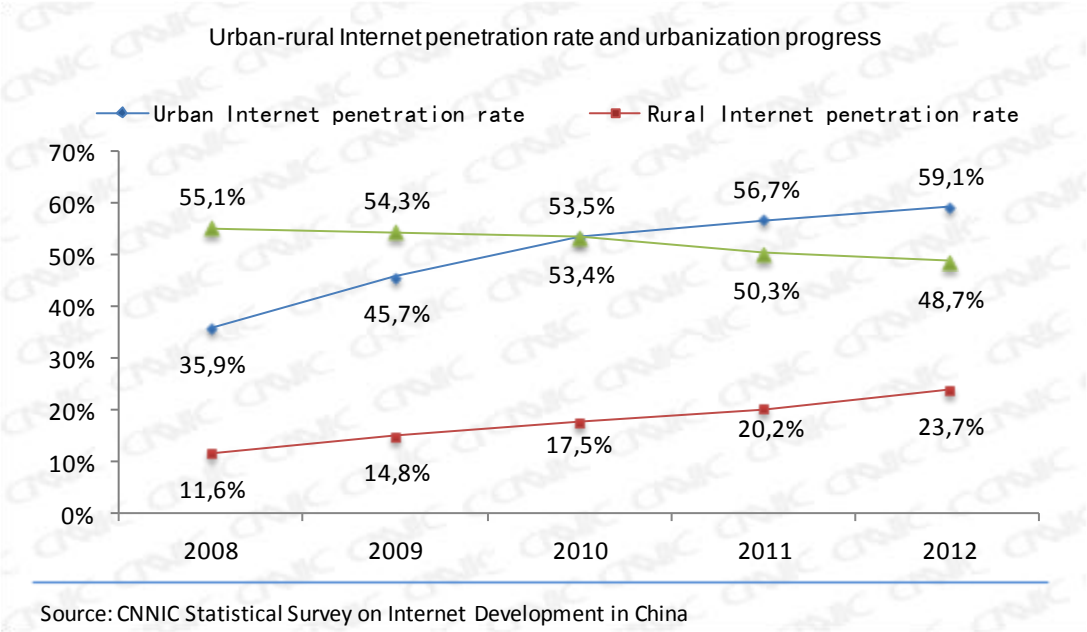


Figure 6 Urban-rural Internet penetration rate and urbanization progress

II. Attributes of Internet Users

(I) Gender Structure

As of the end of December 2012, the sex ratio of Internet users was 55.8:44.2, similar to that of 2011. Gaps remain in use rate of Internet for male and female residents.

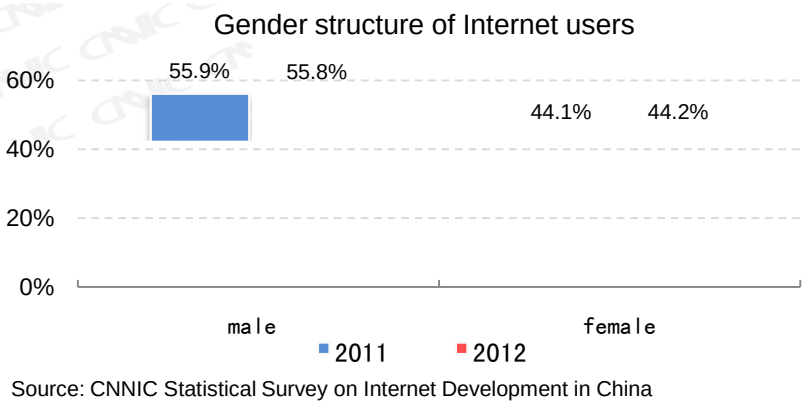


Figure 7 Gender structure of Internet users

(II) Age Structure

Percentage of Internet users between the age of 10 and 19 has declined from 26.7 % in 2011 to 24.0%, relating to the population decline of that age. Besides, percentage of Internet users above the age of 40 increased at different levels for different age sections. And penetration speed of Internet among these groups accelerated.

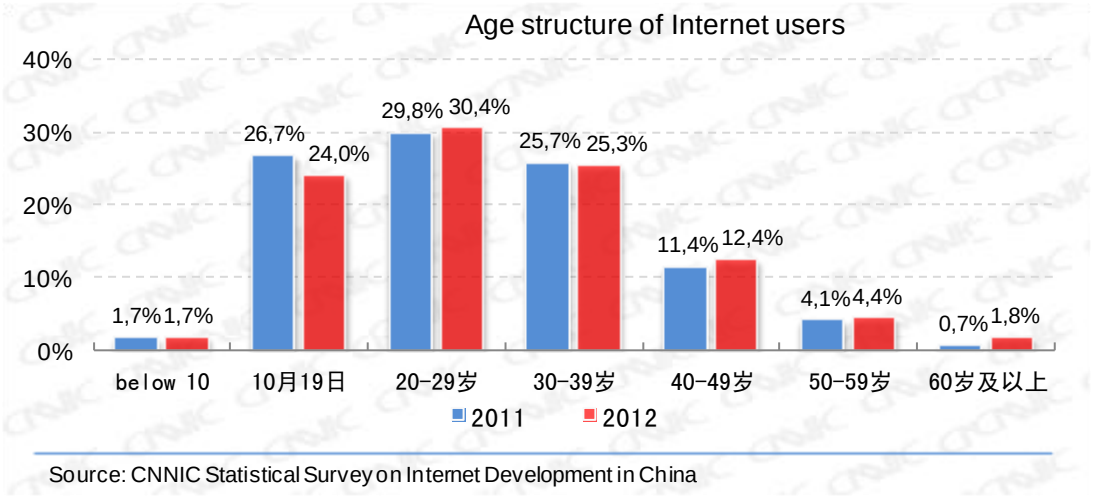


Figure 8 Age structure of Internet users

(III) Education Structure

Internet penetration rate among people with high school and junior college degree and above education background has attained a comparatively high level, and among people with junior college degree and above in particular, was saturated. The growth momentum of Internet users is from people with low education background. By the end of 2012, percentage of Internet users with the education background of elementary school and below has grown up to 10.9%.

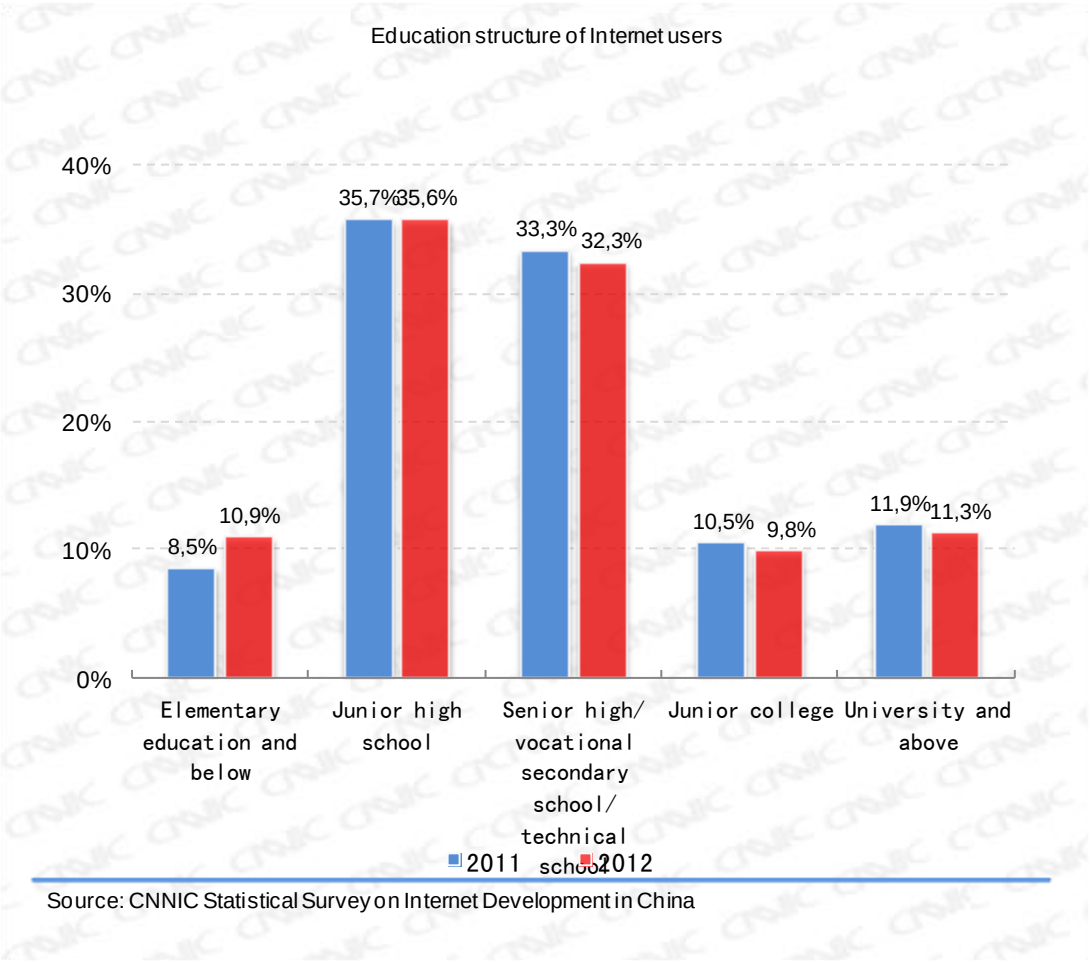


Figure 9 Education structure of Internet users

(IV) Occupational Structure

As Internet penetration rate among students stays at a high level and high school and elementary school students decline each year, students, as the largest group of Internet users, has dropped to 25.1% in 2012. Percentage of people of individually-owned business/ freelancers ranked the second, reaching 18.1%. In companies and enterprises, managers account for 3.1% and general employees account for 10.1% in all Internet users. And among party and government organs and institutions, the leading cadres and common clerks account for 0.5% and 4.2% respectively. And professional technicians take up 8.1%.

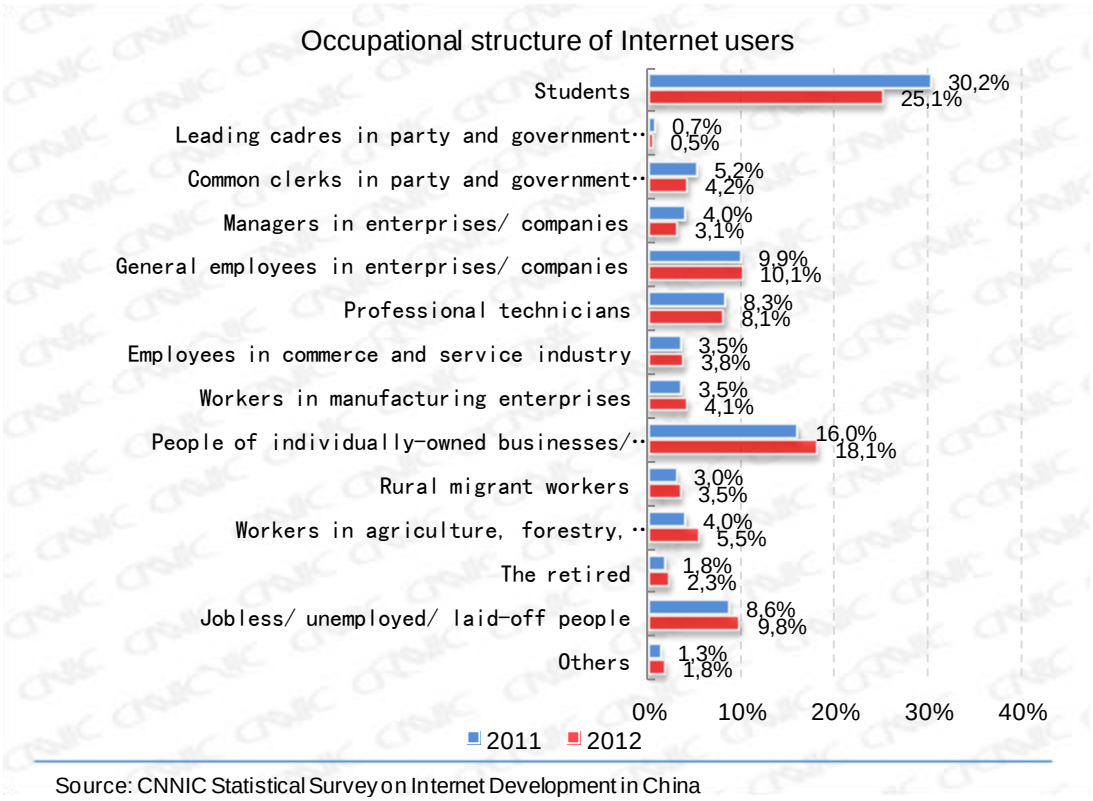


Figure 10 Occupational structure of Internet users

(V) Income Structure

Internet users with monthly income of above RMB 3,000 increase steadily, accounting for 28.8%, which is 6.5% higher than the end of 2011.

[1] Among which, students' income includes living expenses provided by their families, salary from work-study program, scholarship and other income. Farmers' income includes living expenses from their offspring, income from agricultural production, and government subsidy. The jobless, unemployed and laid-off people's income includes living expenses from their offspring, relief fund, subsidy, pension and basic living allowance from government. The retired people's income constitutes of living expenses from their offspring, and retirement pension.

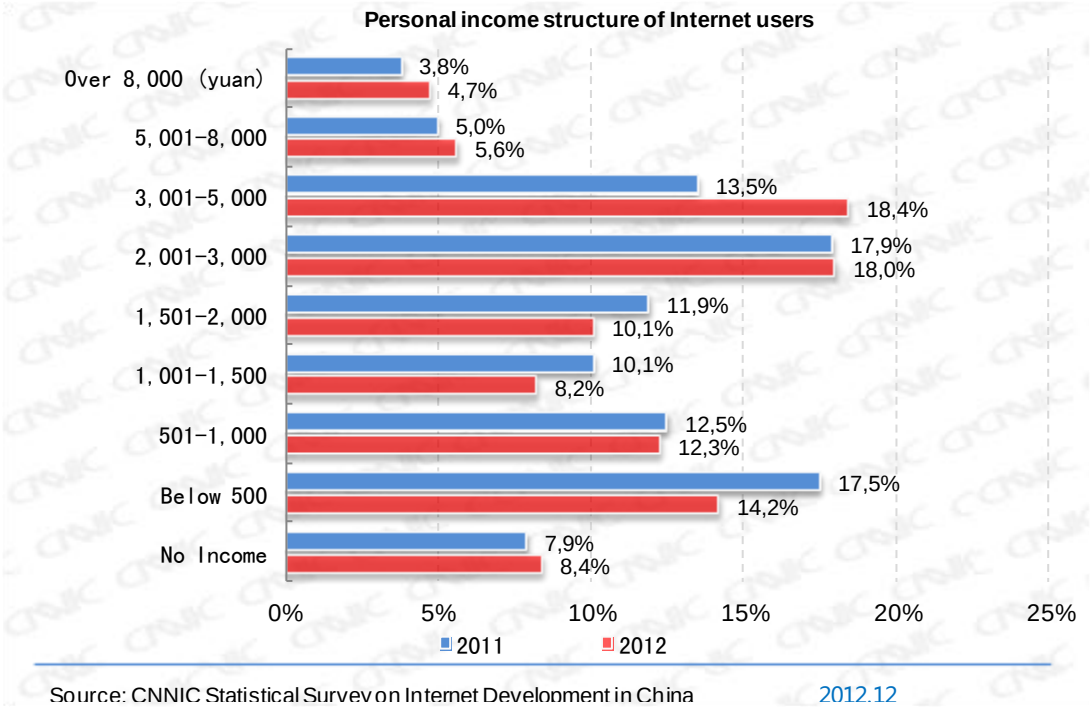
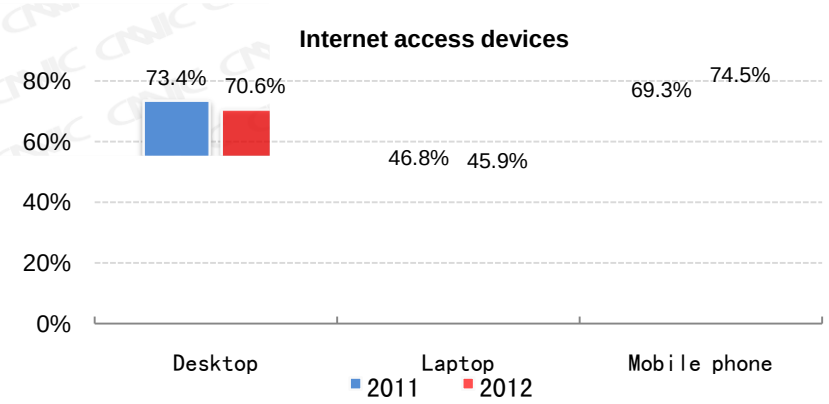


Figure 11 Structure of monthly income of Internet users

III. Access Modes

(I) Internet Access Devices

The ratio of Internet users using desktops dropped to 70.6% in 2012 by nearly 3% over the end of last year. The ratio of Internet users using laptops dropped slightly to 45.9% compared to the figure of the end of last year. The ratio of Internet users using mobile phones rose quickly from 69.3% to 74.5%.

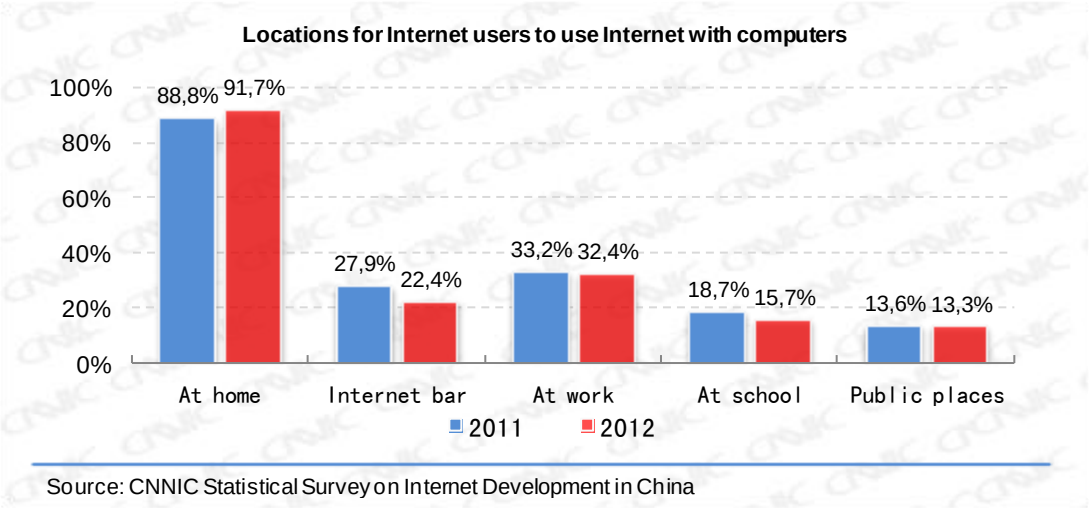


Source: CNNIC Statistical Survey on Internet Development in China

Figure 12 Internet access devices

(II) Locations to Use Internet

As more and more homes become Internet accessible, 91.7% of Internet users went online at home at the end of 2012, a 2.9 percent growth compared to that of the end of last year. It showed that household Internet access rate was on the rise. Percentage of Internet users who access to Internet at Internet bar or computer room at school dropped considerably, among which using Internet bar dropped 5.5% and using public computer room at school dropped 3%. Decline of use rate of public places with Internet access devices is the inevitable result of higher possession of personal Internet access devices and improvement on the condition of Internet access.



Source: CNNIC Statistical Survey on Internet Development in China

Figure 13 Locations for Internet users to surf Internet with computers

(III) Online Duration

Weekly average of time spend online in 2012 was 20.5 hours, 1.8 hours more than that of 2011.

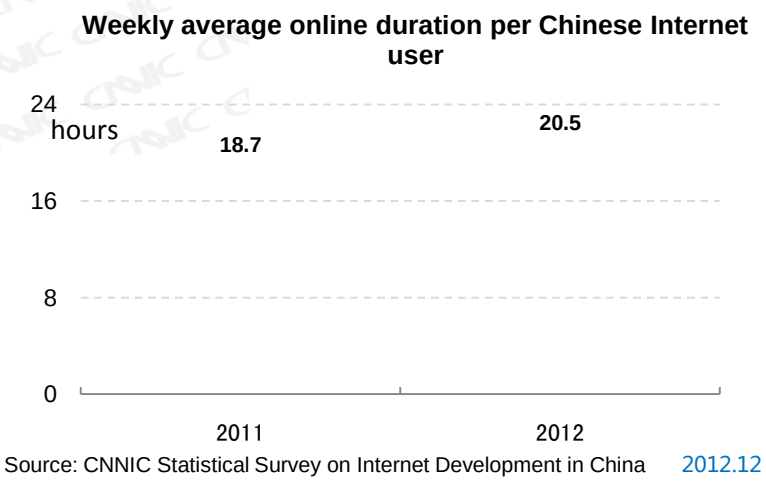


Figure 14 Average weekly online duration of Internet users

Chapter III Basic Internet Resources

I. Overview of Basic Resources

China had 331 million IPv4 addresses and 12,535/32s of IPv6 addresses at the end of December 2012.

Total domain names were 13.40 million, among which ".CN" domain names reached 7.51 million, a 112.8% growth and took up 56.0% of all domain names in China. And the number of ".中国" domain names reached 280,000.

There were altogether 2.68 million websites, a 16.8% growth compared to that of the same time last year.

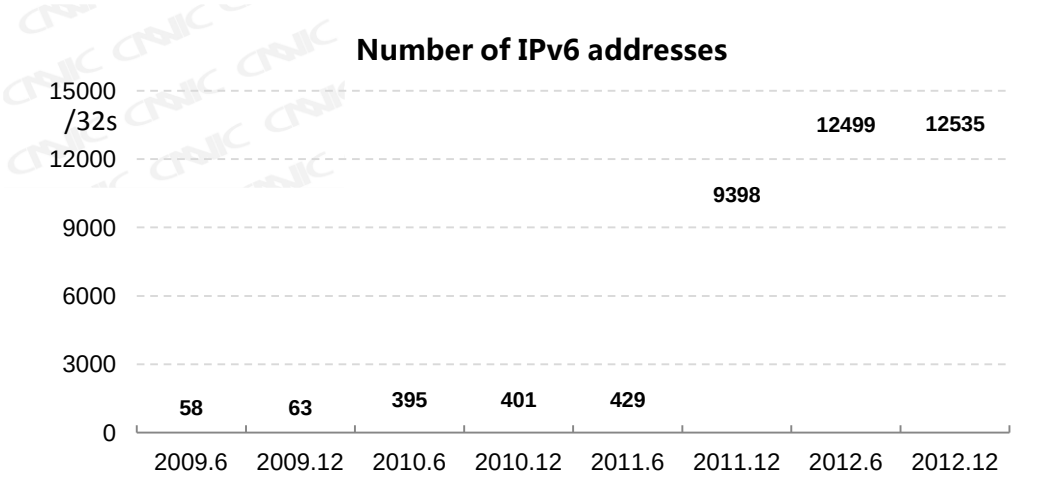
International Internet bandwidth reached 1,899,792 Mbps, with a growth rate of 36.7% to that of the same time last year.

Table 2 Comparison of China Internet basic resources from 2011-2012

	December 2011	December 2012	Annual growth	Annual growth rate
IPv4	330,439,936	330,534,912	94,976	0.0%
IPv6 (/32s)	9,398	12,535	3,137	33.4%
Domain name	7,748,459	13,412,079	5,663,620	73.1%
Wherein, .CN Domain name	3,528,511	7,507,759	3,979,248	112.8%
Wherein, .中国 Domain name	—	283,484	—	—
Website	2,295,562	2,680,702	385,140	16.8%
Wherein, .CN website	951,609	1,036,864	85,255	9.0%
Wherein, .中国 website	—	4,095	—	—
International Internet bandwidth (Mbps)	1,389,529	1,899,792	510,263	36.7%

II. IP Addresses

China has had 12,535/32s IPv6 addresses by the end of December 2012, a remarkable 33.4% growth compared to that of the same time last year and ranking the third worldwide. According to Notice on the Development Proposal of the Next Generation Internet in the 12th Five-Year Period, small scale commercial pilots of IPv6 will be gradually carried out before the end of 2013. It is to form the commercial modes and technology evolution path and make preparation for the overall deployment of IPv6. Plentiful address resource is the foundation for the smooth implementation of that process.



Source: CNNIC Statistical Survey on Internet Development in China 2012.12

Figure 15 Number of IPv6 addresses in China

Total number of our IPv4 addresses remained, which was 331 million at the end of December

2012.

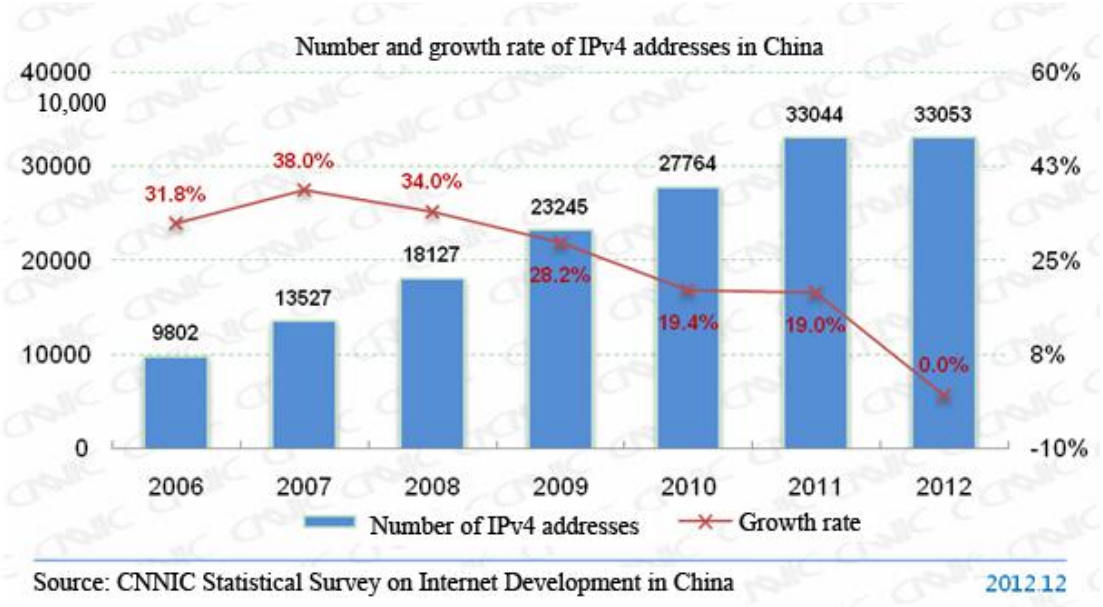


Figure 16 Changes of IPv4 addresses resources in China

III. Domain Names

The total number of domain names increased to 13.41 million as led by the great growth of .CN domain name. The growth rate reached 73.1% compared to that of the end of last year.

Table 3 Number of domain names in each category

	Number	Proportion in total domain names
CN	7,507,759	56.0%
COM	4,834,690	36.0%
NET	629,154	4.7%
中国	283,484	2.1%
ORG	145,414	1.1%
Others	11,578	0.1%
Total	13,412,079	100.0%

China has 7.51 million .CN domain names as of the end of 2012, increasing by 112.8% compared to that of the same time last year and accounting for 56.0% of all China domain names. And .COM domain names were 4.83 million, taking up 36.0%. Beside, number of .中国 domain names reached 280,000.

Table 4 Number of domain names in each ".CN" category

	Number	Proportion in total CN domain names
cn	6,158,126	82.0%
com.cn	1,059,202	14.1%
net.cn	126,059	1.7%
org.cn	58,117	0.8%
gov.cn	52,889	0.7%
adm.cn	45,588	0.6%
edu.cn	4,026	0.1%
ac.cn	3,711	0.0%
mil.cn	41	0.0%
Total	7,507,759	100.0%

IV. Websites

China has had 2.68 million websites by the end of June 2012. The number has increased 0.38 million in the year with the growth rate of 16.8 %.

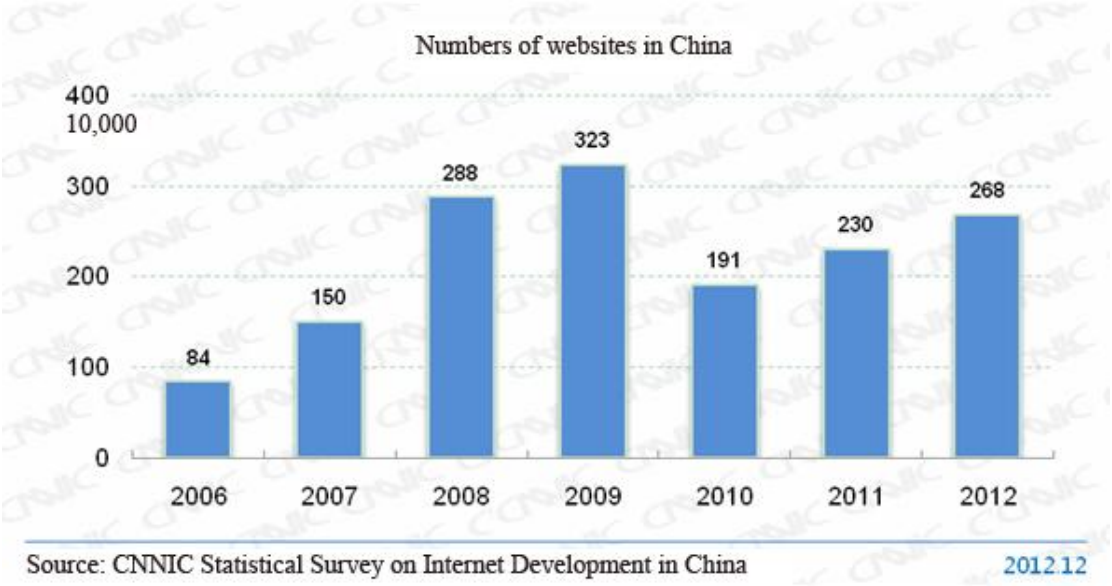


Figure 17 Number of Websites in China

Note: Websites with the domain name of ".EDU.CN" are excluded.

[2] Websites whose domain names registrants are within the territory of the P.R.C.

V. Webpages

By the end of 2012, China has 122.7 billion webpages, growing by 41.7% compared with that of 2011.

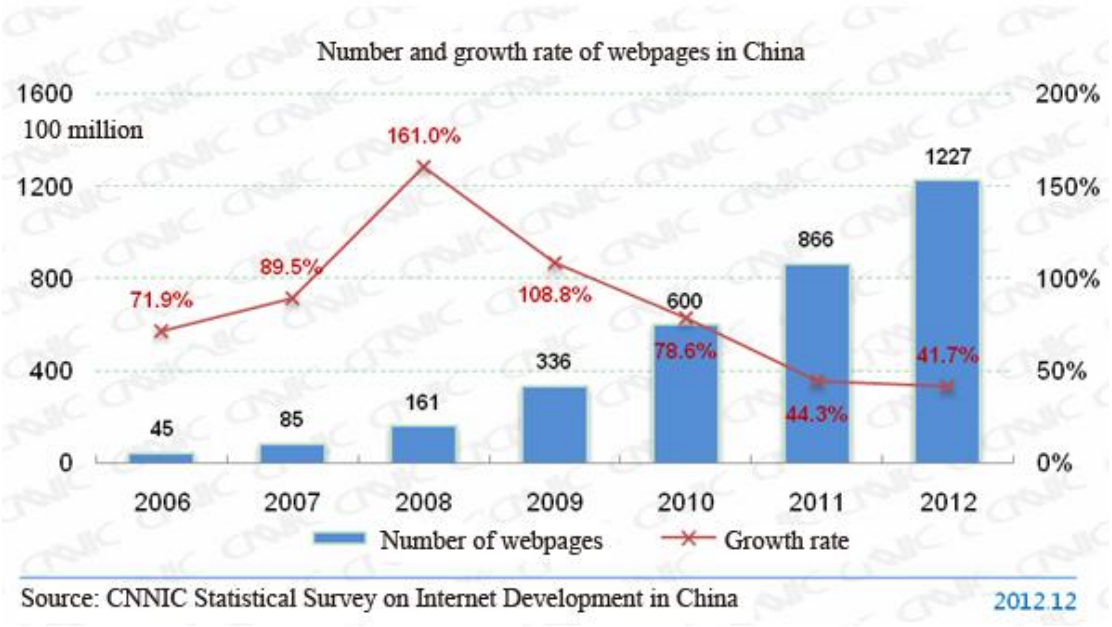


Figure 18 Number of Webpages in China

Average number of webpages of a single website and average number of bytes of a single webpage in 2012 remained the growth momentum in 2012, indicating that the content on the Internet was more abundant: average number of webpages of a single website reached 45,800, a 21.4% growth to the same period last year; and average number of bytes of a single webpage was 42KB, a 10.2% growth.

Table 5 Number of Webpages in China

	Unit	2011	2012	Growth rate
Total number of webpages		86,582,298,393	122,746,817,252	41.77%
Static webpages		59,364,979,522	60,379,347,181	1.71%
	Proportion in total webpages	68.56%	49.19%	—
Dynamic webpages		27,217,318,871	62,367,470,077	129.15%
	Proportion in total	31.44%	50.81%	—

[3] Data source: Baidu.com, Inc. (Beijing)

	webpages			
Size of the webpage (total byte)	KB	3,313,529,625,009	5,140,463,284,447	55.14%
Average webpages of each website		37,717	45,789	21.40%
Average bytes of each webpage	KB	38	42	10.21%

VI. International Internet Bandwidth

By the end of December 2012, China has had 1,899,792 Mbps of international Internet Gateway bandwidth, up 36.7 % in the whole year.

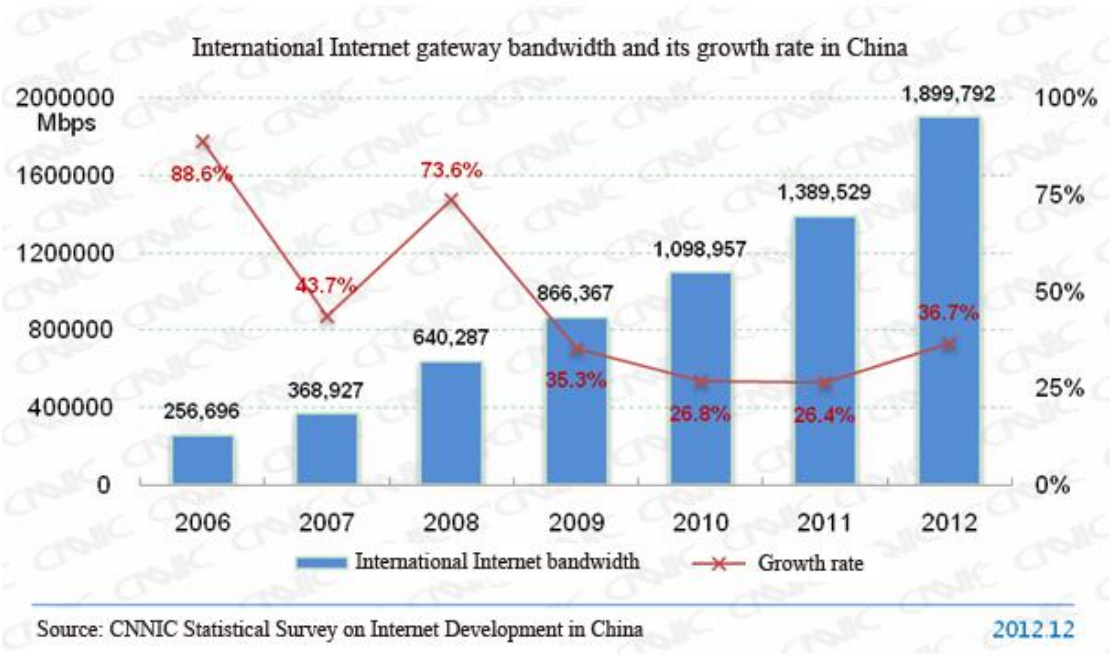


Figure 19 Changes of China's international Internet gateway bandwidth

Table 6 International Internet gateway bandwidth of major backbone networks

	International Internet bandwidth (Mbps)
China Telecom	1,048,848
China Unicom	586,279
China Mobile	206,563
China Education and Research Network	35,500
China Science and Technology Network	22,600
China International Economy and Trade Net	2
Total	1,899,792

Chapter IV Internet Applications of INTERNET USERS

I. Overall Condition of Internet Applications

The use of internet applications in 2012 had a similar tendency to that in 2011. The utilization ratio of instant messaging, No. 1 internet application, kept rising, e-commerce applications were rapidly developing and the utilization ratios of traditional internet applications such as e-mail and forum/BBS were on a decline.

Users of microblog kept growing, and mobile users saw a gradually dominating trend

The number of microblog users reached 309 million in 2012, a 58.73 million increase over the end of 2011. The rapid expansion of microblogs had come to an end, but the annual growth was still as high as 23.5%. A considerable number of users accessed microblogs and published microposts via mobile phones. By the end of 2012, the mobile phone microblog users has hit 202 million, namely 65.6% of microblog users used their mobile phones to access microblogs.

Online shopping and group shopping kept growing at a high rate

Online shopping users reached 242 million, and the utilization ratio increased to 42.9%. Online shopping users increased by 48.07 million, or 24.8%, compared with 2011. Against the background that the growth of Internet users slowed down gradually, the application of online shopping still kept a momentum of rapid growth. The absolute growth of Internet users outperformed that in 2011, 4% higher than the growth rate in the same period of last year. The number of group shopping users was 83.27 million, increasing the utilization ratio to 14.8%, a 3.3% growth over the end of 2011. The increase in the number in a year was as high as 28.8%.

E-commerce applications on mobile phones witnessed an all-round significant

growth in utilization ratio

E-commerce applications witnessed fast development in the field of mobile phone terminal, growing in an all-sided manner. Compared with 2011, the proportion of mobile phone Internet users shopping online via mobile phones grew by 6.6%, and the total number was 2.36 times as great as that at the end of last year. In addition, the proportion of mobile phone group shopping users in the total number of mobile phone Internet users went up 1.7% over the end of last year, that of mobile phone online payment up 4.6%, and that of mobile phone online banking up 4.7%. The users of the three mobile applications all grew by more than 80%.

Table 7 Usage of Network Applications in China from 2011 to 2012

	2012		2011		
Application	**Number of users (in 10,000)**	**Internet users' utilization ratio**	**Number of users (in 10,000)**	**Internet users' utilization ratio**	**Annual growth rate**
Instant messaging	46775	82.9%	41510	80.9%	12.7%
Search engine	45110	80.0%	40740	79.4%	10.7%
Online music	43586	77.3%	38585	75.2%	13.0%
Blog/Personal space	37299	66.1%	31864	62.1%	17.1%
Online video	37183	65.9%	32531	63.4%	14.3%
Online game	33569	59.5%	32428	63.2%	3.5%
Microblog	30861	54.7%	24988	48.7%	23.5%
Social networking website	27505	48.8%	24424	47.6%	12.6%
E-mail	25080	44.5%	24578	47.9%	2.0%
Online shopping	24202	42.9%	19395	37.8%	24.8%
Online literature	23344	41.4%	20268	39.5%	15.2%
E-banking	22148	39.3%	16624	32.4%	33.2%
Online payment	22065	39.1%	16676	32.5%	32.3%
Forum/BBS	14925	26.5%	14469	28.2%	3.2%
Travel booking	11167	19.8%	4207	8.2%	—
Group shopping	8327	14.8%	6465	12.6%	28.8%
Online stock investment	3423	6.1%	4002	7.8%	-14.5%

(I) Acquisition of Information

1. Search engine

The number of users of search engine was 451 million in China by the end of 2012, representing an increase of 43.7 million over the end of 2011 and an annual growth rate of 10.7%,

[4] In the report, definition of travel booking covers booking air tickets, hotel, train tickets, and travel routes via Internet, which is different from that in the previous report. Booking train tickets is added in the report.

and 80.0% of the internet users used search engine. As a basic application on the internet, search engine is an important tool for internet users to obtain information. Its utilization ratio had kept around 80% since 2010, making it the No. 2 application on the internet.

The use of search engine entered the stage of stable development on the whole, and this market gradually shifted its emphasis from the sole increase of number of users to the improvement of user experience. The new competition in 2012 drove the existing search engine companies to develop, promoting the development of the whole search engine market. On one hand, the search engine industry strengthened self-discipline and sorted out the search results which reduced false information and dangerous links and increased the access security; on the other hand, the search engine companies increased input in technology, improved search quality and incorporated the personalized and social networking elements in an effort to display the search results in an intelligent manner.

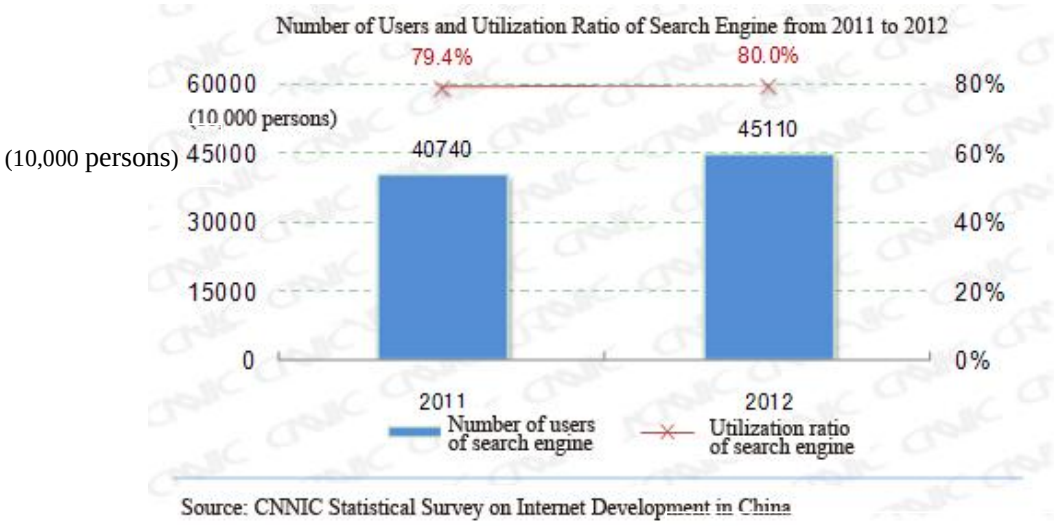


Figure 20 Number of Users and Utilization Ratio of Search Engine in China from 2011 to 2012

(II) Business Transactions

1. Online shopping

The number of online shopping users reached 242 million and utilization ratio of online shopping rose to 42.9% by the end of December 2012. There was a growth of 48.07 million, or 24.8%, in the number of online shopping users compared with 2011.

While the growth of number of internet users gradually slowed down, there was a sharp

growth in online shopping. The growth in number of online shopping users in 2012 was 14.63 million more than that in 2011 and the growth rate was 4% higher than the same period of 2011. The growth and growth rate in 2011 were 33.44 million and 20.8% respectively. Now, the residents' consumption played a more important role in driving the development of national economy and online retailing gave an impetus to the increase of consumption. The mobile online shopping became an important driving force in the increase of number of online shopping users. The number of mobile online shopping users increased by 136.5% annually in 2012 to 55.5 million. The increase of users' purchase power and the combination of online consumption habit and the forms of mobile and social online shopping promoted the growth of online retail market. The frequent promotion of e-commerce companies offering low prices also stirred up the interest of users, leading to the surge in number of online shopping users.

The market structure was in a rapid optimization stage while the online shopping users rapidly increased in number. The main B2C e-commerce companies implemented the strategy of establishing an open platform, and there was competition as well as cooperation between the companies. The traditional companies became an important part of the market and strengthened their position in the market. However, the problems of online shopping fraud, user information leakage, and disordered competition of companies were more prominent in 2012 due to the industry's regulation measures that lagged behind the market development, and this industry was in a stage where many conflicts existed.

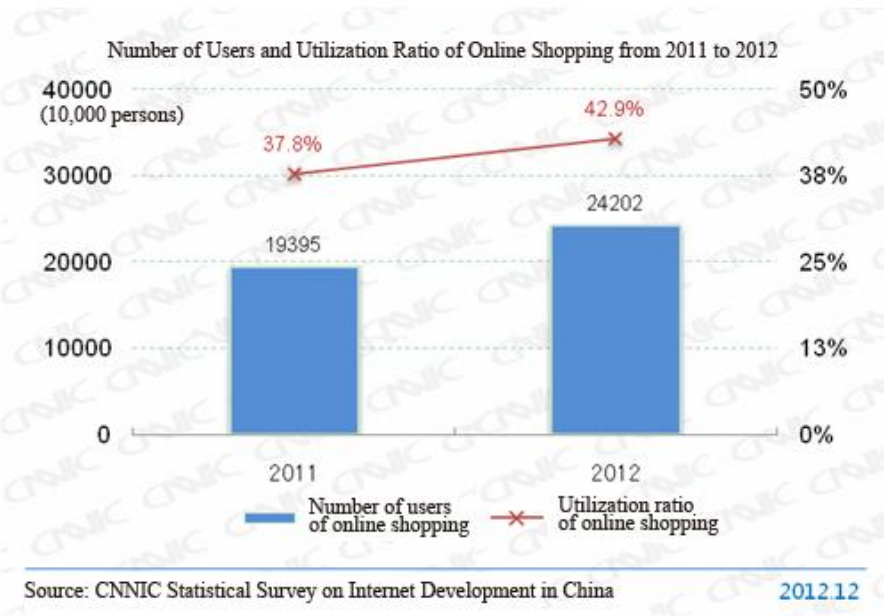


Figure 21 Number of Users and Utilization Ratio of Online Shopping in China from 2011 to 2012

2. Group shopping

The number of users of group shopping was 83.27 million by December 2012, and the utilization ratio increased by 3.3% to 14.8% compared with the end of 2011. The users of group shopping increased by 28.8% in a year and the growth rate of users was still high.

2012 was a year when the group shopping industry changed its strategy from expansion to the maintenance of status quo, and the main service providers sought to make progress while maintaining stability. The closing of quite a number of group shopping websites put a stop to the craze for overnight success in group buying business, but this consumption model was already well known by the users and performed well in e-commerce and travel booking market. Old brand e-commerce companies and emerging service providers of group shopping already had a stable customer base locally in the fields of e-commerce, group shopping of goods and travel booking. Very notably, the performance of non-independent group shopping websites backed by old brand e-commerce companies or other internet service companies was quite eye-catching, and these websites continuously generated value for the sellers and had better marketing capability in addition to the isolated group shopping activities by taking advantage of the platform.

The group shopping industry will have diversified development in the future while it gets more concentrated and the group shopping service will further integrate with the other internet services. The mobile group shopping is still an important growing sector. The users of mobile group shopping increased by 88.8% to 19.47 million in 2012.

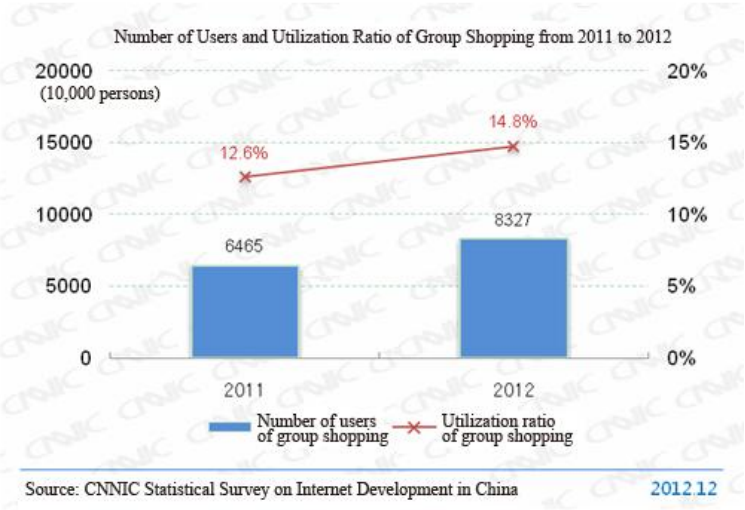


Figure 22 Number of Users and Utilization Ratio of Group shopping in China from 2011 to 2012

3. Online Payment

The number of users and utilization ratio of online payment were 221 million and 39.1% respectively by December 2012. There was a growth of 53.89 million, or 32.3%, in the number of users of online payment compared with 2011.

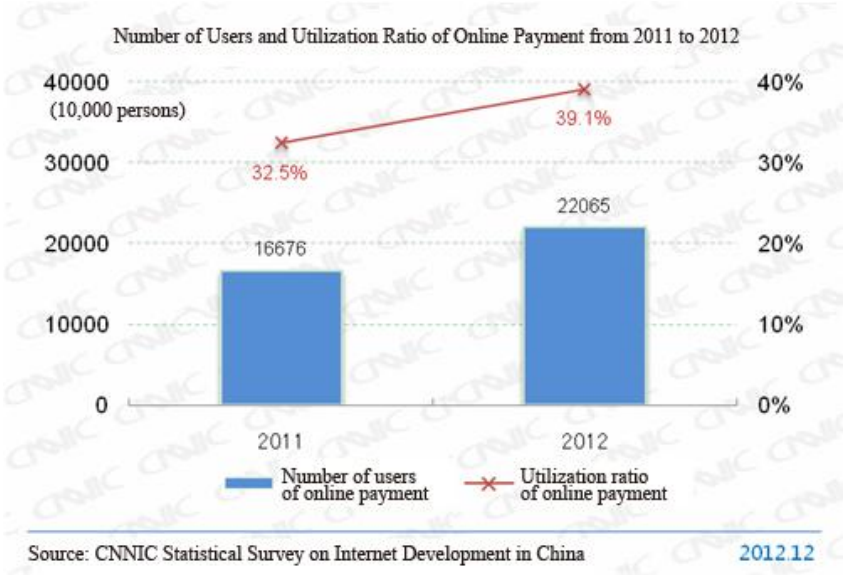


Figure 23 Number of Users and Utilization Ratio of Online Payment in China from 2011 to 2012

The rapid growth of number of online payment users was attributable to the prosperity of online consumption. With the rapid development of China's online retail market, the types of life services for which payment could be made online kept expanding and the transaction scale kept increasing, leading to the popularity of online payment. The convenient forms of payment such as express payment and Katong (card-through) payment made payment more operable which led to popularity of online payment among more people. The establishment of technical standards of mobile payment and the efforts made by companies in payment business in mobile payment resulted in the rapid growth of number of mobile online payment users. The number of mobile online payment users reached 55.31 million by December 2012, and the annual growth rate of users was 80.9% and utilization ratio of mobile online payment was 13.2%.

In 2012, the People's Bank of China continued to issue the Payment Business License, promulgated the administrative measures of business segments and permitted third-party payment

companies to engage in the payment and settlement business of traditional financial field. While the market supervision was improved and the market was segmented, an industrial pattern was formed that included payment companies, traditional banks, e-commerce giants and telecommunication operators. The service providers and modes of payment will be more diversified in the future and the risks of online payment will be greater; therefore, efforts should be made to improve government supervision policies, strengthen cooperation among companies and improve consumers' sense of security so as to improve the online payment security.

4. Travel Booking

The number of internet users that had booked air tickets, hotels, train tickets and travel itinerary on the internet by the end of December 2012 was 112 million, accounting for 19.8% of the total number of internet users. The proportion of Chinese internet users who had booked air tickets, hotels, travel itinerary and train tickets online were 9.0%, 7.2%, 5.4% and 14.0% respectively.

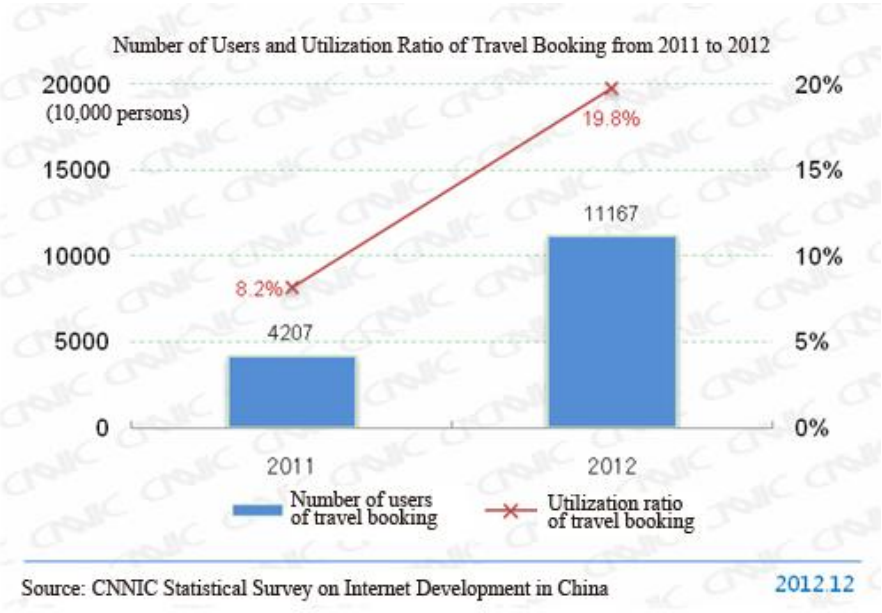


Figure 24 Number of Users and Utilization Ratio of Online Travel Booking in China from 2011 to 2012

As online booking of train ticket gained instant popularity, the number of users who booked

[5] In the report, definition of travel booking covers booking air tickets, hotel, train tickets, and travel routes via Internet, which is different from that in the previous report. Booking train tickets is added in the report.

train tickets online increased substantially to 78.97 million. The users who booked air tickets, hotels and travel itinerary online were relatively limited groups of people compared with other applications, and the penetration rate was still low and there was plenty of room for the users of these applications to grow in number. The rapid growth in the residents' demand in leisure travel, expansion of high-speed rail network and availability of more choices of tourist routes will lead to more online travel booking and drive the growth of travel booking market.

Figure 25 Utilization Ratios of Travel Booking Services of China's Internet Users in 2012

The travel booking industry went through a profound transformation due to the use of mobile internet, and the companies were improving their services in mobile travel services to improve the customer experience of wireless travel services. As travel booking service and mobile internet had inherent connection, wireless travel services closely connected with such applications as LBS, group shopping and mobile payment, and there will be more application settings and the online travel service industry will mature.

(III) Communication

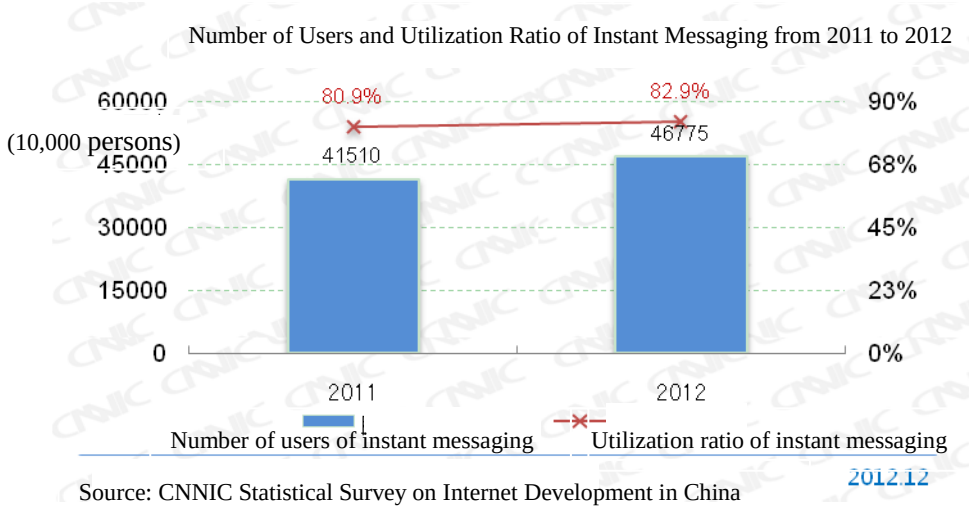
1. Instant Messaging

The number of instant messaging users in China was 468 million by the end of December

2012, representing a growth of 52.65 million, or 12.7%, compared with the end of 2011. The utilization ratio of instant messaging was 82.9%, up by 2% over the end of 2011.

The utilization ratio of instant messaging declined from 2007 and picked up in 2010, and since the end of 2011, instant messaging had become No. 1 application on China's internet. The utilization ratio of instant messaging products continuously increased as the products met the demands of users, and the continuously innovated mobile instant messaging products attracted increasingly more users.

The instant messaging industry had developed for years. With the constant improvement of product functions by the manufacturers, the instant messaging products met increasingly more demands of people and became more appealing to users, and the products therefore became an important communication tool for people in daily life. The instant messaging products on smartphone brought more vitality to the instant messaging market. The mobile instant messaging industry rapidly developed with the popularity of smartphones, especially the sale of the smartphones of RMB 1000 or so. The mobile instant messaging products changed people's way of socializing, and the integration of OTT service and O2O model made them more than just a chatting tool. The research and development of new technologies of mobile instant messaging products led to the growth in the number of mobile instant messaging users which then led to the growth in the number of instant messaging users.



Source: CNNIC Statistical Survey on Internet Development in China

Figure 26 Number of Users and Utilization Ratio of Instant Messaging in China from 2011 to 2012

2. Blog/Personal Space

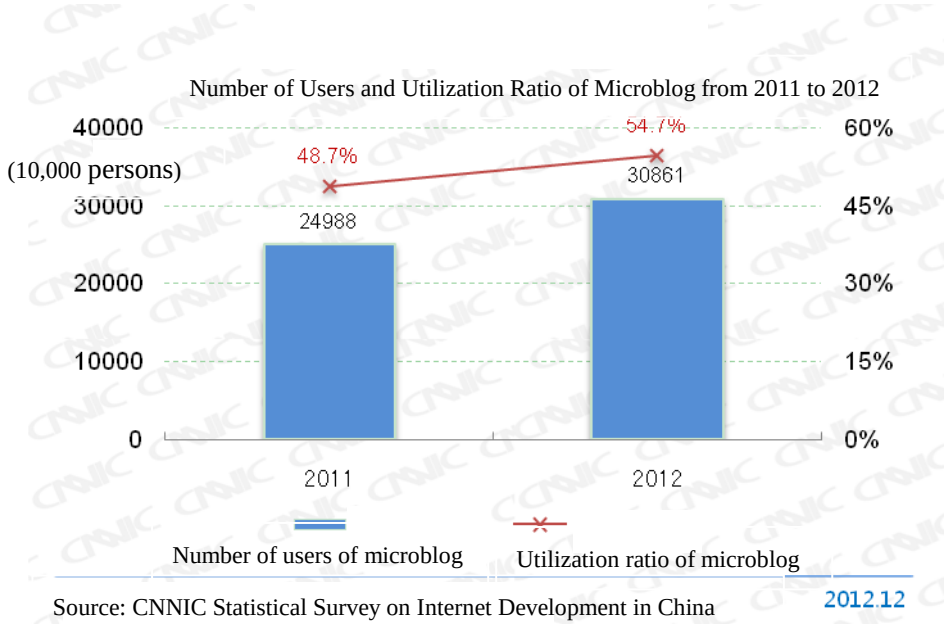
The number of users of blog and personal space was 372 million by the end of December

2012, representing an increase of 5435 compared with the end of 2011. 66.1% of the internet users used blog and personal space, up by 4% compared with the end of 2011.

The space websites such as Qzone had similar basic functions to those of blog websites at the early stage of development, and they were the same type of internet application. In recent years, the space websites were transformed to social networking websites through redesign and therefore met the demands of internet users for socializing; therefore, the number of users was on the rise. Meanwhile, the number of blog users was on a year-on-year decline, and the development model was transformed from grassroots to elite. Blogs of some "super-bloggers" and specialized blogs were viewed by many and were influential, while microblogs and social networking websites which were more interactive were chosen by normal users as a way to communicate and reflect on life. Only 24.8% of the internet users were still using blogs which were 140 million by the end of December 2012.

3. Microblog

The number of microblog users was 309 million by the end of December 2012, representing a growth of 58.73 million, or 23.5%, over the end of 2011. 54.7% of the internet users microblogged, up by 6% compared with the end of 2011.



Source: CNNIC Statistical Survey on Internet Development in China

Figure 27 Number of Users and Utilization Ratio of Microblog in China from 2011 to 2012

Microblog became a mainstream application used by China's internet users after the

development in 2011, and its vast number of users made it a communication center of public opinions. Microblog was reshaping the creation and communication of public opinions. Normal users, opinion leaders and traditional media all turned to microblog to different degrees as a way to obtain news, publish news, express opinions and stir up public opinions, which resulted in high growth rate in number of personal users of microblog in 2012.

The change in the behavior of microblog users was more worth noting than the growth in number of users at current stage. The second half of 2012 saw stagnant and even less activity of microblog users on the PC. According to the data of Chinese Internet Data Platform, the number of daily active users of microblog was on a month-on-month decline in the second half of 2012, decreasing from 112 million (peak value) in July to 87 million in December, and the daily visiting time of microblog also dropped from 11.72 million hours (peak value) in July to 7.78 million hours in December. The reasons behind this tendency were as follows: on one hand, microblog lost the sense of freshness to users, which caused the retention to microblog to weaken; on the other hand, part of the microblog users chose to read and post microblog on their mobile phones instead. 202 million microblog users visited microblogs on their mobile phones by the end of 2012, accounting for 65.6% of the microblog users, and the tendency of users to choose mobile internet made microblog one of the products with the greatest development potentials in the mobile internet era.

4．Social networking websites

The number of users of social networking websites was 275 million by the end of December 2012, up by 12.6% over the end of 2011. The proportion of users of social networking websites in the internet users was 48.8%, slightly higher than 2011.

Social networking function was fully integrated into various internet applications. On one hand, a group of new applications with social networking elements such as photo-sharing application, private social network and shopping sharing application emerged in 2012. Especially in the mobile internet field, many popular mobile applications in 2012 had social networking function because of the communication function of mobile phone. On the other hand, the internet applications such as searching, online shopping and media were incorporating the social networking element so as to enrich their functions, improve the customer experience and have

new service and profit-making models. While the whole internet had the tendency of incorporating social networking function, the traditional social networking websites which required real-name registration increased platform functions, incorporated new social networking component and shifted the emphasis of business to mobile devices, which led to the growth in number of users of social networking websites in 2012. However, as the growth in the number of users of traditional social networking websites which required real-name registration leveled off or slowed down on the whole, the addition of these applications could not lead to a significant growth in number of users; therefore, some social networking websites chose a different path when developing mobile applications and offered brand-new products.

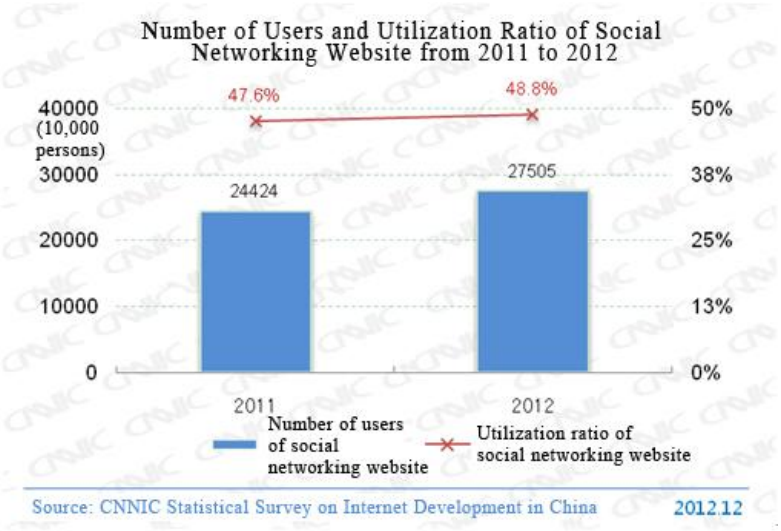


Figure 28 Number of Users and Utilization Ratio of Social Networking Websites in China from 2011 to 2012

(IV) Online Entertainment

1. Online Games

The number of users of online games was 336 million by the end of 2012, and the penetration rate dropped to 59.5% from 63.2% in 2011. The growth in number of users was 11.42 million and the growth rate was only 3.5%, hitting a record low. The number of users of online games in China had kept low since 2010 due to the environment and the internal factors of gaming industry.

First of all, the rapid development of mobile internet brought more challenges than opportunities to online games. On one hand, the increase in the use of mobile internet led to the decline in the use of games; on the other hand, as games were a product emphasizing great

customer experience, it was hard to develop gaming on the mobile phone which had limited size of screen.

Second, internal problems still existed in the online gaming industry. The large client games which had a dominant position in the gaming industry had developed for a long time, and the industry was losing regular users who were getting tired of those games. And the online games lacked variety and it was more difficult to innovate, which led to the difficulty in attracting new users. The internal problems further prevented the development of the industry.

Last, the change in structure of users of online games leads to the revolution of the industry. The user platform is essential in the competition of online gaming products according to the development tendency. The quality of the platform on which the mobile games are based decides the fate of the products as the promotional and payment issues are involved. Moreover, the model of profit-making on mass production was no longer workable for the online gaming industry, and the utilization ratio declined. The increase in individual demands makes it hard for a single gaming product to meet the demands of a vast number of users, so the division of market decides if the game operation can make profit.

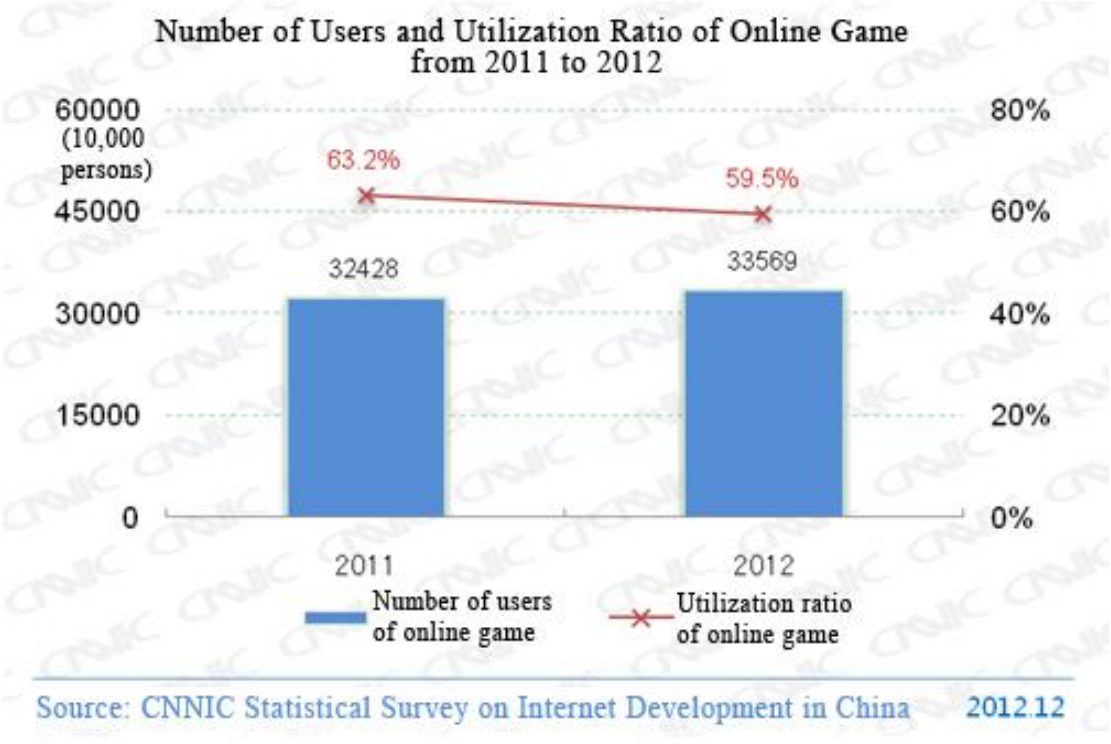


Figure 29 Number of Users and Utilization Ratio of Online Games in China from 2011 to 2012

2. Online Literature

The number of online literature users in China was 233 million by the end of December 2012, representing an annual growth of 30.77 million, or 15.2%, over the end of 2011. The utilization ratio of online literature was 41.4%, up by 1.9% over the end of 2011.

The utilization ratio of online literature did not keep up with the popularity of internet, and the online literature was still an application whose development was slower than that of the whole internet. As a new form of literature, the online literature was popular in the earlier stage of its development due to its low threshold when a vast number of works were written and distributed on the internet to a vast number of readers, which led to the rapid development of online literature. However, the online literature is now in a predicament. On one hand, the low threshold resulted in a large number of low-quality works; on the other hand, in order that the online literature could be updated and distributed rapidly, it was written in such a way that it was less like the works of literature; and to adapt to the taste of the readers, the online literature became stylized. The low quality, lack of innovation and stylizing are the problems existing in online literature and prevent the development of online literature.

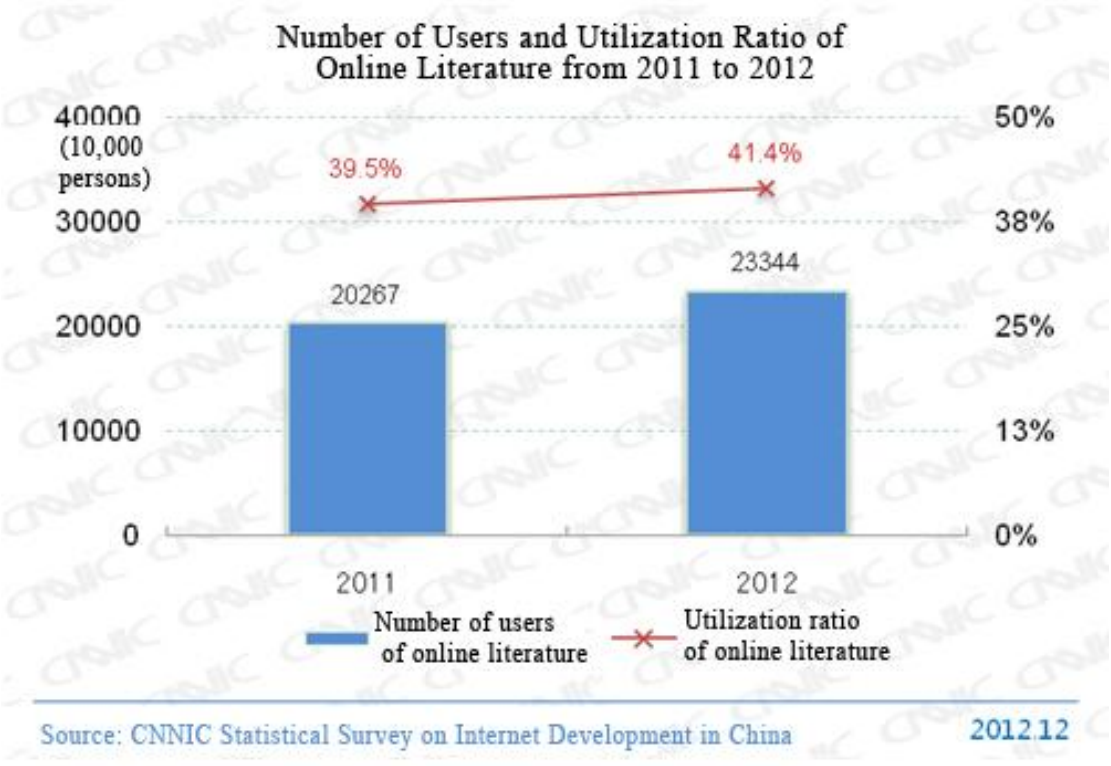


Figure 30 Number of Users and Utilization Ratio of Online Literature in China from 2011 to 2012

3. Online Video

The number of online video users reached 372 million by the end of 2012, representing a growth of 46.53 million, or 14.3%, over the end of 2011. 65.9% of the internet users watched online videos, up by 2.5% compared with the end of 2011.

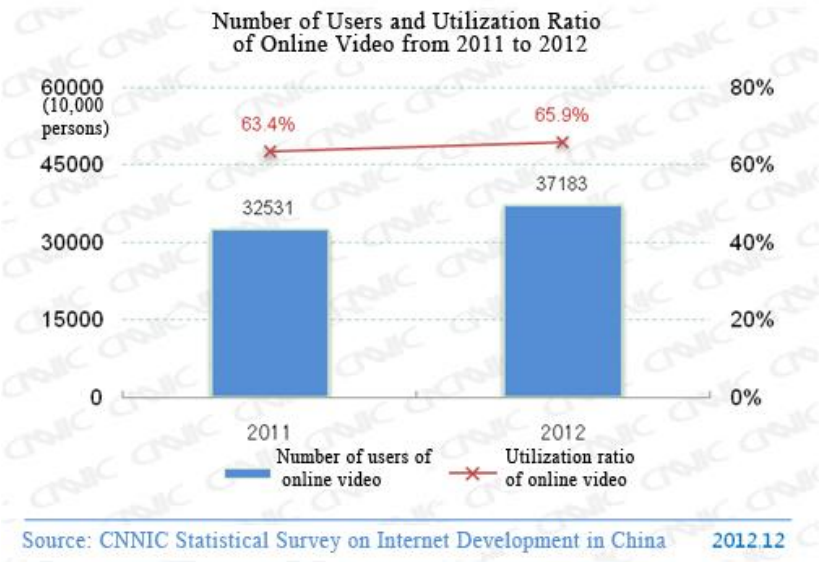


Figure 31 Number of Users and Utilization Ratio of Online Videos in China from 2011 to 2012

In 2012, China's online video companies continued to provide the users with high-quality online video services and took a proactive approach in tackling the problems that existed in the industry. In order to improve the service quality, the companies improved the web content and increased the videos of films and television serials; had more close cooperation with television station in various forms from the elementary form of synchronous broadcasting and joint promotion to the in-depth cooperation such as joint production and development of peripheral programs in the stage of content planning and production to maximize the distribution scope and influence of the program; and increased the input in the content they produced themselves (some of the high-quality content could be broadcasted in the television channel) and formed their own characteristics. These efforts led to the steady rise in the number of online video users.

On the basis of that, the companies adopted various strategies to tackle the problems which were the result of non-rational competition in the industry in recent years to control the costs, increase the profit-making ability and protect the healthy development of the industry. First, meticulous effort was made in the purchase of content, and the irrational increase of prices of

copyrights of television serial to be broadcasted on the internet was contained through the joint purchase of copyrights. Second, attempts were made to affect the behaviors of users. For example, the time of cinema advertising was prudently extended as could be tolerated by the users to increase the profits from advertising, and efforts were made to explore the possibility of paid video model. To conclude, the online video industry was in a positive situation on the whole in 2012 both from the aspects of the number of users and the industry environment.

II. Application of Mobile Phone Internet Users

With the popularity of smartphones, efforts made by internet companies and development of wireless internet, China's mobile internet developed well in 2012 with various applications having good performance. The applications relating to communications and information acquisition developed faster and were still the mainstream applications of the mobile phone, and the numbers of their users and their utilization ratios all significantly increased. The penetration rates of the applications relating to entertainment and e-commerce were comparatively low, but the development speed of these applications was fast and the utilization ratio of the whole sector was rising。Therefore，this sector was a highlight of the industry.

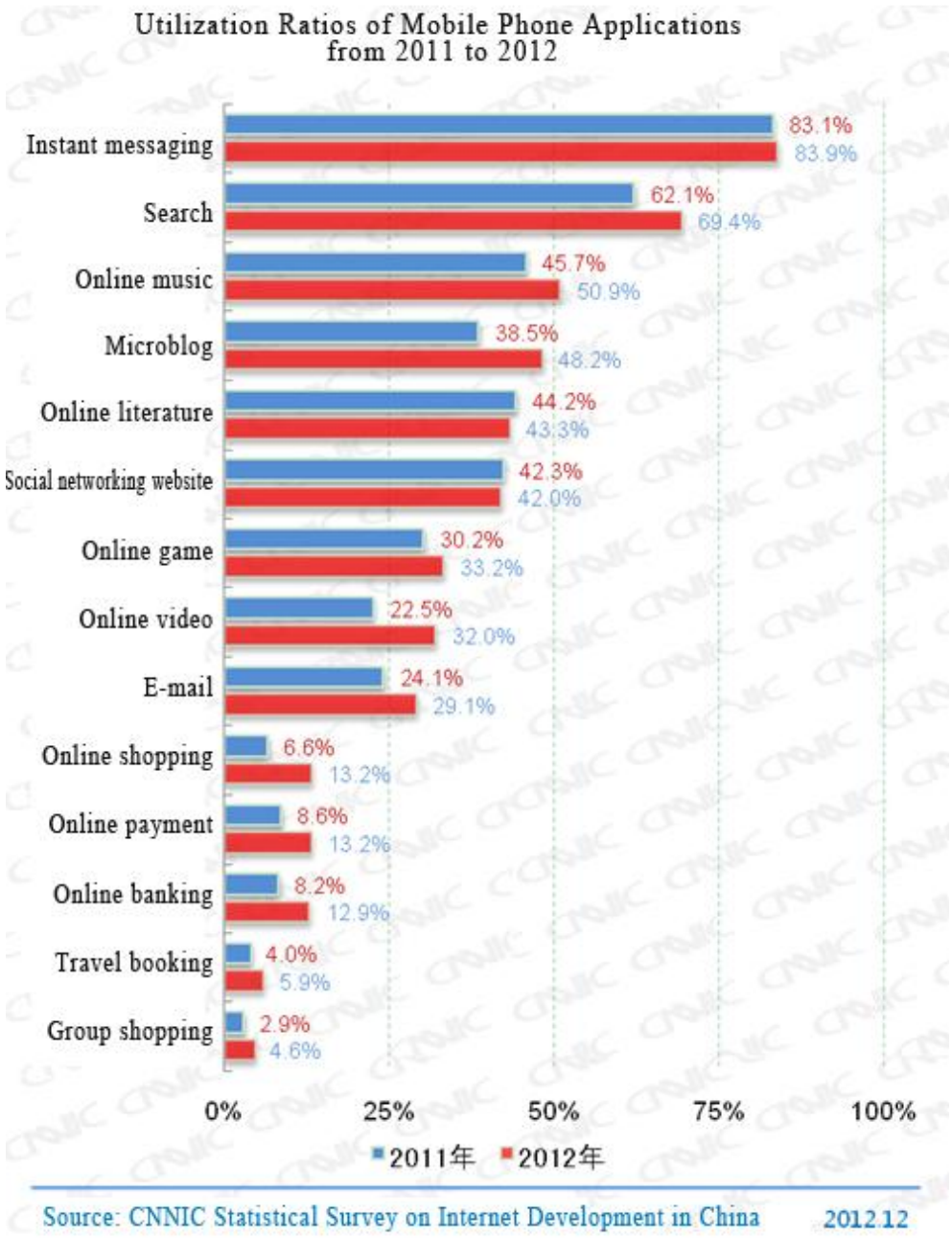


Figure 32 Applications of Mobile Phone Internet Users from 2011 to 2012

The instant messaging became the most popular application on mobile phone with its utilization ratio ranking top 1.

The number of users of mobile phone instant messaging was 352 million by the end of 2012. Its utilization ratio was 83.9% and had been steady after the surge in 2011. Instant messaging ranked top 1 among the applications on mobile phone and became the most popular application on mobile phone.

The instant messaging on mobile phone allowed users to communicate with their friends

anywhere at any time, which was the characteristic of mobile social networking. The interactive elements such as messages, photos and vocal and video materials and functions such as geographical positioning and two-dimensional code scanning were added to the mobile instant messaging, which made the communication more convenient and interesting and attracted more and more mobile internet users who became addicted to it and always stayed online.

Instant messaging had become a standard preset application in the mobile phone with the promotion of instant messaging service providers and the number of its users kept rising. While the number of instant messaging users kept rising, the functions of instant messaging were increasing in 2012. The instant messaging was developed from a pure chatting tool to an integrated platform integrating the functions of social networking, news and recreation as well as the e-commerce service and service for customers which were companies so that the users could obtain all kinds of resources very conveniently. The instant messaging became an important mobile internet portal and had great commercial value.

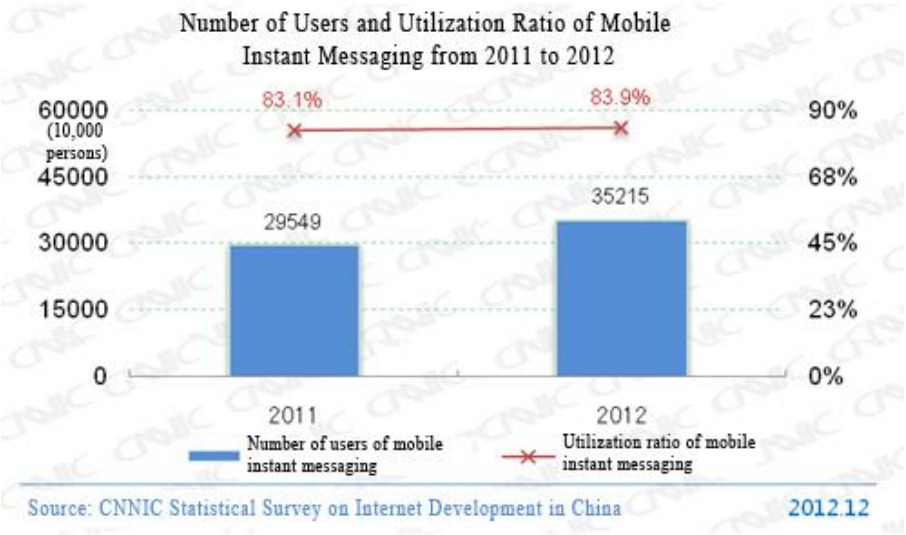


Figure 33 Number of Users and Utilization Ratio of Mobile Instant Messaging in China from 2011 to 2012

The mobile search rapidly developed and had obvious advantages as a portal.

The number of users and utilization ratio of mobile search in China were 291 million and 69.4% respectively by the end of 2012, representing a growth of 32.0% and 7.3% respectively over the end of 2011.

The utilization ratio of mobile search ranked No. 2, making the mobile search a core

application on the mobile internet. The substantial increase in number of users was a result of the rigid demand of mobile phone internet users for mobile search service and showed the advantages of mobile search as a portal in mobile internet. The mobile search is similar to the search for information on the computer and also satisfies the users' demand for conveniently finding information anywhere at any time. The mobile search will be more useful with the development of mobile internet and the expansion of information on the internet. To develop the mobile search and based on the characteristics of localization and time fragmentation of mobile phone use, the mobile search will be developed in two directions in the future. First, the localized information service will be improved so that more accurate search results will be available to users according to the users' positions and behavioral preferences. Second, the interaction will be strengthened. The input of photos and voices compensates for the loss of part of the customer experience caused by the limited size of screen of mobile phone and enables users to key in and find information in fragmented time.

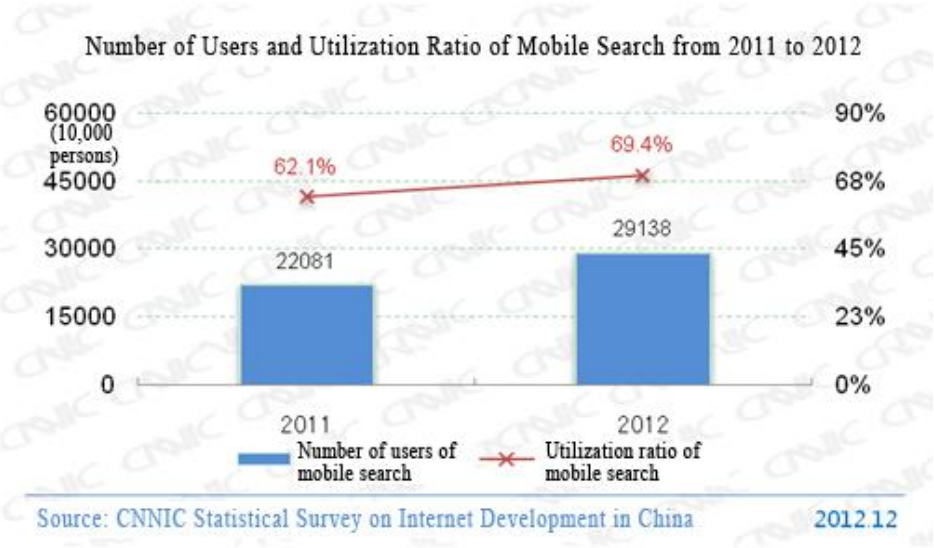


Figure 34 Number of Users and Utilization Ratio of Mobile Search in China from 2011 to 2012

The mobile microblog developed the fastest with strong momentum.

The number of internet users who used microblog on mobile phone was 202 million by the end of 2012, and the utilization ratio of mobile microblog was 48.2%, up by 9.7% over 2011, making mobile microblog an application on mobile phone with the fastest growing utilization ratio for two consecutive years. The mobile microblog became a mainstream application on mobile phone with strong development momentum.

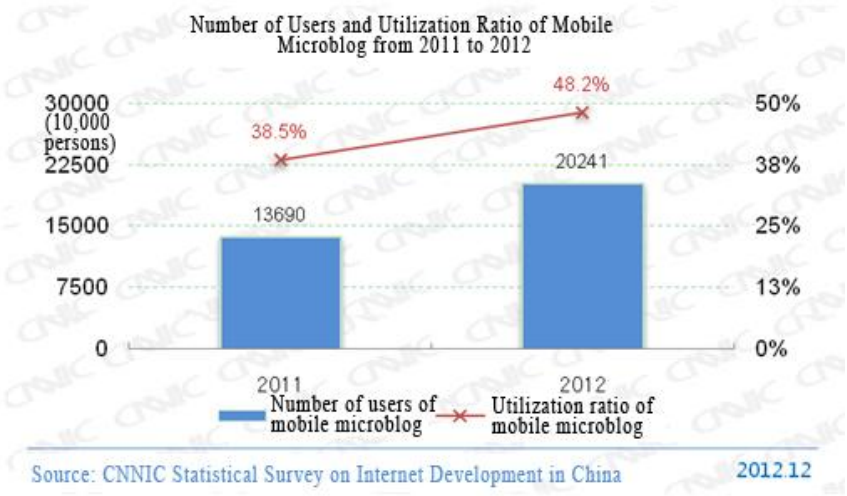


Figure 35 Number of Users and Utilization Ratio of Mobile Microblog in China from 2011 to 2012

The rapid development of microblog on mobile phone was due to two reasons. First, the users carried their mobile phones with themselves, so they could learn the latest news and publish personal comments anywhere at any time via the microblog which became an important way for them to obtain information and communicate with friends; second, the microblog was less affected by the limited size of screen of mobile phone as the characters published on microblog were short, photo sharing was fast and operation was convenient, so the microblog could be conveniently used by users in fragmented time.

The growth rate of number of mobile video users ranked No. 2, making mobile video a new highlighted recreational application.

The number of China's internet users who watched videos online or downloaded videos on mobile phones was 130 million by the end of 2012, and the utilization ratio of mobile video was 32.0%, up by 9.5% over 2011, making the mobile video the second fastest developing application following mobile microblog and a new highlighted recreational application of 2012.

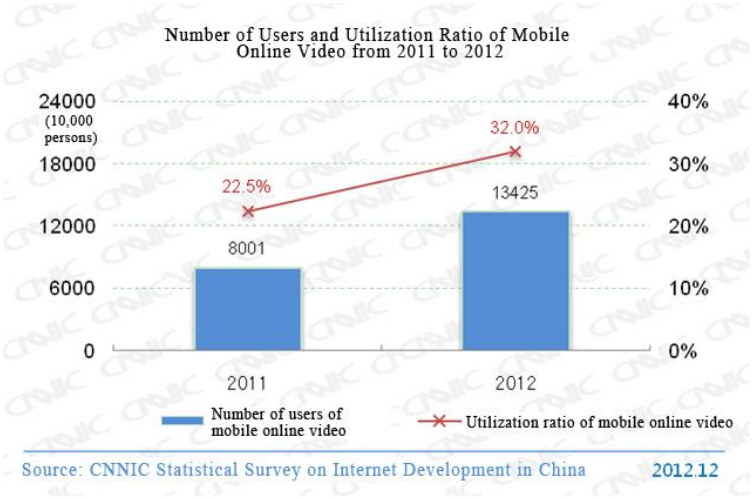


Figure 36 Number of Users and Utilization Ratio of Mobile Online Video in China from 2011 to 2012

The mobile video attracted increasingly more users due to the following reasons: 1. The access to 3G and Wi-Fi high-speed internet provided basis for the development of mobile video as the limitation of internet traffic on mobile video was reduced. With the popularity of 4G technology and expansion of wireless network coverage, the number of users of mobile video will further increase. 2. The widening of screen of smartphone and the introduction of application of high-definition mobile video improved users' experience of watching video on mobile phone and attracted more internet users to use the application who gradually got used to watching video on mobile phone instead of on the computer at home. 3. The interaction and cooperation between mobile video and social networking websites, microblog websites and portal websites, etc greatly promoted the development of mobile video service.

The utilization ratio of mobile online game increased and the mobile online game became a new force driving the development of online game.

The number of users of mobile online game in China was 139 million in 2012 and the utilization ratio was 33.2%, up by 3.0% compared with 2011.

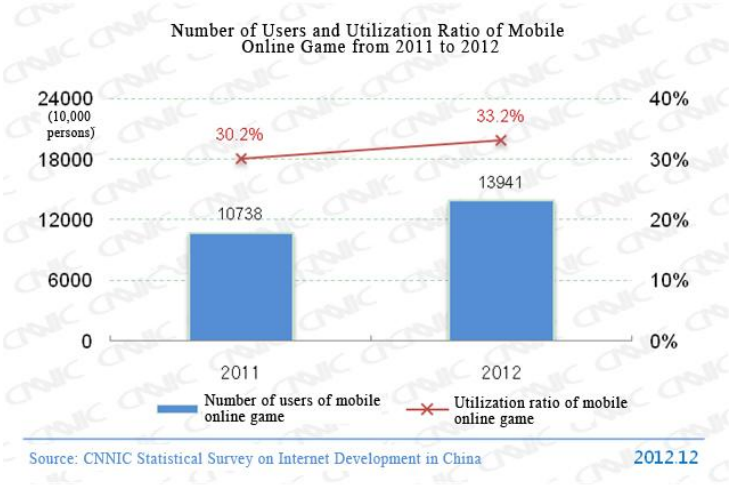


Figure 18 Number of Users and Utilization Ratio of Mobile Online Game in China from 2011 to 2012

The growth in number of online game players was slow and the utilization ratio of online game kept declining in recent years. The growth in number of players of online game on the computer was especially slow. According to CNIDP (http://www.cnidp.cn/), the daily number of people active on the fighting game platform dropped from 139 million to 135 million and the daily playing time of a person dropped from 12 minutes 20 seconds to 8 minutes 38 seconds on average in December compared with January 2012. Although the emergence of web games enriched the bearing form of games, the web games failed to become a strong driver of growth in the number of new users as their contents and playing methods were basically the same as client games. On the contrary, with the popularity of smartphone and development of mobile internet in 2012, there was a rapid growth in the number of users of mobile online game, which injected new vigor into the online game industry.

The mobile online game rapidly developed and became a way of recreation. More and more users liked to play games in fragmented time such as when they were at the bus station and metro station, in a queue or at dinner. With the popularity of smartphone, the mobile online game will gradually cover all the age groups instead of only the group of young people. Convenient and fun, the mobile online game will attract many older users in addition to young people, unlike the online game on the computer with the threshold of use. The mobile online game also faces many problems while attracting a large amount of users which pose a challenge to its further development. First, the visual effect of the screen of mobile phone and the limitation on operation have a great adverse effect on users' experience in operation of games on mobile phone; second,

playing games on mobile phone consumes much electricity in the cell and users get less addicted to the game due to this concern; third, there are a large number of mobile online game companies providing games with homogeneous contents that lack innovation, which makes the mobile online game less attractive to the users.

The number of users of e-commerce applications was increasing on the whole, and the growth in number of users of mobile shopping was the largest.

With the improvement of the environment of mobile internet and the popularity of smartphone in China, the e-commerce applications on mobile phone developed rapidly in China and the sector was growing on the whole in 2012. The utilization ratio of mobile online payment, mobile online banking, mobile shopping and mobile group shopping rose by 4.6%, 4.7%, 6.6% and 1.7% respectively compared with 2011, and the growth rates of the numbers of users of these applications were all more than 80%. The utilization ratio of mobile shopping grew the fastest. The number of users of mobile shopping was 2.36 times that of the end of 2011 and the increase in number was the largest.

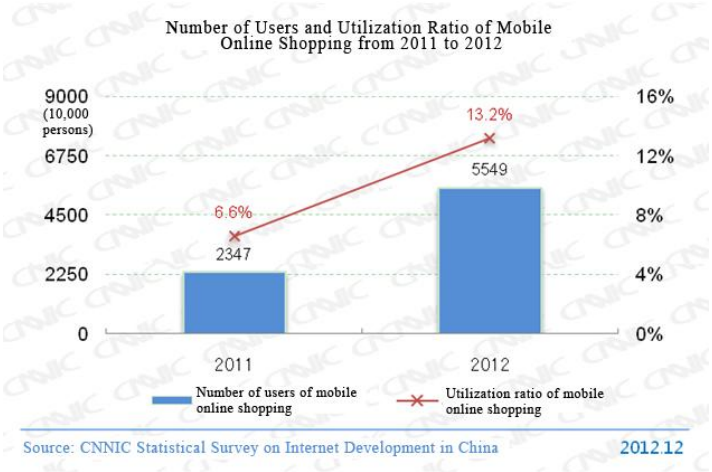


Figure 38 Number of Users and Utilization Ratio of Mobile Online Shopping in China from 2011 to 2012

First, shopping on mobile phone removed the limitation of conventional shopping on places and made it possible for the transactions to be concluded anywhere at any time, which was an important reason why consumers liked it. Second, as the mobile shopping developed, the purchase of clothes and cosmetics, film tickets and prepaid phone card and booking of hotels and travel itinerary, etc could all be done on the mobile phone, which met the various demands of consumers in life and brought convenience to them. Third, the development of applications of shopping on mobile phone and payment on mobile phone improved the users' experience of shopping on

mobile phone. More and more consumers could complete the whole processes of shopping on mobile phone instead of making payment on the computer after looking things up on the mobile phone, which greatly increased the shopping efficiency. Last, with the development of the functions such as two-dimensional code, bar code and comparison shopping, more and more consumers started to shop online instead of shopping offline, bringing a new driving force of growth in the use of mobile shopping.

Chapter V Internet Application of SMEs

I. Development of Basic Internet Conditions for SMEs

(I) Popularization of Computer

By the end of December 2012, the ratio of the interviewed SMEs depending on computer-based offices[6] has reached 91.3%. As an important part to information technology of enterprises, computer is the basis for Internet application of enterprises. Now, SMEs in China have reached a high level in computer popularization, and have possessed the conditions required for in-depth Internet application and information construction.

(II) Popularization of Internet

By the end of December 2012, the ratio of the interviewed SMEs depending on internet-based offices[7] has reached 78.5%. The proportion of enterprises depending on internet-based office is one of the core indicators for the development level of Internet application in enterprises. Limited by the popularization of hardware devices, computers remained to be the major Internet access tools for SMEs. However, according to the survey results, now the internet popularization rate of SMEs in China was far behind the

[6] Computer refers to desktop or laptop, excluding some equipment with embedded computing function, such as cell phone, Personal Digital Assistant (PDA) or television.

[7] Enterprises depending on Internet-based offices mean that enterprises directly use internet in various activities. Although some enterprises use internet media to conduct advertising/ promotion, they do not directly use internet to work. Those ones are not included. Any equipment possessing the internet access function (not limited to computer) can be served as tools accessing internet, including mobile phone, PDA, game machine and digital television which can access Internet through fixed or mobile network.

popularization rate of computers, and it was very common that computers were not accessed to Internet. With the development of Internet, the functions of computer have been enriched greatly, therefore, cultivating the internet awareness of SMEs and further increasing their “internet access” proportion would pave the road for the in-depth implementation of internet applications of enterprises.

Table 1 lists the internet popularization rates of enterprises in some member states of OECD[8] by the end of 2011 or even earlier. We can know from the table that there is still a large gap between the internet popularization rate of SMEs in China and that of some developed countries. In developed countries, for small- and mini-sized enterprises employing not more than 50 persons, the Internet popularization rate has basically reached 95%. Among those countries, the average Internet popularization rate of the 27 countries of European Union reached 94.2%, and in 2010, Korea witnessed an Internet popularization rate of 98.2%. Besides, for enterprises with a scale of 50 persons and above in most countries, the internet popularization rate reached nearly 100%.

Table 1 The proportions of enterprises depending on internet-based offices in some developed countries (classified by the staff scale)

(%)	10-49 persons	50-249 persons	250 persons and above
Australia (2010) (*)	95.9	99.1	99.9
Austria	97.9	99.5	100.0
Belgium	95.1	99.5	99.8
Canada (2007) (*)	93.7	98.9	99.6
Czech	95.6	98.8	99.7
Denmark	97.4	98.4	99.8
Estonia	94.9	98.9	100.0
27 member states of EU	94.2	98.7	99.6
Finland	99.8	100.0	100.0
France	95.1	99.6	99.7
Germany	96.0	98.7	99.7
Greece	92.4	98.9	100.0
Hungary	87.9	96.5	99.0
Iceland (2010)	97.3	100.0	100.0

[8] Organization for Economic Co-operation and Development, OECD for short.

(%)	10-49 persons	50-249 persons	250 persons and above
Ireland	91.7	99.2	99.2
Israel (2008)	91.0	100.0	100.0
Italy	93.8	97.7	99.5
Japan (*)	..	98.4	99.8
Republic of Korea (2010) (*)	98.2	99.9	100.0
Luxembourg	96.2	99.1	100.0
Mexico (2008) (*)	89.3	94.1	97.2
Holland	99.6	100.0	100.0
New Zealand (*)	95.8	98.7	99.4
Norway	96.6	98.3	98.7
Poland	92.6	99.1	99.7
Portugal	94.2	100.0	100.0
Slovakia	97.1	98.9	100.0
Slovenia	96.7	99.6	100.0
Spain	96.2	99.3	99.9
Sweden	95.3	100.0	99.3
Switzerland (2008) (*)	100.0	100.0	100.0
Turkey (2010)	89.7	96.9	98.4
U.K.	94.3	98.9	99.2

Data Source: OECD

Notes:

1. The data were issued by OECD at the end of 2011 or even earlier, and for those not issued at the end of 2011, the time is marked in the table.
2. For most European countries, the statistics cover manufacturing, construction, wholesale and retail, hotel and restaurant, transport, storage and communications, financial agency and insurance, real estate, leasing and commercial activities, as well as other community-related, social and personal service activities. For European countries, the financial agency and insurance industry are not covered in the statistics.
3. For Australia, the following industries are excluded: government organization, public management and security, education and training, asset investment and pension fund, religious services, services for civic, professional and other interest groups, and private household employees, etc. As from 2010, agriculture, forestry and fishery have been covered in the statistics.
4. For Canada, agriculture, forestry, animal husbandry and fishery, as well as professional contractors in the construction industry are excluded.
5. For Denmark and Finland, financial agency and insurance are not included in the statistics.
6. For Japan, only enterprises with a staff number of 100 and above are included in the statistics, and agriculture, forestry, fishery and mining industry are excluded.
7. The statistics of the Republic of Korea mainly cover the following areas: agriculture, forestry, fishery, mining and quarrying industry, manufacturing, construction, wholesale and retail, transportation, accommodation and restaurant, information and communication, financial institution and insurance, real estate and leasing, professional, scientific and technical activities, management of business

facilities and business support services, membership organization, maintenance and other personal services.

8. For New Zealand, the statistics exclude government administration and national defense, as well as personal and other services. Only enterprises with a staff number of 6 and above (average employees) and an annual turnover reaching NZD 30,000 are included in the statistics.
9. For Switzerland, only enterprises with a staff number of 5 and above are included in the statistics.
10. There are also some differences among the enterprise scale segments of different countries: the "50-249 persons" for Canada actually reached "50-299 persons", and "250 persons and above" actually reached "300 persons and above"; the "50-249 persons" for Japan actually reached "100-299 persons", and the "250 persons and above" actually reached "300 persons and above"; the "10-49 persons" for Mexico actually reached "20-49 persons"; the "10-49 persons" for Switzerland actually reached "5-49 persons".

(III) Popularization of Broadband

By the end of December 2012, among the interviewed SMEs, the popularization rate of fixed broadband has reached 71.0%[9], and broadband became the main way for enterprises to access Internet. In 2012, the broadband construction in China entered into the phase of full acceleration, covering various aspects such as the development of fiber broadband network and wireless mobile broadband network. In the Guiding Opinions for the Implementation of the Outline of the "12th Five-year Plan" issued by the Ministry of Industry and Information Technology, it is proposed in particular that we should improve the level of broadband infrastructure in China, advance the popularization and promotion of broadband application, and bring into play the key role of broadband in supporting the overall promotion of the information technology level of our country, as well as the role in the development of economy and society. Besides, the task of actively supporting the improvement of internet access and application level in SMEs is put forward, and it is clearly indicated that we should support and encourage SMEs to actively enhance the internet environment of SMEs, so as to elevate the ability and level of such enterprises in utilizing broadband network and information service.

[9] The popularization rate of fixed broadband released in this survey refers to the proportion of those using fixed broadband to access the Internet among the interviewed enterprises; the figure disclosed in the previous *Survey Report on the Internet Applications of SMEs in China* refers to the proportion of those using fixed broadband to access the Internet among enterprises depending on internet-based offices.

Table 2 provides the broadband popularization rates of enterprises in some member states of OECD by the end of 2011 or even earlier. In 2011, in the countries with relevant statistics, the average broadband popularization rate in enterprises using Internet approached 90%. Among those countries, the broadband popularization rate in the 27 countries of EU hit 89.2%, that in Japan was a bit lower, 83.4%, and that in Korea reached 98.4% as early as 2010. Compared with most developed countries, the broadband popularization rate in the SMEs with internet access in China still lagged far behind. Furthermore, the issue of “broadband being not broad” has always been obstructing the implementation of the internet applications and information construction among enterprises.

Table 2 The broadband popularization rates of enterprises accessing internet in some developed countries

(%)	2005	2006	2007	2008	2009	2010	2011
Finland	81.1	88.9	90.6	92.1	93.9	..	98.7
Republic of Korea	94.2	96.2	97.0	97.2	98.6	98.4	..
Switzerland (*)	85.0	..	..	98.0	..	..	..
Spain	76.2	87.1	89.8	92.1	93.8	95.4	96.1
Iceland	..	95.2	..	99.5	..	95.3	..
Sweden	82.5	88.9	87.3	89.4	89.3	91.3	94.9
Slovenia	73.9	74.9	79.3	84.3	84.9	87.8	94.9
Denmark	82.5	82.7	80.1	79.7	80.0	86.6	94.8
New Zealand (*)	..	85.0	..	92.5	..	94.7	..
Australia (*)	70.4	83.8	89.7	93.3	96.6	94.4	..
Canada	89.7	92.2	94.3	..	..	..	..
France	..	86.5	89.4	92.3	92.9	93.3	93.8
U.K.	65.4	77.4	78.2	87.1	88.3	87.9	93.5
Luxembourg	64.2	76.0	81.4	86.9	88.8	..	93.2
Holland	71.3	81.7	86.9	85.9	87.4	90.9	92.3
Estonia	66.6	75.7	78.3	87.8	86.2	88.0	92.1
Ireland	47.6	60.7	67.6	82.7	80.2	86.7	91.2
Germany	62.4	73.1	79.6	84.0	89.2	89.3	91.1
Norway	78.0	86.1	85.2	86.1	90.0	86.8	90.1
Austria	60.7	69.5	72.2	76.4	76.8	81.7	89.4
27 member states of EU	62.2	72.9	77.0	81.1	83.2	85.4	89.2
Turkey	..	..	81.8	..	..	88.8	..

(%)	2005	2006	2007	2008	2009	2010	2011
Czech	52.1	69.3	76.9	79.2	77.7	86.5	88.6
Italy	56.7	69.6	75.6	81.1	83.8	84.0	88.3
Hungary	47.6	61.3	69.5	72.1	75.6	79.4	87.3
Belgium	77.9	84.5	86.3	91.4	88.8	..	87.1
Portugal	62.8	65.9	76.4	80.7	84.7	84.7	85.6
Japan (*)	68.1	73.6	75.9	76.8	76.9	79.7	83.4
Greece	44.3	57.7	71.7	73.7	84.2	80.6	81.6
Slovakia	47.6	60.8	76.1	79.0	78.2	78.3	81.5
Poland	42.7	46.4	53.2	58.7	58.3	69.0	77.5
Mexico (*)	..	..	..	51.6	..	..	..

Data Source: OECD

Notes:

1、 For Australia, agriculture, forestry and fishery have been covered in the statistics as from 2010.

2、 For Japan, only enterprises with a staff number of 100 and above are included in the statistics.

3、 For Mexico, only enterprises with a staff number of 20 and above are included in the statistics.

4、 For New Zealand, only enterprises with a staff member of 6 and above and an annual income of NZD30, 000 and more are included in the statistics.

5、 For Switzerland, only enterprises with a staff member of 5 and above are included in the statistics. The broadband refers to Internet access with a speed above 144kbps.

II. Development of E-commerce and Internet Marketing of SMEs

(I) Popularization of E-commerce

By the end of December 2012, the E-commerce application level of the interviewed SMEs still remained very low, with online sale accounting for 25.3% and online purchase accounting for 26.5%.

To improve the E-commerce application level of SMEs in China was of great significance. As an important force in China's national economic and social development, SMEs accounted for over 99% of the total number of enterprises in China, providing 80% urban jobs and creating 60% GDP and 50% tax revenues. For SMEs, the application of E-commerce was of great importance to SMEs in improving their internal management efficiency, reducing operation costs, expanding market opportunities and enhancing service level.

Table 3 shows the E-commerce popularization rates of enterprises in some member states of OECD by the end of 2011 or even earlier. It can be seen from the table that the online sale popularization rate of SMEs in China was above the average level of these countries while the rate of online purchase was below the average level. According to the statistics, for enterprises in most developed countries, the proportion of online sale was smaller than that of online purchase, and in some countries the proportion of online sale even could not reach half of that of online purchase. On the one hand, the developed countries developed E-commerce earlier than China did, and got vigorous support from society and governments in aspects of economy and policies, which have effectively promoted the in-depth and extensive popularization of E-commerce in enterprises. On the other hand, to improve the efficiency of supply chain management and reduce operation costs, enterprises in most developed countries have adopted online purchase as the solution driven by internal IT-based development. Therefore, online purchase proportion of enterprises in developed countries was much higher than that of Chinese enterprises.

In comparison, in the period with relatively insufficient internal information construction, the E-commerce of SMEs in China was largely driven by the E-commerce service providers in the external market, and the primary objective was to expand market, seek business opportunities and promote sales. SMEs in China had not realized that online purchase can bring benefits for internal operation, and they did not bring online purchase into full play.

Table 3 The E-commerce popularization in some developed countries

(%)	Proportion of online-sale enterprises	Proportion of online-purchase enterprises
Austria	11.1	41.0
Belgium	21.9	50.9 (2010)
Czech	25.8	39.1
Denmark	22.9	47.8 (2010)
Estonia	11.1	17.2 (2010)
27 member states of EU	13.0	19.1
Finland	17.1	33.1
France	10.7	20.0
Germany (2010)	22.2	40.4
Greece	5.9	6.0
Hungary	9.7	17.9
Iceland (2010)	16.0	21.6
Ireland	23.3	48.8
Italy	3.9	11.3
Luxembourg	14.9	32.0
Holland	19.5	28.3
Norway	30.6	50.8
Poland (2010)	8.5	12.0
Portugal	15.7	13.9
Slovakia	13.3	14.5
Slovenia	11.3	18.0
Spain	11.1	19.9
Sweden	24.4	38.5
Turkey (2010)	8.1	11.2
U.K.	14.9	44.5 (2010)
Australia (2010) (*)	32.3	60.8
Canada (2007) (*)	13.1	65.4
Israel (2008)	47.0	43.0
Japan (*)	21.6	30.0
Republic of Korea (2010) (*)	9.3	48.3

(%)	Proportion of online-sale enterprises	Proportion of online-purchase enterprises
Mexico (2008) (*)	8.7	13.5
New Zealand (2010) (*)	51.9	74.0
Switzerland (2008) (*)	31.0	75.0

Data Source: OECD

Notes:

1. The data were issued by OECD at the end of 2011 or even earlier, and for those not issued at the end of 2011, the time is marked in the table.
2. There are some differences in the definition of online sale and online purchase between different countries. For example, some countries define that orders generated through traditional E-mail are within the scope of online sale/ online purchase (such as Australia, Canada and Korea), but some others exclude such orders (such as Ireland, U.K. and some other European countries). Most countries adopt OECD's definition of internet E-commerce, namely the commodities or services are ordered through internet, but the payment and delivery can be finished off-line.
3. The statistic objects vary from country to country:
   a) For European countries, the financial agency and insurance industry are not covered in the statistics.
   b) For Australia, the following industries are excluded: government organization, public management and security, education and training, asset investment and pension fund, religious services, services for civic, professional and other interest groups, and private household employees, etc. As from 2010, agriculture, forestry and fishery have been covered in the statistics.
   c) For Canada, agriculture, forestry, animal husbandry and fishery, as well as professional contractors in the construction industry are excluded.
   d) For Japan, only enterprises with a staff number of 100 and above are included in the statistics, and agriculture, forestry, fishery and mining industry are excluded.
   e) The statistics of the Republic of Korea mainly covered the following areas: agriculture, forestry, fishery, mining and quarrying industry, manufacturing, construction, wholesale and retail, transportation, accommodation and restaurant, information and communication, financial institution and insurance, real estate and leasing, professional, scientific and technical activities, management of business facilities and business support services, membership organization, maintenance and other personal services.
   f) For New Zealand, only enterprises with a staff number of 6 and above and an annual turnover reaching NZD 30,000 are included in the statistics. The sectors of government administration and national defense, as well as personal and other services are excluded.
   g) For Switzerland, only enterprises with a staff number of 5 and above are included in the statistics, covering manufacturing, construction and the supplies and services of electricity, gas and water.
4. For Switzerland, the statistics refers to the percentage of enterprises adopting online purchase/ sale among the enterprises depending on internet-based offices.

(II) Application of Internet Marketing[10]

By the end of December 2012, the ratio of the interviewed SMEs employing internet to conduct marketing and promotion reached 23.0%[11]. Among various marketing and promotion channels, internet has already excelled such traditional print media as newspaper and magazine, and with advantages such as diversified presentation forms, relatively low promotion threshold and evaluable promotion effects, it has gone beyond such three-dimensional media as television and radio, becoming the preferred channel for SMEs in China to carry out marketing and promotion. According to further survey, among various internet marketing methods, SMEs tended to choose E-business platform promotion, search engine marketing, instant messenger marketing, website-displayed advertisements, E-mail marketing and other sophisticated internet marketing methods. Other emerging internet marketing methods such as microblog marketing, forum/ BBS, SNS, video marketing and group purchase were also favored by SMEs to a certain extent.

III. The Features and Trends of Internet Application of SMEs

◇ **There is still a large room for SMEs to improve the internet access level**

There is still a large space for SMEs to improve the internet access level both in terms of “quantity” and “quality”. First, the internet popularization rate and broadband access rate in China still lag behind the developed countries; second, the actual speed of broadband is far behind the advanced level abroad. In the future, we should further publicize the role of internet in promoting the development of enterprises, improve the internet awareness of enterprises, and carry out the internet infrastructure construction stated in the “12th Five-year Plan” at the same time, paving the road and clearing the obstacles to the utmost extent for the internet application and development of SMEs .

[10] It refers to activities of marketing and promotion by way of internet.
[11] It includes advertising released or promotion carried out by the enterprises or through agent/ advertising company, including paid promotion and free promotion.

◇ **E-commerce application shall be popularized and deepened further**

SMEs in China still face some practical difficulties in developing E-commerce. First, the awareness of applying E-commerce still lags behind the developed countries. For SMEs in China, their understanding of E-commerce still remains only at promotion and sale. Even in enterprises that have already carried out E-commerce, there are still problems in the coordinated management of traditional channels and network channel. Besides, there are some problems with the construction of E-commerce supporting facilities. For example, the legal and institutional environment for E-commerce is not complete; logistics and payment system still need to be improved; and the overall quality of service suppliers such as website servers, E-commerce platform operators needs to be enhanced. Furthermore, SMEs lack the conditions and mechanisms required for attracting, retaining and training E-commerce professionals. Those problems can all lead to that even if E-commerce is carried out, it is difficult to gain actual effects and E-commerce will ultimately become just a form.

◇ **The management of internet marketing market needs to be standardized further**

Boasting such features of controllable low costs, low threshold and high accuracy, internet marketing has won the great favor of SMEs. However, the internet marketing market is not mature yet: from the perspective of SMEs, the following issues are common: the delivery method is not refined enough, the level of website construction is inadequate; and there are difficulties in integrating operation mechanism and internet marketing. From the perspective of service suppliers, market regulations are not complete and the service quality varies from each other greatly. All those problems have limited SMEs from conducting and utilizing internet marketing, leading to inadequate actual effects of internet marketing. In the future, we should organize the forces from all social circles such as government, service providers and enterprises to regulate the internet marketing market jointly and assist the growth of SMEs really and truly.

Appendix 1 Attached Tables of Basic Internet Resources

Table 1 Number of IPv4 addresses in the regions of China

Region	Number of Addresses	Equivalence
Mainland China	330, 534, 912	19A+179B+144C
Taiwan	35, 394, 304	2A+28B+19C
Hong Kong SAR	11, 762, 432	179B+123C
Macau SAR	324, 864	4B+245C

Table 2 Allocation of IPv4 addresses among the organizations in Mainland China

Organization name	Number of Addresses	Total number of IPv4 addresses
China Telecom	125, 761, 280	7A+126B+247C
China United Network Communications Corporation	69, 751, 040	4A+40B+81C
China Mobile Communications Corporation	51, 086, 336	3A+11B+132C
China Education and Research Network	16, 649, 728	254B+14C
China Tietong Telecommunications Co., Ltd.	15, 795, 200	241B+4C
State Information Center	4, 194, 304	64B
Great Wall Broadband Network Service Co., Ltd	2, 147, 328	32B+196C
Beijing Education Information Network Service Center Co., Ltd	2, 097, 152	32B
Oriental Cable Network Co., Ltd.	1, 662, 976	25B+96C
Beijing Teletron Telecom Engineering Co., Ltd	1, 544, 448	23B+145C
China Cable Television Network Co., Ltd	1, 188, 864	18B+36C
China Great Wall Telecommunication Technology Development Center	1, 056, 768	16B+32C
Beijing Chengyi Times Network Engineering Technology Co., Ltd	1, 032, 192	15B+192C
CECT-CHINACOMM Communications Co., Ltd	1, 011, 712	15B+112C

HiChina Zhicheng Technology Ltd.	999,424	15B+64C
Beijing Gehua CATV Network Co., Ltd	999,424	15B+64C
China Science and Technology Network	928,768	14B+44C
21 Viatnet Group, Inc.	838,656	12B+204C
Beijing Bitone United Networks Technology Service Co., Ltd	786,432	12B
Shenzhen Topway Video Communication Co., Ltd	722,944	11B+8C
Beijing Shidai Hongyuan Communication Technology Co., Ltd	720,896	11B
Beijing Founder Broadband Network Technology Co., Ltd	663,552	10B+32C
Beijing Weishi Chuangjie Technology Development Co., Ltd	655,360	10B
Beijing New-billion Telecom Technology Co., Ltd	589,824	9B
China Netcom Broadband Network Co., Ltd	557,056	8B+128C
Huabei Oil Communication Corporation Information Center	557,056	8B+128C
Beijing Kuandaitong Telecom Technology Co., Ltd	524,288	8B
Beijing Kuancom Network Technology Co., Ltd	524,288	8B
CITIC Networks	524,288	8B
Huaxia Shilian Holdings Co., Ltd	524,288	8B
Shaanxi Broadcasting and TV Network Intermediary Group Co., Ltd	503,808	7B+176C
Guangdong Jinwanbang Technology Investment Co., Ltd	479,232	7B+80C
Bejing Hsoft Technologies Inc.	461,824	7B+12C
Jinan UPNET Technology Co., Ltd.	458,752	7B
Daqing Zhongji Petroleum Telecommunication Construction Co., Ltd	438,272	6B+176C
FibrLINK Communications Co., Ltd	407,552	6B+56C
Beijing SRIT NETech Co., Ltd	385,024	5B+224C
Alibaba Cloud Computing Co., Ltd	344,064	5B+64C
Guangzhou Zhujiang Digital Group Co., Ltd	327,680	5B
Jiangxi Radio and TV Network Transmission Co., Ltd	327,680	5B
Jinan Broadcasting Jiahe Broadband Network Co., Ltd	270,336	4B+32C
Shenzhen Zhongtian Network Technology Co.,	262,144	4B

Ltd		
Hubei Chutian Shitong Network Co., Ltd	262, 144	4B
Fujian Fiber Intercommunications Co., Ltd	262, 144	4B
ChinaCache International Holdings Ltd	262, 144	4B
Guangdong CATV Network Co., Ltd	262, 144	4B
Chongqing CATV Network Co., Ltd	262, 144	4B
263 Network Communication Co., Ltd.	259, 072	3B+244C
China Motion Telecom	205, 824	3B+36C
Shanghai Yovole Computing Networks Co., Ltd	196, 608	3B
Beijing Sinnet Technology Co., Ltd	189, 440	2B+228C
Gold-bridge Netcom Telecommunication Co., Ltd	188, 416	2B+224C
Pacnet Business Solutions (Shenzhen) Limited	164, 864	2B+132C
Guangdong Efly Network Co., Ltd	147, 456	2B+64C
Tianjin Broadcast and TV Network Co., Ltd	144, 384	2B+52C
Qihoo 360 Technology Ltd.	133, 120	2B+8C
Guangzhou Yizhan Hulian Computer Technology Ltd.	131, 072	2B
Beijing Yuexintong Information Technology Company Limited	131, 072	2B
Shanghai Yixuan Network Technology Co., Ltd	131, 072	2B
Shenzhen Tencent Computer System Co., Ltd	131, 072	2B
Henan Xinfei Jinxin Computer Co., Ltd	131, 072	2B
Beijing Hangshu Wide-net Technology Co., Ltd	131, 072	2B
Sichuan Ping An Communication Technology Co., Ltd.	131, 072	2B
Shenzhen Wotone Network Development Co., Ltd	131, 072	2B
SVA Information Industry Co., Ltd	131, 072	2B
Sub-total	314, 881, 792	18A+196B+183C
Others	15, 653, 120	238B+217C
Total	330, 534, 912	19A+179B+144C

Data source: APNIC and CNNIC

Note 1: As a national Internet registry (NIR) certified by APNIC and approved by Ministry of Industry and Information Technology, CNNIC organized ISPs with certain scale and influence to build up an IP address allocation alliance. At present, CNNIC Allocation Alliance totally has 339 members, holding 74167552 IPv4 addresses, about 4.42A. Most of the above-listed are members of CNNIC Allocation Alliance;

Note 2: Only the organizations with the number of IPv4 addresses greater than 2B are listed in the IPv4 address allocation table.

Note 3: The deadline for the above statistical data is December 31, 2012.

Table 3 Number of IPv6 addresses in China

Region	Number of Addresses
Mainland China	12535 /32s
Taiwan	2337 /32s
Hong Kong SAR	109 /32s
Macau SAR	3 /32s

Table 4 IPv6 address allocation in Mainland China

Organization name	Number of IPv6 addresses (/32)
China Telecom	4099
China Mobile Communications Corporation	4098
China United Network Communications Corporation	4098
CNNIC IP Address Allocation Alliance	203
China Education and Research Network	16
Beijing Internet Institute Information Technology Co., Ltd	16
Others	5
Total	12535

Data source: APNIC and CNNIC

Note 1: /32 as shown in the IPv6 address allocation table is a method to present IPv6 addresses, and the corresponding number of addresses is $2^{(128-32)}=2^{96}$.

Note 2: The deadline for the above statistical data is December 31, 2012.

Table 5 Proportion of IPv4 address in each province

Province	Proportion
Beijing	25.61%
Guangdong	9.61%
Zhejiang	5.31%
Shandong	4.93%
Jiangsu	4.81%
Shanghai	4.47%
Liaoning	3.39%
Hebei	2.89%
Sichuan	2.81%
Henan	2.67%
Hubei	2.42%

Hunan	2.41%
Fujian	1.96%
Jiangxi	1.77%
Chongqing	1.71%
Anhui	1.68%
Shaanxi	1.66%
Guangxi	1.41%
Shanxi	1.30%
Heilongjiang	1.23%
Jilin	1.23%
Tianjin	1.05%
Yunnan	0.99%
Inner Mongolia	0.79%
Xinjiang	0.62%
Hainan	0.48%
Gansu	0.48%
Guizhou	0.44%
Ningxia	0.24%
Qinghai	0.18%
Xizang	0.13%
Others	9.32%
Total	100.00%

Data source: APNIC and CNNIC
Note 1: The above IP address statistics are for the provinces where the IP address owners are located.
Note 2: The deadline for the above statistical data is December 31, 2012.

Table 6 Number of domain names, .CN domain names and .中国 domain names by provinces

Province	Domain name		Including：.CN Domain name		.中国 domain names	
	Number	Proportion in total domain names	Number	Proportion in total .CN domain names	Number	Proportion in total .中国 domain names
Zhejiang	3,429,977	25.6%	2,810,016	37.4%	20,053	7.1%
Guangdong	2,815,805	21.0%	1,848,602	24.6%	59,854	21.1%
Beijing	1,255,887	9.4%	472,405	6.3%	31,553	11.1%

Shanghai	843,503	6.3%	260,263	3.5%	16,126	5.7%
Fujian	815,661	6.1%	353,235	4.7%	14,268	5.0%
Jiangsu	522,351	3.9%	178,443	2.4%	22,480	7.9%
Shandong	468,980	3.5%	129,154	1.7%	16,638	5.9%
Hebei	272,654	2.0%	58,502	0.8%	7,267	2.6%
Sichuan	261,186	1.9%	71,341	1.0%	9,958	3.5%
Liaoning	228,795	1.7%	90,419	1.2%	12,517	4.4%
Henan	228,049	1.7%	63,124	0.8%	4,748	1.7%
Hubei	156,517	1.2%	58,910	0.8%	5,360	1.9%
Hunan	142,789	1.1%	51,385	0.7%	4,619	1.6%
Anhui	119,306	0.9%	43,309	0.6%	3,553	1.3%
Tianjin	117,168	0.9%	29,585	0.4%	3,240	1.1%
Shaanxi	112,627	0.8%	36,002	0.5%	4,415	1.6%
Chongqing	109,230	0.8%	34,312	0.5%	6,281	2.2%
Jiangxi	77,075	0.6%	26,518	0.4%	2,442	0.9%
Heilongjiang	73,258	0.5%	28,582	0.4%	4,246	1.5%
Shanxi	71,069	0.5%	21,032	0.3%	3,024	1.1%
Guangxi	70,328	0.5%	27,829	0.4%	2,840	1.0%
Jilin	66,827	0.5%	18,115	0.2%	3,192	1.1%
Yunnan	60,920	0.5%	24,233	0.3%	4,734	1.7%
Hainan	43,005	0.3%	11,847	0.2%	677	0.2%
Inner Mongolia	39,254	0.3%	12,663	0.2%	1,958	0.7%
Guizhou	33,002	0.2%	12,919	0.2%	1,425	0.5%
Xinjiang	32,447	0.2%	11,815	0.2%	739	0.3%
Gansu	23,794	0.2%	8,973	0.1%	647	0.2%
Ningxia	14,577	0.1%	3,813	0.1%	373	0.1%
Qinghai	12,396	0.1%	2,054	0.0%	229	0.1%
Xizang	4,798	0.0%	1,210	0.0%	203	0.1%
Others	888,844	6.6%	703,123	9.4%	13,825	4.9%
Total	13,412,079	100.0%	7,503,733	100.0%	283,484	100.0%

Note: The total number of domain names by provinces doesn't cover .EDU.CN.

Table 7 Number of websites by provinces

	Number of Websites	Proportion in total number of websites
Guangdong	435,864	16.3%
Beijing	398,462	14.9%
Shanghai	270,327	10.1%

Zhejiang	195,546	7.3%
Fujian	188,992	7.1%
Jiangsu	170,810	6.4%
Shandong	142,863	5.3%
Hebei	86,452	3.2%
Sichuan	82,942	3.1%
Henan	79,301	3.0%
Liaoning	64,369	2.4%
Hubei	60,296	2.2%
Hunan	48,458	1.8%
Shaanxi	39,484	1.5%
Tianjin	36,742	1.4%
Anhui	34,547	1.3%
Chongqing	31,437	1.2%
Shanxi	21,739	0.8%
Jiangxi	21,545	0.8%
Jilin	21,091	0.8%
Heilongjiang	20,258	0.8%
Guangxi	18,067	0.7%
Yunnan	13,291	0.5%
Inner Mongolia	12,946	0.5%
Hainan	12,436	0.5%
Guizhou	7,941	0.3%
Gansu	6,228	0.2%
Xinjiang	5,697	0.2%
Ningxia	4,098	0.2%
Qinghai	2,356	0.1%
Xizang	972	0.0%
Others	145,145	5.4%
Total	2,680,702	100.0%

Note: The total number of websites by provinces doesn't cover the websites under EDU.CN.

Table 8 Web pages classified by updating cycle

Web page updating cycle	Proportion
Update weekly	2.0%
Update monthly	7.4%
Update every three months	18.5%
Update every six months	16.5%
Update every more than six months	55.6%
Total	100.0%

Data source: Baidu Online Network Technology (Beijing) Co., Ltd.

Table 9 Web pages classified by suffix forms

Web page suffix forms	**Proportion**
. html	9.5%
htm	3.9%
/	54.7%
shtml	0.0%
asp	9.6%
php	7.7%
txt	0.0%
nsf	0.0%
xml	0.0%
jsp	3.2%
cgi	0.0%
pl	0.0%
aspx	2.2%
do	0.0%
dll	0.0%
jhtml	1.5%
cfm	0.0%
php3	0.0%
phtml	0.0%
Other suffixes	7.7%
Total	100.0%

Data source: Baidu Online Network Technology (Beijing) Co., Ltd.

Table 10 Web pages classified by multimedia forms

Web page multimedia forms	Proportion (in multimedia web pages)
jpg	57.0%
gif	37.6%
zip	0.0%
swf	3.7%
doc	0.1%
pdf	0.0%
rm	0.0%
mid	0.0%
ram	0.0%
mp3	0.0%
ppt	0.0%
mpg	0.0%
Other multimedia	1.5%
Total	100.0%

Data source: Baidu Online Network Technology (Beijing) Co., Ltd.

Table 11 Number of web pages by provinces

	Total number	Static	Dynamic	Proportions of static to dynamic
Beijing	38, 094, 501, 610	20, 523, 896, 790	17, 570, 604, 819	1. 17:1
Guangdong	17, 873, 852, 984	9, 287, 537, 886	8, 586, 315, 098	1. 08:1
Shanghai	10, 814, 818, 142	5, 769, 570, 774	5, 045, 247, 367	1. 14:1
Zhejiang	9, 588, 985, 450	5, 056, 771, 081	4, 532, 214, 370	1. 12:1
Jiangsu	8, 233, 663, 796	3, 390, 706, 882	4, 842, 956, 915	0. 7:1
Henan	5, 968, 602, 580	2, 560, 637, 401	3, 407, 965, 179	0. 75:1
Fujian	4, 698, 727, 949	2, 074, 868, 490	2, 623, 859, 459	0. 79:1
Shandong	2, 923, 357, 797	974, 224, 060	1, 949, 133, 737	0. 5:1
Sichuan	2, 864, 372, 046	1, 094, 210, 179	1, 770, 161, 868	0. 62:1
Tianjin	2, 759, 890, 512	1, 642, 864, 995	1, 117, 025, 517	1. 47:1
Hebei	2, 600, 059, 497	1, 420, 333, 349	1, 179, 726, 148	1. 2:1
Hubei	2, 592, 350, 255	1, 101, 255, 024	1, 491, 095, 230	0. 74:1
Anhui	2, 476, 031, 556	913, 276, 745	1, 562, 754, 811	0. 58:1
Jiangxi	1, 933, 048, 617	1, 094, 447, 242	838, 601, 374	1. 31:1
Hunan	1, 832, 633, 429	806, 350, 992	1, 026, 282, 437	0. 79:1
Liaoning	1, 821, 832, 142	1, 033, 267, 243	788, 564, 899	1. 31:1
Shaanxi	1, 179, 661, 457	329, 571, 486	850, 089, 970	0. 39:1
Guangxi	614, 025, 218	184, 612, 141	429, 413, 077	0. 43:1
Hainan	571, 666, 578	139, 033, 712	432, 632, 867	0. 32:1
Heilongjiang	542, 111, 759	203, 721, 579	338, 390, 181	0. 6:1
Yunnan	485, 436, 913	125, 292, 764	360, 144, 150	0. 35:1
Chongqing	450, 294, 294	172, 759, 056	277, 535, 239	0. 62:1
Shanxi	413, 268, 048	100, 714, 193	312, 553, 856	0. 32:1
Jilin	406, 422, 825	136, 650, 645	269, 772, 180	0. 51:1
Gansu	331, 899, 561	80, 713, 036	251, 186, 525	0. 32:1
Xinjiang	290, 884, 206	83, 834, 148	207, 050, 058	0. 4:1
Guizhou	138, 898, 043	35, 365, 506	103, 532, 538	0. 34:1
Inner Mongolia	131, 434, 473	28, 064, 367	103, 370, 106	0. 27:1
Ningxia	86, 224, 234	10, 261, 424	75, 962, 810	0. 14:1
Qinghai	24, 374, 540	3, 429, 758	20, 944, 783	0. 16:1
Xizang	3, 486, 741	1, 104, 233	2, 382, 509	0. 46:1
The whole country	122, 746, 817, 252	60, 379, 347, 181	62, 367, 470, 077	0. 97:1

Data source: Baidu Online Network Technology (Beijing) Co., Ltd.

Table 12 Number of web page bytes by provinces

	Total page size (KB)	Average number of bytes per page (KB)
Beijing	1, 598, 896, 794, 063	42
Guangdong	720, 862, 367, 972	40
Shanghai	528, 339, 799, 641	49
Zhejiang	486, 434, 239, 754	51
Jiangsu	310, 644, 859, 566	38
Henan	252, 917, 546, 708	42
Fujian	159, 006, 497, 360	34
Shandong	139, 951, 991, 860	48
Hebei	117, 095, 088, 380	45
Tianjin	104, 827, 317, 374	38
Hubei	102, 850, 454, 180	40
Sichuan	101, 914, 677, 802	36
Anhui	90, 079, 145, 839	36
Liaoning	87, 602, 050, 250	48
Hunan	60, 510, 693, 091	33
Jiangxi	58, 259, 945, 425	30
Shaanxi	45, 647, 129, 967	39
Guangxi	24, 079, 120, 223	39
Shanxi	23, 190, 373, 335	56
Yunnan	21, 704, 229, 825	45
Heilongjiang	21, 380, 520, 814	39
Hainan	20, 746, 518, 506	36
Chongqing	16, 855, 795, 631	37
Jilin	12, 729, 963, 427	31
Gansu	10, 543, 603, 773	32
Xinjiang	9, 193, 140, 276	32
Guizhou	4, 673, 062, 202	34
Ningxia	4, 515, 820, 351	52
Inner Mongolia	3, 695, 735, 778	28
Qinghai	1, 200, 252, 712	49
Xizang	114, 548, 362	33
The whole country	5, 140, 463, 284, 447	42

Data source: Baidu Online Network Technology (Beijing) Co., Ltd.

Table 13 Proportion of web page classified by updating cycle in each province

	Update weekly	Update monthly	Update every three months	Update every six months	Update every more than six months
Beijing	1.90%	7.10%	17.75%	15.48%	57.77%
Guangdong	1.71%	7.29%	17.05%	15.72%	58.23%
Shanghai	2.02%	6.88%	16.55%	15.57%	58.98%
Zhejiang	2.35%	8.44%	19.28%	16.59%	53.34%
Jiangsu	2.15%	7.54%	20.17%	17.63%	52.51%
Henan	2.41%	8.44%	22.41%	18.67%	48.08%
Fujian	1.94%	6.63%	16.92%	17.88%	56.63%
Sichuan	2.14%	7.68%	20.58%	18.05%	51.55%
Hebei	2.16%	6.96%	17.47%	15.72%	57.69%
Shandong	2.17%	6.91%	19.66%	18.05%	53.20%
Tianjin	1.57%	5.64%	15.11%	13.99%	63.69%
Hubei	2.19%	8.01%	18.82%	17.10%	53.88%
Anhui	2.24%	8.32%	20.62%	17.99%	50.83%
Jiangxi	2.23%	7.83%	17.01%	18.24%	54.69%
Liaoning	1.88%	5.44%	18.06%	16.72%	57.89%
Hunan	2.71%	9.91%	21.92%	18.75%	46.70%
Shaanxi	2.04%	7.06%	24.00%	20.63%	46.27%
Hainan	1.29%	6.30%	21.51%	20.57%	50.33%
Guangxi	2.35%	7.70%	17.60%	15.74%	56.61%
Heilongjiang	2.33%	9.09%	24.36%	18.78%	45.43%
Yunnan	1.68%	6.40%	22.25%	22.01%	47.67%
Shanxi	2.55%	8.18%	24.74%	18.88%	45.65%
Chongqing	2.93%	9.99%	26.35%	14.80%	45.94%
Jilin	3.71%	13.92%	26.37%	20.10%	35.90%
Gansu	2.16%	9.63%	27.45%	24.57%	36.18%
Xinjiang	2.47%	8.72%	27.95%	21.45%	39.41%
Guizhou	4.51%	12.25%	23.66%	25.81%	33.78%
Ningxia	0.80%	2.98%	22.82%	23.04%	50.37%
Inner Mongolia	3.33%	8.44%	21.54%	30.63%	36.06%
Qinghai	2.39%	5.46%	17.81%	17.74%	56.59%
Xizang	1.28%	5.26%	12.39%	14.45%	66.62%
The whole country	2.02%	7.39%	18.47%	16.50%	55.62%

Data source: Baidu Online Network Technology (Beijing) Co., Ltd.

Table 14 Proportion of web page classified by coding type in each province

	Simplified Chinese	Traditional Chinese	English	Others
Beijing	93.69%	3.58%	0.83%	1.90%
Guangdong	95.26%	2.29%	0.66%	1.79%
Shanghai	90.01%	8.05%	0.78%	1.17%
Zhejiang	96.62%	0.92%	1.65%	0.80%
Jiangsu	96.95%	2.11%	0.49%	0.44%
Henan	98.32%	1.07%	0.34%	0.27%
Fujian	98.29%	0.89%	0.35%	0.46%
Shandong	91.49%	5.12%	0.60%	2.79%
Sichuan	98.66%	0.41%	0.33%	0.60%
Tianjin	97.59%	0.93%	0.46%	1.03%
Hebei	97.17%	1.33%	0.47%	1.03%
Hubei	97.44%	0.70%	0.45%	1.41%
Anhui	95.45%	1.63%	0.81%	2.11%
Jiangxi	93.55%	4.62%	1.32%	0.51%
Hunan	97.14%	2.10%	0.28%	0.48%
Liaoning	98.24%	0.87%	0.45%	0.44%
Shaanxi	99.00%	0.34%	0.32%	0.34%
Guangxi	96.29%	2.92%	0.36%	0.44%
Hainan	95.75%	1.72%	0.16%	2.37%
Heilongjiang	96.91%	1.97%	0.53%	0.59%
Yunnan	94.47%	5.15%	0.19%	0.19%
Chongqing	94.27%	5.11%	0.29%	0.33%
Shanxi	96.09%	1.56%	2.12%	0.23%
Jilin	96.26%	0.96%	2.37%	0.41%
Gansu	93.61%	5.75%	0.23%	0.41%
Xinjiang	96.52%	2.87%	0.41%	0.20%
Guizhou	96.77%	1.55%	0.97%	0.71%
Inner Mongolia	98.07%	0.30%	1.28%	0.35%
Ningxia	97.02%	2.60%	0.09%	0.29%
Qinghai	92.14%	7.05%	0.33%	0.48%
Xizang	97.39%	0.09%	0.23%	2.29%
The whole country	95.03%	2.91%	0.74%	1.32%

Data source: Baidu Online Network Technology (Beijing) Co., Ltd.

Appendix 2 Organizations Supporting the Survey

We would like to express our heartfelt thanks to the following organizations which have provided strong support for the availability of online questionnaires for this survey and the collection of the basic resources data.

1. Portal websites for survey (listed according to the time when the survey links are provided)

Taobao.com	Sohu.com	NetEase.com
Renren.com	Qunar.com	ifeng.com
Iqiyi.com	Vancl.com	Sina.com.cn
Kaixin001.com	58.com	CSDN
QQ.com	Funshion.com	People.com.cn
Docin.com	Jiayuan.com	

2. Organizations supporting the survey (not listed in any particular order)

China Telecom
China United Network Communications Limited
China Mobile Communications Corporation
China Education and Research Network Center
China Science and Technology Network Center
ChinaSat
China International Electronic Commerce Center
CGWNET Center
Baidu Online Network Technology (Beijing) Co., Ltd.
SanFront Information Technology Company
Chongqing Zhijia Information Technology Co., Ltd (CQHOT)
Beijing East Netscape Information Technology Co., Ltd
Beijing SinoNets Xinye Network and Telecommunication Co., Ltd
Beijing Innovative Linkage Technology Ltd.
Beijing Xinnet Digital Information Technology Co., Ltd
Guangdong Eranet International Limited
Xiamen Longtop On-line Technology Co., Ltd (its brand Bizcn)

Xiamen Jingtong Technology Industry Co., Ltd.
Xiamen ZZY Network Service Co., Ltd
NET.cn
Zhongqi Power S&T Co., Ltd

Appendix 3 Introduction to CNIDP

cnidp.cn -- open and shared Internet data and services

Launched and operated by CNNIC

◆ Providing Internet statistical data and services for free

Reflecting the situation of Internet development in China objectively and timely

Website of the platform: www.cnidp.cn

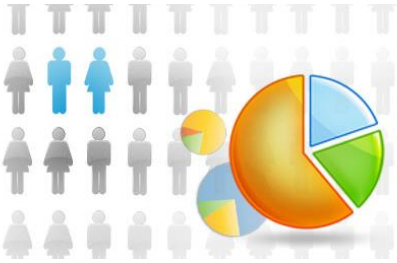
Introduction to the platform

Chinese Internet Data Platform, launched and run by CNNIC, adopts the research method of fixed sample panel to reflect multiple facets (macro and micro) of Internet development situation in China and provide multifaceted decision-making support for the participants of the Internet industry through the Internet using behavior data of Chinese Internet users samples collected by the survey clients continuously in real time and by analyzing those data statistically.

Function Demonstration

Statistical data

Provide weekly, monthly, quarterly and half-year statistical data including the covered users, visiting times, page views, visiting duration and other indicators for domestic mainstream websites/software; the data are updated within no more than 3 days.

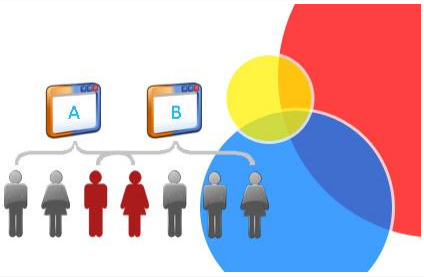


Users' features

Provide multi-dimensional structural distribution data including gender, age, academic degree, occupation, salary, region and city levels for domestic mainstream websites/software.

Overlap analysis

Conduct statistics on the overlap of user groups and the structural distribution of different user groups for different websites/software.



Trend comparison

Provide detailed historical statistical data of each day so as to reflect the trend of historical changes for domestic mainstream websites/software.