Chapter 2 - Size and Structure of Internet Users

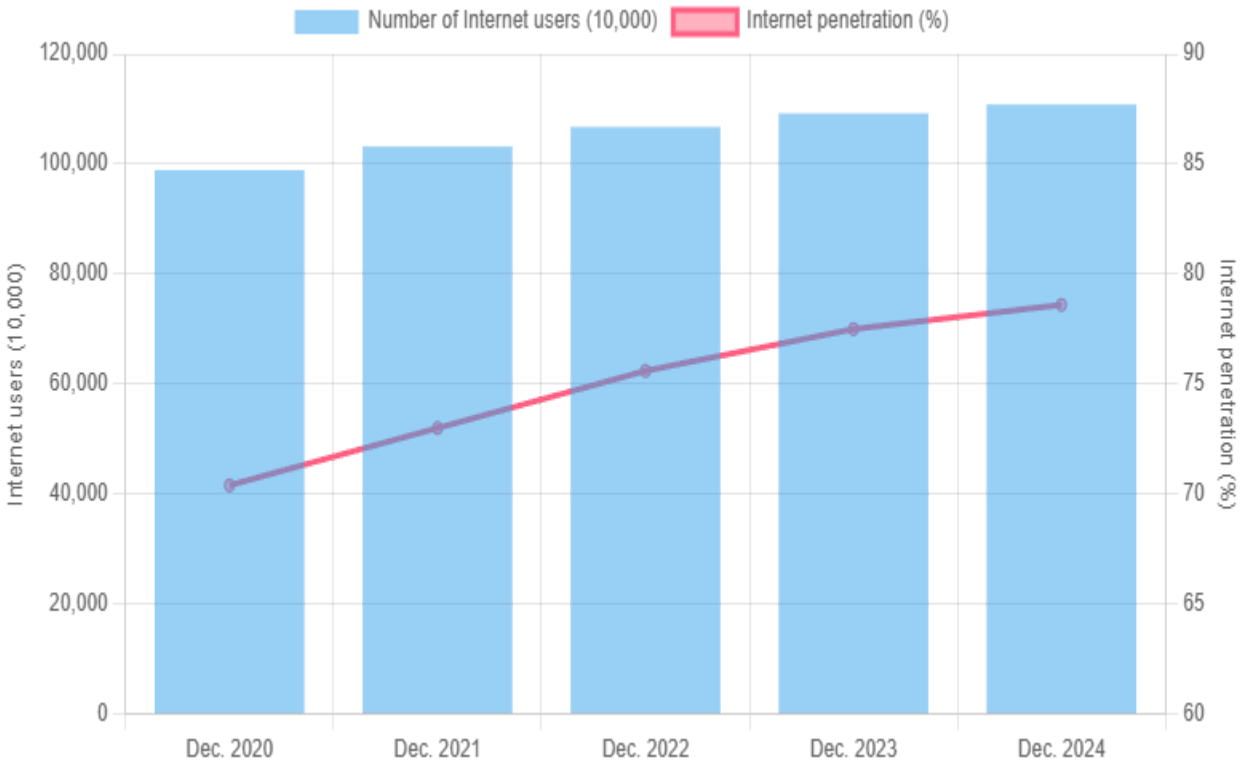
The year 2024 marked the 30th anniversary of China’s all-purpose access to the global Internet. Over a three-decade period, the number of Chinese netizens reached 1,108 million, accounting for over 20%[15] of the worldwide total, with Internet penetration reaching 78.6%. Over the past three decades, the number of Internet users in China has increased, the composition of netizens has become more homogeneous, and their digital literacy and skills have improved steadily. Hundreds of millions of people have benefited from the Internet's development.

I. Size of Internet Users in China

1. Overall Size of Internet Users in China

By December 2024, China had **1,108 million** Internet users, an increase of **16.08 million** over December 2023. Internet penetration reached 78.6%, up 1.1 percentage points from December 2023.

Figure 10 Netizen Size and Internet Penetration from Dec. 2020 to Dec. 2024

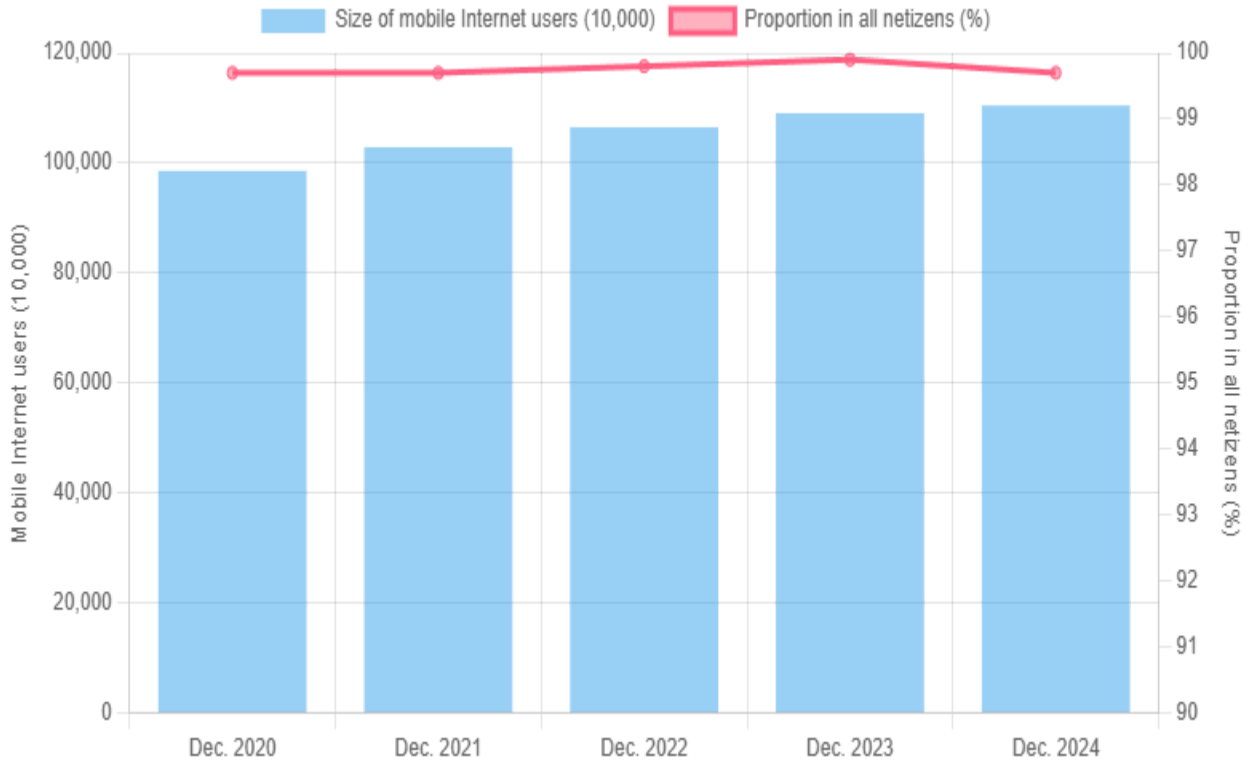


Left axis: Number of Internet users (10,000 persons). Right axis: Internet penetration rate (%).

Source: Statistical Survey on China's Internet Development, CNNIC, December 2024.

As of December 2024, the number of mobile phone users accessing the Internet reached **1,105 million**, an increase of **14.03 million** from December 2023, accounting for 99.7% of all Internet users.

Figure 11 Size of Mobile Internet Users and Their Proportion in All Netizens from Dec. 2020 to Dec. 2024



Left axis: Size of mobile Internet users (10,000 persons). Right axis: Their proportion among all netizens (%).

Source: Statistical Survey on China's Internet Development, CNNIC, December 2024.

In 2024, China's Internet recorded significant achievements in the development, application and promotion of information infrastructure. In this context, the number of Internet users continued to grow, further boosting the diffusion of digital vitality and the sharing of digital dividends.

First, the network infrastructure was strengthened to accommodate users' diverse access requirements. China's Ministry of Industry and Information Technology and other departments have made overall arrangements and advanced the coordinated development of new information infrastructures across regions, networks, and industries[16]. They have expedited the transition from the Internet of Everything to the Smart Connection of everything[17], thereby enabling more users to access Internet services.

As of November, China had built a total of **4.191 million** 5G base stations, accounting for **33.2%** of all mobile base stations[18]. In the mobile Internet of Things (IoT), the three major telecommunications enterprises had 2.642 billion cellular IoT end-users by November, representing 59.6% of mobile network end-connections

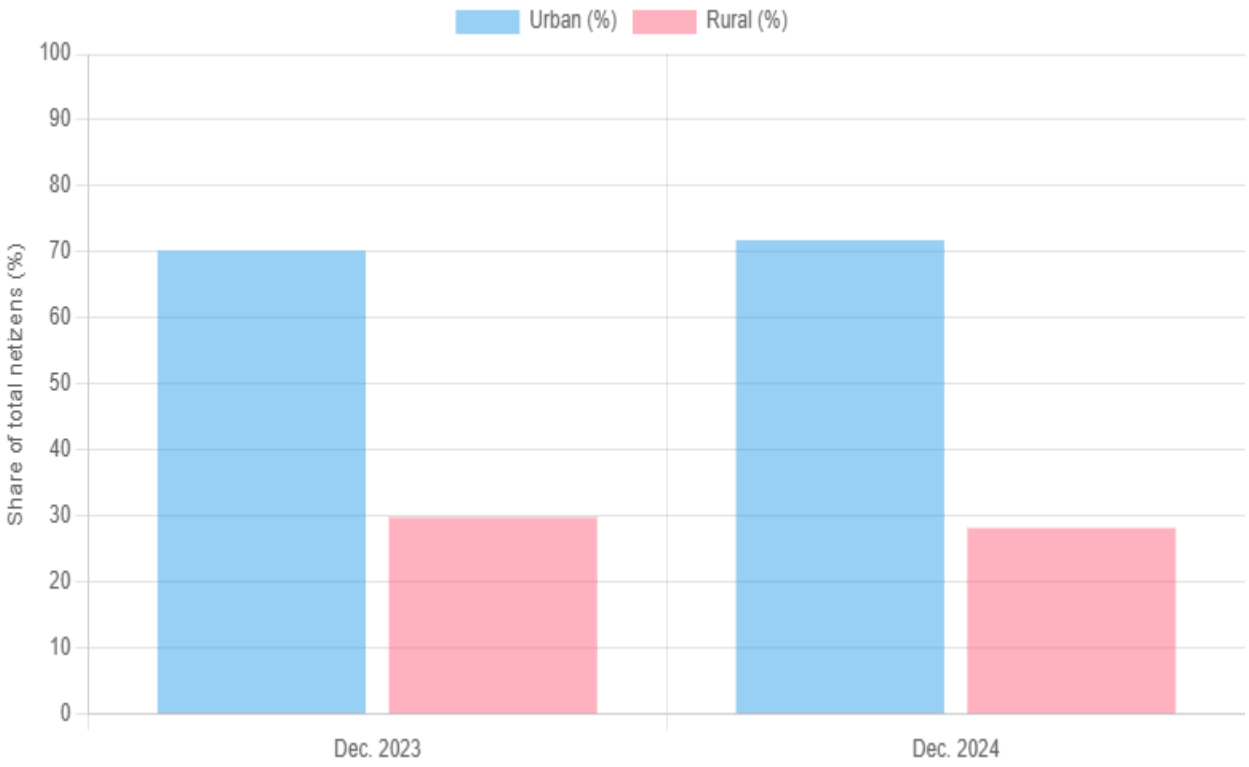
(including mobile phone users and cellular IoT end-users) [19]. The pan-intelligent connection of people, machines and things has been advanced in an orderly manner. In satellite Internet, satellite 03[20] in high orbit and the Qianfan Constellation satellites in groups 01[21] and 02[22] in low orbit have been successfully launched, thereby enhancing integrated services capacity.

Second, Internet applications have gained popularity to meet the diversified needs of Internet users. With the adoption and promotion of AI, 5G, and other technologies, new digital products and services have emerged, spanning areas such as office work, transport, culture and tourism, elderly care, and healthcare. They have met the personalised needs of more than 1.1 billion netizens. Digital events for older adults have been conducted in an orderly manner[23], and more than 200,000 digital classes for older adults[24] have been held. The activities have allowed more elderly groups to share digital results. By December 2024, **47.4%** of Internet users aged 60 and over were able to use mobile phone apps appropriately for older adults.

2. Size of Internet Users in Urban and Rural Areas in China

As of December 2024, the number of urban Internet users in China reached **795 million**, accounting for **71.8%** of all Internet users. The number of rural Internet users was 313 million[25], accounting for **28.2%** of the total. The Internet penetration in urban areas was **85.3%**, an increase of **1.9 percentage points** from December 2023. The Internet penetration in rural areas was **65.6%**[26].

Figure 12 Urban and Rural Structure of Internet Users



Shares of urban and rural Internet users in total netizens, December 2023 vs December 2024.

Source: Statistical Survey on China's Internet Development, CNNIC, December 2024.

In 2024, the integration of digital and real-world systems accelerated the orderly development of digital villages, playing an essential role in improving village production and living standards and promoting the collaborative development of urban and rural areas.

First, the digital production model in rural areas has been rapidly promoted. With the construction of large-scale data resource pools in agriculture and the rural regions, the benefits enterprises bring to villages and public welfare activities for farmers' consumption have further enabled the application of digital technologies in rural production, including quality seed source sharing, intelligent farmland monitoring, and livestock risk control. Through these efforts, villages and enterprises have also developed in mutual support.

China has collected data on about **1.107 billion** pieces of rural contracted land, **960,000** rural collective economic organisations, **900 million** members, and **4 million** family farms. The Agricultural QR Code platform has issued 2.276 billion codes, and the Agricultural Information App has served 1.06 million users [27]. The

deep integration of the digital production model with the agricultural industry provides a strong impetus to rural economic development.

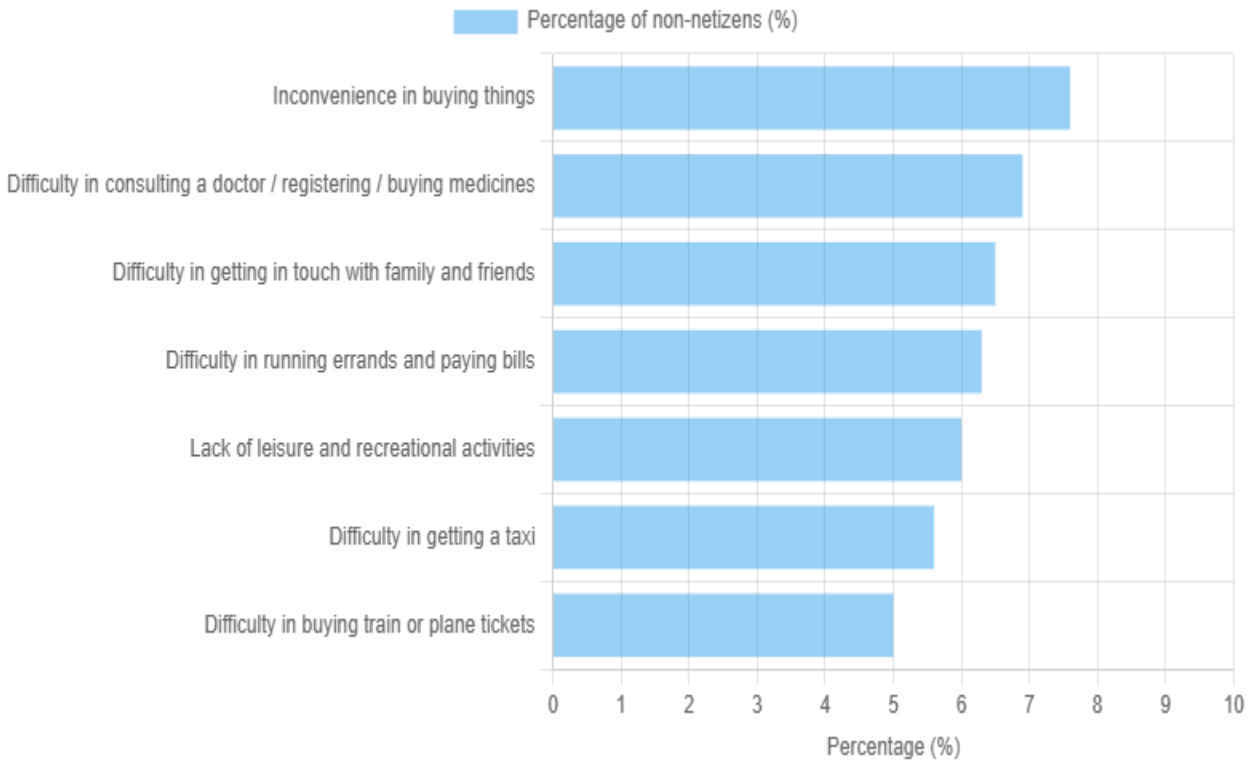
Second, the digital service system in rural areas has developed. Telecommunication services and the broadband program in border areas have been advanced in an orderly manner, so that more people in rural and remote areas have access to the Internet[28]. Three hundred thirty-seven thousand eight hundred multi-functional village-level logistics stations have been completed, with the model of delivery, rural e-commerce, special agricultural products and farmers (cooperatives) widely promoted[29]. The telemedicine service network covers all cities and counties, and extends to communities and rural areas. **70%** of health centres nationwide have established telemedicine collaborative relationships with higher-level hospitals[30]. The digital service system in rural areas, which is improving, provides strong support for farmers' production and livelihoods.

3. Size of Non-Internet Users in China

As of December 2024, the number of non-netizens stood at 301 million, down **16.08 million** from December 2023. By region, the majority of non-netizens were still in rural areas. Their proportion had reached **54.4%** of the total non-netizens, **20.6 percentage points** higher than that of the rural population in the total population. By age, the elderly group aged 60 and above was the primary group of non-Internet users, excluding children under 6. As of December 2024, the proportion of non-netizens aged 60 and above among all non-netizens was **46.8%**.

The largest inconvenience for non-Internet users caused by lack of Internet access was shopping, which accounted for 7.6% of total. The proportions of inconveniences, such as difficulties in consulting a doctor, registering and buying medicines, contacting family and friends, and running errands and paying bills, were similar, with each making up between 6% and 7%. Difficulties in obtaining taxis, purchasing train and plane tickets, and other inconveniences accounted for 5%-6%, respectively.

Figure 13: Inconvenience Caused by Not Accessing the Internet

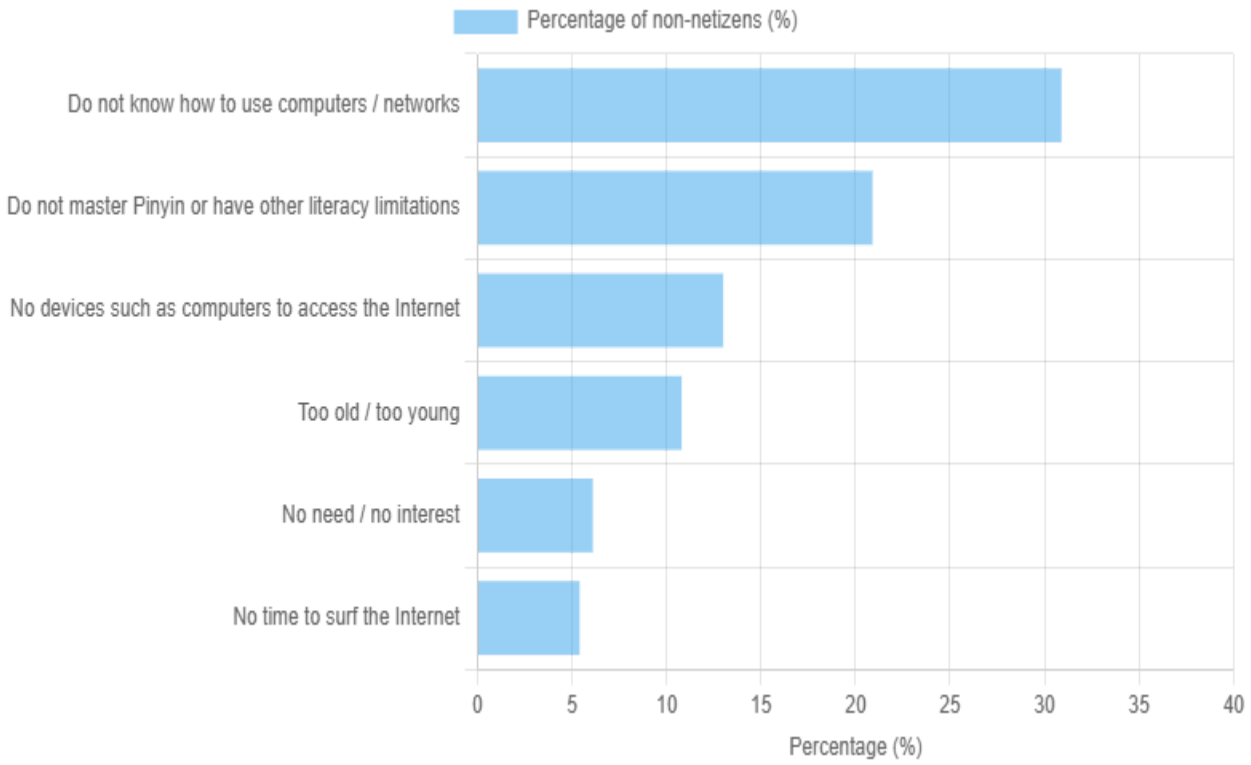


Percentage of non-netizens citing each type of inconvenience due to not accessing the Internet.

Source: Statistical Survey on China's Internet Development, CNNIC, December 2024.

A shortage of skills, limited literacy, inadequate access to devices, and age were significant reasons why non-netizens did not access the Internet. **30.9%** of non-netizens did not access the Internet because they did not know how to use the computer/Internet; **20.9%** did not because they did not master Pinyin or due to literacy limitations; **13.0%** did not because they did not have access to computers and other devices; and **10.8%** did not because they were too old/too young to access the Internet.

Figure 14: Reasons for Not Accessing the Internet

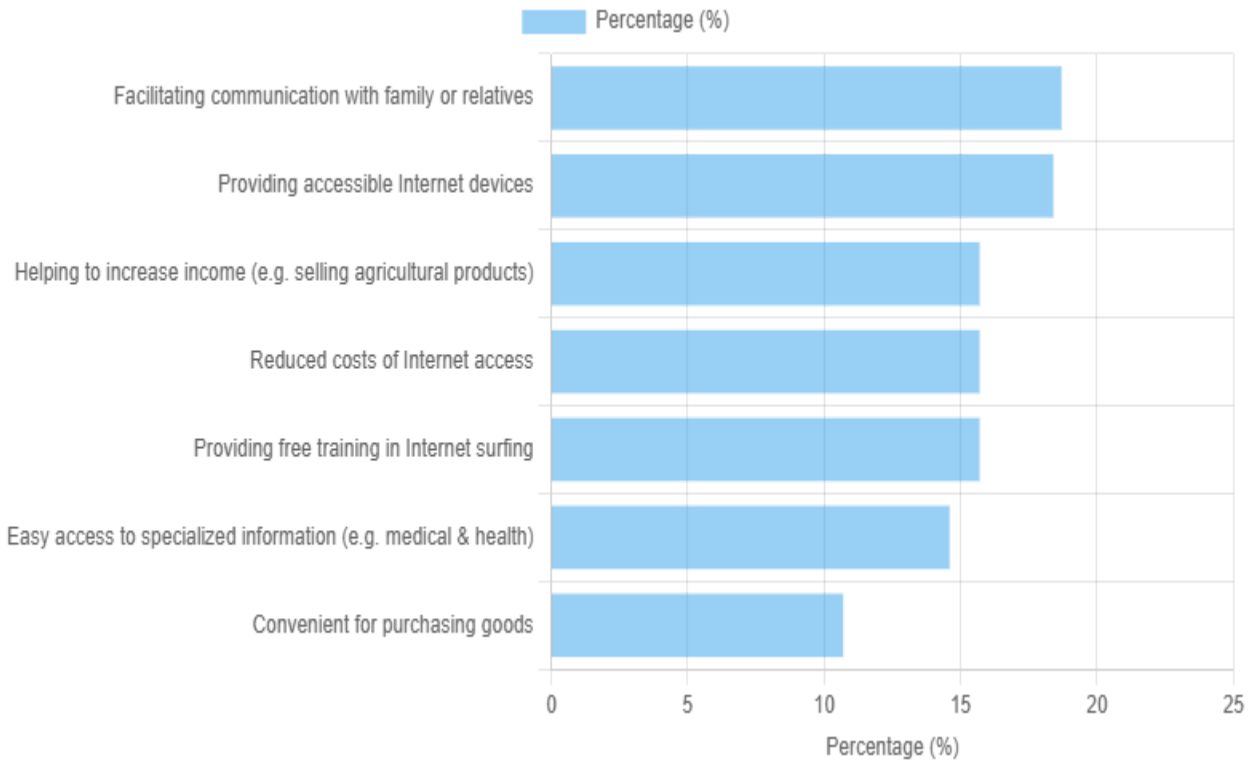


The main reasons cited by non-netizens for not accessing the Internet.

Source: Statistical Survey on China's Internet Development, CNNIC, December 2024.

The primary reason non-netizens accessed the Internet was to communicate with family members, accounting for **18.7%**. Providing accessible Internet devices was the second factor encouraging non-Internet users to access the Internet, accounting for **18.4%** of the total. Helping to increase income, such as through the sale of agricultural products, was the third factor in promoting Internet access, accounting for **15.7%**.

Figure 15 Internet Access Facilitators



Factors that would encourage non-netizens to start accessing the Internet.

Source: Statistical Survey on China's Internet Development, CNNIC, December 2024.

II. Internet User Structure and Internet Access Devices in China

1. Gender Structure in China

As of December 2024, the ratio of males to females among Chinese netizens was **51.1:48.9**, which was roughly the same as that in China's overall population.

Figure 16 Gender Structure of Internet Users

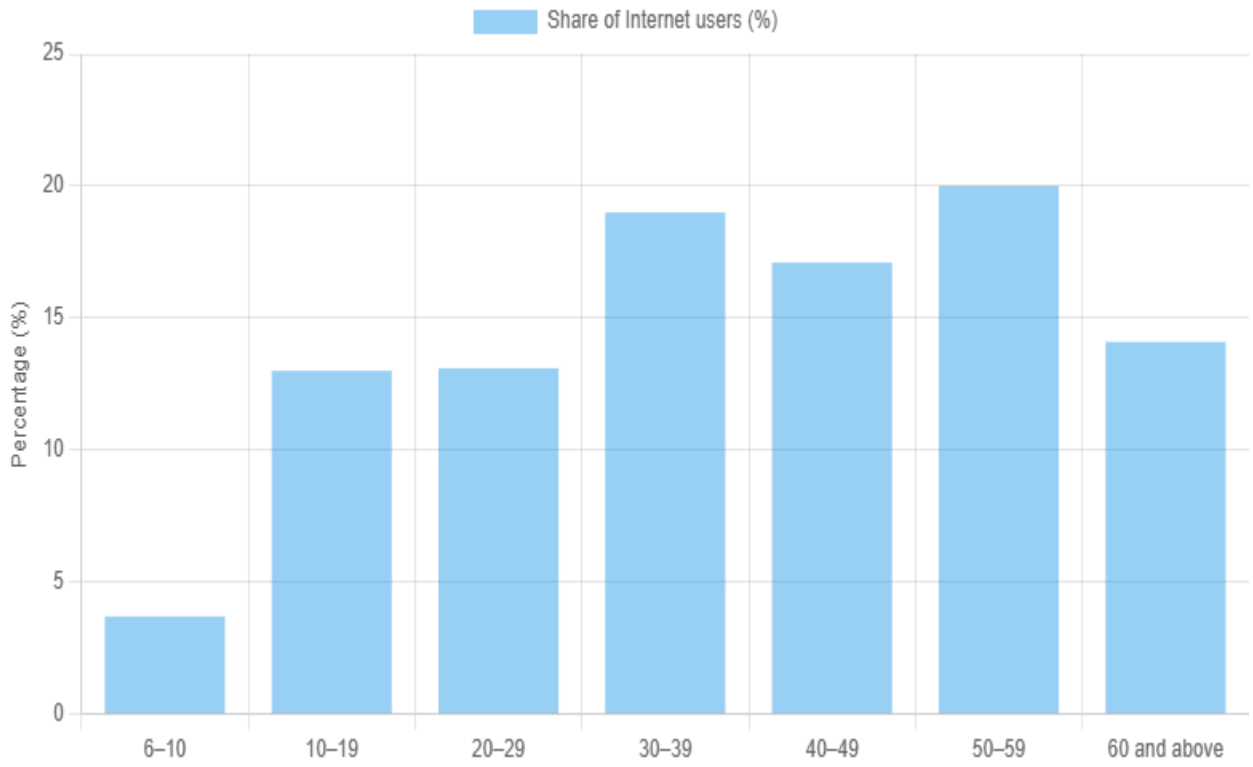
Male-to-female share among Chinese Internet users (%).

Source: Statistical Survey on China's Internet Development, CNNIC, December 2024.

2. Age Structure in China

As of December 2024, the proportions of Internet users aged 10–19, 20–29, 30–39 and 40–49 were **13.0%**, **13.1%**, **19.0%** and **17.1%** of the total, respectively. The proportion of Internet users aged 50 and above increased to **34.1%** from **32.5%** in December 2023. The Internet has been increasingly used among middle- and older-age groups.

Figure 17: Age Structure of Internet Users



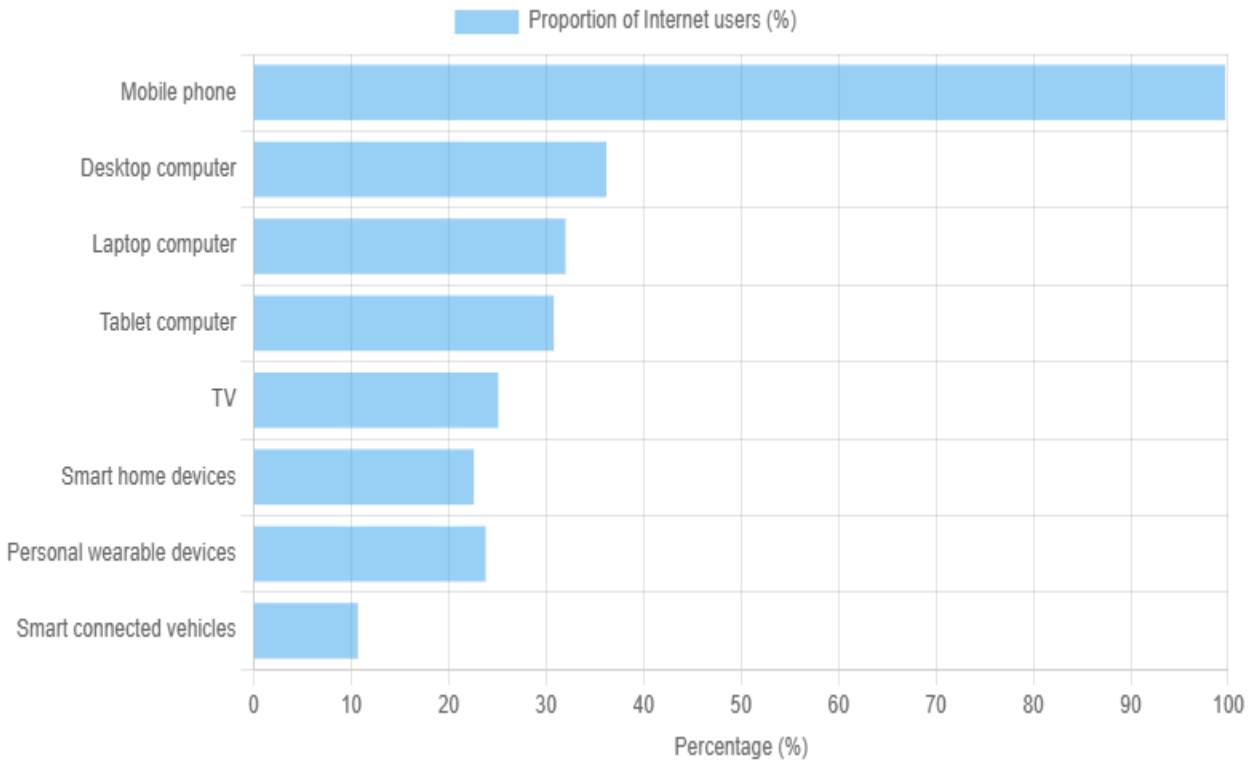
Age-group distribution of Chinese Internet users (%).

Source: Statistical Survey on China's Internet Development, CNNIC, December 2024.

3. Internet Access Devices in China

As of December 2024, the proportions of Chinese netizens accessing the Internet via mobile phones, desktop computers, laptops, TVs, and tablets were 99.7%, 36.2%, 32.0%, 25.1%, and **30.8%** of the total, respectively. Those of netizens accessing the Internet via smart connected vehicles, smart home devices, and personal wearable devices accounted for 10.7%, 22.6%, and **23.8%** of the total, respectively. The number of netizens using smart connected vehicles to access the Internet reached **119 million**.

Figure 18 Usage of Internet Access Devices



Proportion of Internet users using each type of access device (%).

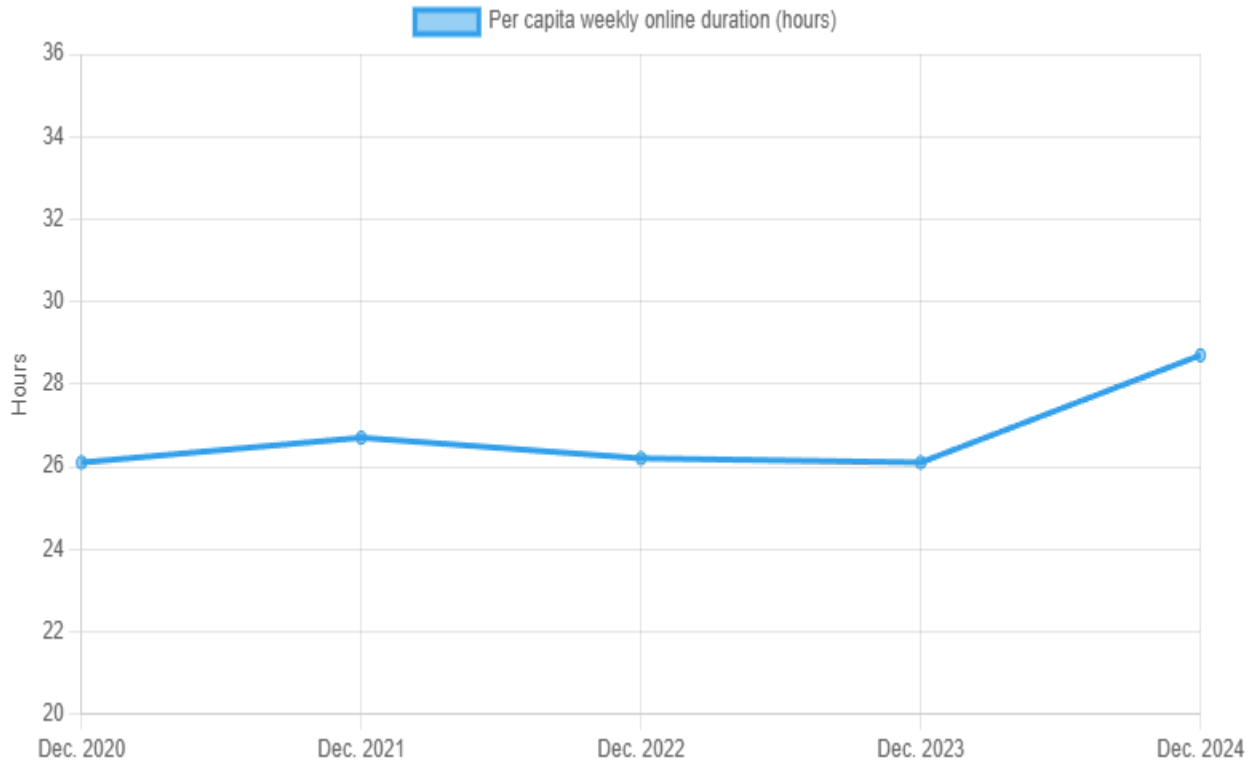
Source: Statistical Survey on China's Internet Development, CNNIC, December 2024.

4. Online Duration in China

Per Capita Weekly Online Duration of Internet Users

As of December 2024, the per capita weekly online duration[31] of China's Internet users was **28.7 hours**, up by **2.6 hours** over December 2023.

Figure 19: Per Capita Weekly Online Duration of Internet Users



Per capita weekly online duration of Internet users (hours), December 2020–December 2024.

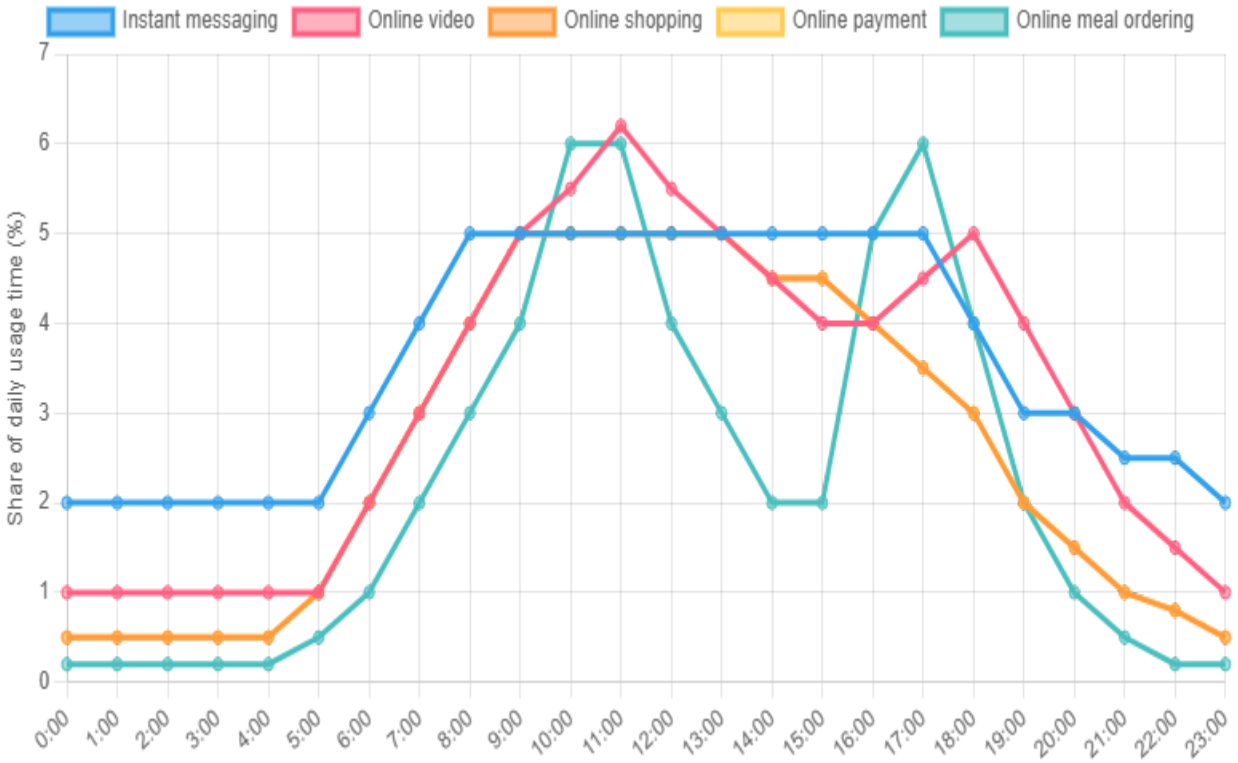
Source: Statistical Survey on China's Internet Development, CNNIC, December 2024.

Distribution of Usage Period of Five Apps

In November 2024, among the five types of apps frequently used by mobile users, instant messaging apps had a more even distribution of usage across the 9 am-7pm period, with all exceeding 5%. The peak in usage of online video apps occurred at 12 am, accounting for 6.2% of the distribution. A small peak would reappear from 5 pm to 8 pm, which was in line with the leisure and entertainment schedule of most netizens.

The usage period distributions of online shopping apps and online payment apps were relatively similar, with over 80% of total usage occurring between 7 am and 10 pm. The peaks in the usage-period distribution of online meal-ordering apps were evident and correlated with netizens' meal breaks. The peaks occurred at 11–12 pm and 5–6 pm, respectively.

Figure 20: Distribution of Usage Period of Five Apps



Distribution of daily usage time for five app categories (instant messaging, online video, online shopping, online payment and online meal ordering), November 2024.

Source: China Unicom, November 2024.

Notes and References

[15] International Telecommunication Union, https://www.itu.int/en/ITU-D/Statistics/pages/stat/default.aspx.

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[25] The size of China’s urban Internet users reached 795.24 million, and that of rural Internet users 313.08 million.

[26] The rural Internet penetration is resulted from the latest rural population size calculated by China’s National Bureau of Statistics (NBS) in 2024.

[27] China’s Ministry of Agriculture and Rural Affairs, http://www.scs.moa.gov.cn/gzdt/202409/t20240911_6462374.htm , September 11, 2024.

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[31] Per capita weekly online duration refers to the average daily number of hours of accessing the Internet multiplied by 7 days in a week in the past six months.

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