

China's ICT Industry: Current State and Future Direction

Jamie Popkin

This special report focuses on China's emerging information and communication technology market. We look at the size and makeup of the market, assess a number of telecom providers and examine possible future developments.

ANALYSIS

Overview

Information and communication technology (ICT) is one of the most dynamic market sectors in China's economic boom. In this special report, we provide a comprehensive overall analysis of this industry, with detailed drill-down analysis of key sectors. It is organized into four sections:

- 1) ICT Industry Size and Scope
- 2) The ICT "Ecosystem" and Market Trends
- 3) Telecommunications and IT Services
- 4) Future Scenarios.

ICT Industry Size and Scope

"The Size and Scope of China's ICT Industry, 2005-2009" analyzes China's domestic ICT market and its prospects for continued growth. End-user IT spending in China passed \$119 billion in 2005. This data includes all ICT spending as reported by ICT providers. To put this into perspective, India, with a comparable population size, spent only \$35 billion on IT in 2005, while Japan, with a population less than a-tenth the size of China's, spent more than \$292 billion.

China's domestic ICT industry will be strong over the next five years as China continues to upgrade its telecom infrastructure in its drive toward global levels of productivity in its industrial output. Our forecasts imply a high level of productivity from China's ICT investments, particularly as they relate to overall GDP growth. Vendors, users and government agencies should monitor these trends closely to ensure that their business and policy assumptions are valid. In particular, vendors need to understand the dynamics of the enterprise IT market to ensure proper investment, marketing strategy and distribution channel development.

However, "China's Enterprise IT Market May Be Smaller Than You Think" warns of the temptations of fast growth in China; everything may not be as it seems. Despite China having a consumer market that for many IT products is now the largest or second-largest in the world, the enterprise IT market is a different story.

No company can afford to ignore China. Every day brings more news of its dramatic economic advance and the impact it is having on the world. It seems as though practically every IT supplier must have a China strategy. However, the actual market for many IT products and services in China is surprisingly small. Despite being the world's fourth-largest economy (when measured in U.S. dollars) and second-largest when measured using purchasing power parity (PPP), the Chinese market for many IT solutions designed for enterprise use can be very disappointing.

Be wary of the headlines. For many IT suppliers, especially in advanced software or IT services, China is a potential market rather than a real one. As a general rule, the more sophisticated the level of software, the harder it will be to sell in China. Barely any Chinese organization uses advanced business intelligence tools or knowledge management systems.

The ICT "Ecosystem" and Market Trends

"Key Issues for China's ICT Industry, 2006" details Gartner's research agenda for China. It will be framed by a series of key issues that are intended to provide comprehensive insight into the role of government, domestic technology innovation, foreign competition and ICT in China's fast-growing economy.

The ICT sector has received significant investment and favorable economic development policies from many Chinese government entities. The key issues for this dynamic industry will shape our future research agenda:

- How will ICT adoption in China be affected by overarching economic development and government policy trends over the next five years?
- Which technological innovations or enterprise architecture issues will drive user investment over the next five years?
- How will domestic ICT vendors successfully compete against multinational ICT vendors in the next five years?
- What will define success in the Chinese ICT market over the next five years?

Our research in 2006 will examine whether China can continue on its apparent path toward achieving global ICT superpower status, or whether that drive will falter and leave China with a fragmented ICT industry capable of only limited global market penetration.

"Market Trends: Industry Analysis, China, 2004-2009" shows that China is by far the largest market in Asia/Pacific (excluding Japan) in terms of total enterprise IT spending. In fact, it is almost twice that of Australia, the second-largest market. Enterprise IT spend in China will grow at a five-year compound annual growth rate (CAGR) of 6.2 percent, to reach \$85 billion in 2009. Communications, financial services and manufacturing will spend the most on IT, allocating much of their budget to telecom equipment and services, followed by hardware.

Foreign IT service providers should be aware that it is important to emphasize local knowledge, as well as worldwide. Build and retain local talent, and localize offerings to meet the specific needs and challenges of China. Realize that drivers and inhibitors vary greatly by industry. Equipment and service vendors should analyze each sector's market drivers and inhibitors and adjust their business strategy accordingly to either penetrate additional business sectors or expand their industry expertise.

"Market Trends: The Chinese Telecom Industry Ecosystem and Trends" highlights how China is seeking to become a global ICT superpower. To achieve this, it must develop policies, business models and R&D programs that achieve economies of scale and scope. We look at the value chains and trends in this market.

With a current market size of more than \$80 billion, nearly 80 percent of China's spending on IT, and a 7 percent CAGR, the Chinese telecom sector is an extremely significant part of the country's IT industry. It is expected to play a significant role in China's quest for a leading role in the global IT industry.

This note serves as a framework for referencing published and future Gartner notes. Future pieces will analyze specific aspects of the Chinese telecom industry and provide recommendations for the key roles responsible in shaping the future of the ecosystem.

China has advanced its telecom industry at a phenomenal rate during the last decade. It now has the world's largest telecom networks and second-largest number of Internet users. It is likely to be the largest Internet market in terms of the number of Internet users by 2010, though the overall penetration rate will still be low. In the process, a sophisticated ecosystem is being created, comprising all the players found in IT superpowers such as the U.S. and Japan.

"Education, R&D Institutions Are Shaping the Chinese ICT Industry" describes the evolution of Chinese R&D, education institutions and business enterprises, and their roles in shaping China's ICT industry today and in the future.

China must address critical issues if it is to achieve the goals of the 11th five-year plan. Education institutions, the Science and Technology Academy, research laboratories, and related government ministries are playing critical roles in shaping and implementing the policies of China's ICT industry, as well as developing a workforce possessing the skills to meet the demands of the industry.

To become a leading global ICT powerhouse, China must continue its reform programs in transforming its R&D and education institutions, which nurture and reward innovation excellence and international collaboration. With the right mix of government policy, continued high-level investment in R&D and education, transparent governance for policy implementation, and management excellence, China is poised to become a major global ICT powerhouse within 10 years.

"Media Trends in China" states that, according to the Communication University of China, the country has a domestic audience of over 1.2 billion radio listeners and 1.2 billion television viewers. It has 282 radio stations, 314 television stations and 1,913 broadcasting stations at the municipal level. CCTV, the country's largest TV station, has 14 channels, including English and international channels, and broadcasts via satellite feeds to over 90 percent of the country. Revenue from these channels was estimated at \$10 billion in 2004. Given that China also has more than 103 million Internet users, with 34.4 million using broadband, the opportunity for media and entertainment vendors in China is astounding.

China is rapidly undergoing an all-digital transition and technology overhaul to support digital content distribution to multiple channels in preparation for the 2008 Beijing Olympics. The State Administration of Radio, Film and Television (SARFT) plans to shift all television broadcasting to digital by this time, and expects to cease analog transmission by 2015. China plans to finalize a national digital terrestrial broadcasting standard by the end of 2006.

The Motion Picture Association of America (MPAA) attributes an estimated loss of \$280 million in 2004 to piracy in China. Our advice is to play by the rules, proceed with caution and seek trusted partners (including key universities) for technology innovation.

Telecommunications and IT Services

"What Chinese IT Services Providers Must Do to Succeed In the Global Market" shows that many Chinese software service providers, inspired by the success of Indian providers, are seeking to export services globally, but few will succeed. Chinese providers need to implement a number of critical requirements to effectively compete. Gartner has interviewed a selection of these providers to assess their business and service capabilities in the context of the global IT service market. One result of that initial survey is a set of findings and recommendations for Chinese service providers.

The two most common missing ingredients in the business model of most Chinese external service providers (ESPs) are a rigorous focus on selected target markets and a thorough market-oriented approach. Most Chinese ESPs also lack sufficient scale to maintain an effective brand in their target markets. There is no single recipe for success for everyone, but there are 25 critical success factors for Chinese ESPs that will help them succeed in the global IT service market.

"New Chinese Telecom Vendors Target Emerging Markets" highlights how a second wave of emerging Chinese companies are trying to build an international presence based on their market strength in China. This follows on the heels of Huawei and ZTE, which have gained a foothold in the global telecom market. These vendors are typically targeting other emerging markets. In this note, we profile two of them — FiberHome Technologies, a state owned enterprise, and Harbour Networks, a privately owned enterprise.

These emerging vendors have the same advantage as Huawei and ZTE in that they have access to inexpensive labor and manufacturing resources. They also enjoy the same fast-growing home market, where they have the opportunity to sustain revenue and gain experience in deploying large-scale networks.

Some emerging Chinese telecom vendors have a good brand reputation and customer base in the Chinese market. Multinational vendors that have not entered the Chinese market, but that have an interest in doing so, could consider cooperating with Chinese vendors through partnerships, joint ventures, or by acquiring private companies.

In "Government Policies Limit Telecom Prospects in China Under WTO Agreement," we show how the World Trade Organization agreement has opened China's telecom services market to foreign investment. But opportunities remain limited by market maturity, price competition and ongoing restrictions. Investors must look beyond basic telecom services to find new business opportunities.

Despite progress in opening China's telecom markets to competitors and changes in China's foreign ownership policies, opportunities for foreign investors and service providers interested in entering China's vast communications marketplace remain quite limited because of the government's policies.

"Market Focus: China Makes Big Improvements in Broadband Access for Businesses" illustrates how China has made big improvements in broadband access in terms of easy availability, low price and access speeds. But it's a no-frills service, with minimal service guarantees.

Multinational companies are expanding their operations in China at a dramatic pace. As such, their networking requirements in the country are also changing rapidly. In the past, getting reliable international connections to China was sufficient. But in the future, the need for domestic connectivity in the small metropolitan and remote areas will become more important, especially for companies with an extensive business presence in China.

While China's ADSL service still has some way to go before it can be considered "business grade," it should be seriously considered for business use today.

"The Emerging Buyer and Seller Dynamics for IT Services in China" highlights China's enormous potential market for business process and IT services. It offers many choices for buyers of IT services, while offering new territory for IT service providers. We examine the main types of IT buyers seeking resources in China, and the main types of service providers that are best positioned to win the business.

China is an emerging market with the highest growth for business process and IT services. It plays two significant roles in this area: it has a large domestic market that represents a large group of new enterprise buyers of business process and IT services, and it is a source of low-cost labor as a component of a global sourcing strategy (access to offshore/"nearshore" resource delivery capability) to U.S., European and Asian enterprises.

Future Scenarios

"The Future of China's ICT Industry, to 2010" shows how two key factors will shape China's ICT industry: the government's involvement in the economy and the level of technological innovation in the country. We outline four possible scenarios.

Will China emerge as a global technology innovator, or will it merely be a base for manufacturing, with innovation and the control of intellectual property remaining with large multinational Western vendors? Will China's many levels and divisions of government continue to aggressively promote the ICT industry, or will they pull back direct support and allow greater freedom of competition in

domestic markets and adopt a more passive approach to promoting Chinese companies in international markets?

Gartner's research community in China has been exploring these questions since early 2005 via a scenario-planning exercise. All companies with current or potential markets, operations, competitors or suppliers in China (which is pretty much everyone!) must evaluate the impact that the four scenarios could have and prepare alternative strategies.

Please enjoy this special report!

REGIONAL HEADQUARTERS

Corporate Headquarters

56 Top Gallant Road
Stamford, CT 06902-7700
U.S.A.
+1 203 964 0096

European Headquarters

Tamesis
The Glanty
Egham
Surrey, TW20 9AW
UNITED KINGDOM
+44 1784 431611

Asia/Pacific Headquarters

Gartner Australasia Pty. Ltd.
Level 9, 141 Walker Street
North Sydney
New South Wales 2060
AUSTRALIA
+61 2 9459 4600

Japan Headquarters

Gartner Japan Ltd.
Aobadai Hills, 6F
7-7, Aobadai, 4-chome
Meguro-ku, Tokyo 153-0042
JAPAN
+81 3 3481 3670

Latin America Headquarters

Gartner do Brazil
Av. das Nações Unidas, 12551
9º andar—World Trade Center
04578-903—São Paulo SP
BRAZIL
+55 11 3443 1509