# Cityscape Chengdu a Sectoral Research and Investment Report

by

# **China Economic Indicator**



**Understanding China's Economic Indicators** 



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# 2 Cityscape

For years, investment opportunities in China seemed restricted to bustling coastal cities like Shanghai, Shenzhen, and Guangzhou. The Chinese hinterland—where the bulk of the world's largest population resides—received comparatively little attention.

Nearly a decade into the 21st century, the situation in China has changed. Previously emerging markets on the east coast have become increasingly saturated, leading savvy investors to look elsewhere. Meanwhile, infrastructure investment and favourable economic incentives have transformed China's vast hinterland, opening up opportunities in cities most investors previously never knew existed.

Most investors know that inland China has tremendous economic potential. What most people don't understand are the practical mechanics of accessing these increasingly vibrant engines of growth.

*Cityscape*, a groundbreaking series of essential investment profiles, collaboratively developed by CEO and *Supply Chain Asia*, provides investors with the knowledge vital to penetrate cities that will form the frontline of global growth over the next decade.

#### *Cityscape* provides:

- Comprehensive data and in-depth analysis on every aspect of the cities economy; from workforce educational levels, average wages, retail price indices, housing market trends and environmental legislation, to favoured industries, tax breaks, and natural resources
- Up-to-date analysis of each city's infrastructure, planned improvements to physical infrastructure, economic structure, and investment opportunities
- Thorough yet accessible guidance on how to establish a company presence
- Bilingual contact data for government offices, schools, hospitals, and much more.

The first city profiled is Chengdu—capital of south-western China's Sichuan Province. A bustling city in the heart of the country, Chengdu has emerged as a centre for high-tech research and development, earning it the moniker of "China's Silicon Valley". Investment opportunities abound in the city, linked by road, rail, and air to destinations across China and overseas.

The second city in the series is Wuhan—central China's largest metropolis and a city at the nexus of China's transport network.

Once billed as the "Detroit" of China due to its massive auto manufacturing industry, Wuhan has reinvented itself for the 21<sup>st</sup> century as an environmentally-friendly venue for high-tech investment.

*Cityscape* cities include: Chengdu, Wuhan, Chongqing, Xi'an, Taiyuan, Lanzhou, Urumqi, Baotou, Kunming, Changsha, Harbin, Nanning, Zhengzhou, Changchun, and Shenyang.

# 3 City Snapshot

Big, bustling, and growing, Chengdu has emerged as one of the most dynamic cities in the Chinese hinterland and is an increasingly essential gear in the nation's economic engine. As the capital of Sichuan Province—among the most populous in China—Chengdu has become a centre for both business and logistics in western China. The city, once a backwater lagging far behind its coastal counterparts, has now firmly arrived on the business scene.

The rise of Chengdu is due to the convergence of two distinct, but related, factors. One is the Western Development Strategy, in which Chengdu figures prominently as a key city. In an effort to spread economic growth more equitably within the country, Beijing allowed cities like Chengdu to offer foreign firms extensive investment incentives, spurring the interest of multinationals and small to medium enterprises (SME) looking to lower costs.

The second factor attracting outside investment to Chengdu is its vast supply of cheap and talented labour. As the city turned its focus toward high-tech industries, local universities developed well-regarded programmes in IT, churning out a pool of qualified workers. The low cost of living in Chengdu allowed producers to benefit from lower labour costs, with average salaries for skilled labour lower than cities like Beijing, Shanghai or Shenzhen. The ensuing cost-benefits have drawn major investors like Intel, Toyota, and Motorola, reinvigorating the once neglected backwater.

One factor that historically limited development of the city was the high transport cost for primary and secondary sectors. This has however in many ways become a blessing in disguise. Lacking adequate containerised rail infrastructure or the proximity to ports that cities like Shanghai enjoy, Chengdu was forced to focus on development of service industries and high-value manufacturing such as semi-conductors and pharmaceuticals. Industries which are less dependant upon cheap transport costs may insulate the city from the global downturn – in stark contrast to regions heavily dependant upon low cost manufacturing such as Guangdong.

"Chengdu is a major centre of business activity in western China that has great potential for increased growth and prosperity."

Jeffrey A. Moon
Consul General of American
Consulate General Chengdu

With both the Central and Provincial governments working hard to improve the overall investment environment of the city, and the province at large, huge sums are being invested in financing construction of several major intercity highway and rail networks. Within the city limits itself, construction is underway of a seven-line subway system intended to ameliorate traffic times and improve the urban environment.

In short, whilst Chengdu may have started chasing the China dream later in the game, it will become a major base for development of high-end specialised goods and services. With a major corporate presence and undergoing a massive physical infrastructure facelift, Chengdu is poised to be a major driving force for inland China, and an emerging domestic market, which manufacturers and retailers ignore at their peril.

# 4 Overview

# 4.1 Doing Business in China

Since the launch of market reforms in 1978, China has stunned the world with its breakneck economic growth, infrastructure development, and integration into the global economy. Foreign investors, eyeing China's billion-plus population, have been keen to gain access to the world's largest potential market and have wanted their share of the ever-expanding pie.

Investor interest surged further when the Chinese government introduced the option of wholly owned-foreign enterprises (WOFEs). Previously, foreign investors keen to enter the Chinese market could at most form joint-ventures with Chinese partners, who held a majority share. Foreign firms are now largely free to enter the market independent of Chinese partners, an opportunity immediately grasped by a variety of enterprises, big and small.

Initially, cities dotting China's coast were the engine of the country's economic growth while the interior lagged far behind. Market reforms were initially focused around five special economic zones or SEZs; the most famous of which was Shenzhen, in Guangdong Province. As opening up and reform continued, prosperity spread further north along the coast.

In the late nineties, the Chinese government grew increasingly concerned that economic inequality between the coast and interior was too large and represented a potential threat to social stability. In 1999, President Jiang Zemin subsequently launched the Western 'Go West' policy; a series of economic incentives and development strategies meant push the economy to entice firms to invest in inland cities.

### **A Few Things to Remember**

Doing business always involves meeting and greeting people. Body language and movement are both areas to be aware of. Try to be calm, collected and controlled. Body posture should be formal and attentive to show self-control and respectability. Business cards are always exchanged on initial meeting and should both be received and presented with both hands as the head is bowed slightly.

Make sure one side of the card has been translated. Mention your company, rank and any qualifications you hold. When receiving a card treat it with respect; place it in a case or holder, not in a wallet or pocket. Relationships in China can be very formal. Remember, when doing business you are representing your company and your country in the eyes of the Chinese so always keep dealings professional. Never become too informal and avoid humour – jokes are very easily lost in translation.

When doing business in China establish a contact to act as intermediary. They can act as a reference, be your interpreter and navigate you through the bureaucracy, legal system and local business networks.

# <u>Negotiations</u>

The Chinese are famous for being skilled negotiators. One of the primary aims of negotiations is to exact concessions. When formulating your own strategy, you must be willing to ensure your counterpart has gained major concessions.

Make sure you have done your homework before doing business in China. The Chinese can be painstakingly meticulous and the chances are they may know more about your business — and you - than you do.

One typical strategy for Chinese negotiators is to begin with effusive humility and deference to appear vulnerable and weak. You, the stronger, will be expected to help them through concessions.

Above all, be patient and never show anger or frustration. Practise your best 'poker face' before negotiating with the Chinese. Once they see you are uncomfortable they will exploit the weakness.

Decisions will take a long time either because there is a lack of urgency, simultaneous negotiations are taking place with competitors or because the decision makers are not confident enough.

While the project has been effective, inland regions remain far less developed than their coastal counterparts. Compounding the problem is a lack of reliable business intelligence on the ground; while many investors considering a move to China will be aware of Guangzhou, Shanghai, or Beijing, far fewer are familiar with cities such as Chengdu, Wuhan, or Kunming. This lack of familiarity—coupled with the region's less developed infrastructure—has traditionally impeded foreign investment.

Underdevelopment, however, presents unique opportunities in the shape of economic asymmetries that are rapidly evaporating between more developed eastern seaboard cities and the West. Markets in many of China's bellwether cities are saturated, and in many cases rising labour costs have forced manufacturers to look elsewhere for cost effective production bases. Meanwhile, robust government investment in inland infrastructure has, to some degree, reduced logistics costs in the region, making inland China a more attractive option for investors. These improvements are expected to continue apace in the wake of a recently announced economic stimulus package by the Chinese government.

In addition, inland Chinese cities offer competitive advantages unseen in more developed parts of the country. The south-western city of Kunming, for example, has extensive cultural and transport links to the burgeoning Southeast Asian market whilst cities such as Xi'an, though geographically remote, ranks as one of the top cities for IT network infrastructure and high speed internet connections. Although the cities profiled in this guide lack the name recognition of Shanghai, Beijing, or Guangzhou, each presents investors with a wealth of opportunity as growth of inland China will persists in spite of the global economic downturn. This guide is

intended to provide investors with the necessary understanding of both the market environment and opportunities these unique markets offer investors with the vision and foresight to look beyond the obvious.

# 4.1.1 Foreign Direct Investment in China

Whilst there has been in recent months much media speculation as to whether smaller, emerging markets will threatened its status, China will undoubtedly continue to be one of the world's leading destinations

for foreign direct investment (FDI). Also, whilst the introduction of a new labour law (see below), rising costs, and the downturn in the global economy have slowed acceleration projections in the Chinese economy, robust growth is expected to continue in the years to come.

Demand for cheaply made goods from the Greater China (including Hong Kong and Taiwan) region has been one of the key drivers of economic growth since the reforms of the late 1970s. Since that time, investment from 'abroad' rose dramatically to reach USD82.7bn in 2007. Though FDI steadily declined during Q1 through Q4 in 2008, by the end of the year it reached USD92.4bn. According to forecast by Credit Suisse, total FDI is likely to drop to USD75bn in 2009 as companies batten down the hatches to ride out the financial storm, but rebound to USD80bn in 2010.

Despite this enormous growth in the volume of FDI the vast bulk -roughly 80 percent- has crashed upon the eastern seaboard, often with little to none reaching cities further inland. But, as laissez faire aspects of Deng Xiaoping's policy are replaced by the Jiang Zemin's Western Development strategy, hinterland cities are becoming increasingly attractive destinations for FDI.

Originally, foreign invested enterprises (FIE) were limited to joint-ventures (JV) between overseas companies and domestic Chinese firms. This began to change with the passage of the law governing wholly owned foreign enterprises (WOFE or WFOE) in 1986, though WOFE ventures in the vast majority of industries only became feasible after China's accession to the WTO in 2001.

Currently, WOFEs are generally the preferred vehicles for investment in China as they eliminate the degree of risk sometimes associated with collaborating with a mainland company. However, despite significant progress made in the arena of legal protection for foreign investors, problems still remain in areas relating to corruption, poor enforcement of judicial rulings, and intellectual property rights protection. These problems continue to impede the smooth conduct of business in China for both foreign and domestic investors alike – although not always equally.

Previously, competition from neighbouring countries for FDI justified the continuance of preferential policies for foreign investors, measures that also created incentives for domestic firms to reinvest through foreign channels - a practice known as "round tripping." In this respect, much of the FDI coming into China was not in reality foreign but came instead from Chinese investors funnelling capital through various tax havens and the Hong Kong Special Administrative Region (SAR) in an effort to reap the benefits and legal protections bestowed upon 'foreign' investors.

In addition to 'round tripping', Taiwanese firms often chose to channel money through offshore accounts for political reasons. In 2006 for instance, more than 40 percent of FDI entering China passed through companies registered in the Hong Kong SAR and the British Virgin Islands. It is widely suspected that the majority of this investment originated from China. A newly unified corporate income tax plan of 25 percent, instated at the beginning of 2008, is widely expected to curb this activity by levelling the playing field for domestic investors. This said, provincial and municipal levels of government maintain numerous 'soft' policy options to attract investment.

In spite of the difficulties and issues with lack of transparency, China remains attractive due to the continued potential returns on investment. Moreover, inland cities, which represent an undervalued and untapped resource, present the greatest opportunities for investors.

### 4.1.2 Government Structure

The General Office of Chengdu Municipal Government

Offices under the Municipal Government:

Chengdu Municipal Information Office Chengdu Municipal Overseas Chinese Office Chengdu Municipal Foreign Affairs Office Chengdu Municipal Office of Taiwan Affairs

Departments dealing with FDI (most relevant from top):

Chengdu Municipal Bureau of Commerce

Chengdu Municipal Administration for Industry and Commerce

Chengdu Municipal Bureau of Quality and Technical Supervision

Chengdu Municipal State Taxation Bureau

Chengdu Municipal Local Taxation Bureau

Chengdu Municipal Bureau of Public Security

Chengdu Municipal Administration of Foreign Experts Affairs

Chengdu Municipal Administration of Foreign Exchange (People's Bank of China)

Chengdu Municipal Labour and Social Security Bureau

Chengdu Municipal Bureau of Human Resources

Chengdu Municipal Bureau of Civil Affairs

Chengdu Municipal Bureau of Audits

Committees:

Chengdu Municipal Economic Committee

Chengdu Municipal Construction Committee

Chengdu Municipal Committee of Communications

**Commissions and Administrations:** 

Chengdu Municipal Development and Reform Commission

Chengdu Municipal Commission of Science and Technology

Chengdu Municipal Commission of Rural Affairs

Chengdu Municipal Education Commission

Chengdu Municipal Commission of State-owned Assets Supervision and Administration Commission

# Departments in charge of specific project approval:

Chengdu Planning and Management Bureau

Chengdu Municipal Bureau of Environmental Protection

Chengdu Municipal Bureau of Land and Resources

Chengdu Municipal Bureau of Forestry, Landscape and Gardening

Chengdu Municipal Bureau of Press and Publication

Chengdu Municipal Bureau of Education

Chengdu Municipal Bureau of Tourism

Chengdu Municipal Bureau of Water Affairs

Chengdu Municipal Bureau of Culture

Chengdu Municipal Bureau of Radio and Television

Chengdu Municipal Bureau of Public Health

Chengdu Municipal Administration for Food

Chengdu Municipal Administration for Real Estate Management

### 4.1.3 Labour Law

January 1, 2009 marks the first anniversary of the Labour Contract Law (LCL), a groundbreaking set of new regulations intended to address the rising incidence of abusive labour practices across the country. The labour law, while praised by many as a human rights advance in China, led some observers to predict that rising labour costs would make China a less attractive base for investors. One year on, a preliminary examination of data suggests that while costs have indeed risen especially in the southeast, the country remains an attractive option for outsourcing.

The labour law contains 97 articles, yet one provision has proved more effectual than the others. Employees are now able to file suit against employers directly, without going through the previously required government channels. This change has resulted in a steep rise in employee/employer litigation in the time since; in certain jurisdictions, labour-related lawsuits have more than doubled.

These lawsuits were intended to mitigate the effects of mass worker strikes, incidents that increasingly plagued China-based employers in the years leading up to the legal change. The Chinese government views labour-unrest as especially troubling, as a large part of its legitimacy depends on the appearance of widespread social harmony.

According to a survey of SME bosses across China, many complain that the new law has increased operating costs by as much as 20-30%, leading some firms to relocate operations to cheaper countries such as Vietnam, Cambodia, and Bangladesh. There, companies can utilise cheaper overhead and take advantage of more lax labour laws, important considerations during recessionary times. Though some manufacturing sectors, such as footwear, have moved to countries such as Vietnam, this process was already under way before the passage of the LCL.

Nonetheless, a poll of investors surveyed this year by Ernst & Young reinforced China's position as the world's most attractive destination FDI. Simply put, countries that compete with China on labour costs are often unable to manufacture complex goods and lack sufficient infrastructure to cope with increased production.

### 4.1.4 The 2008 Financial Crisis

The financial crisis that rocked the globe in the last half of 2008 did not spare the world's fastest-growing major economy. In November 2008, economic growth in China fell 2.2 percent, marking the largest year on year decline since 1999. This was a direct result of the steep drop in demand from the United States and Europe.

Declining exports have led thousands of Chinese factories to close, a majority of which were clustered in the export driven manufacturing zones of Guangdong province. These factory closings led to the sudden unemployment of hundreds of thousands of workers, stoking government fears of social unrest and demonstrations.

A great number of these factory workers originate from China's poorer inland provinces, part of largest annual internal migration in the world; some estimates put the number of migrants in China at 130 million. Fewer opportunities in eastern China—a consequence of the decrease in China's export rate—could lead scores of these workers to remain in their home provinces.

For investors looking at cities such as Chengdu, the financial crisis may drive up supply of cheap labour as would-be migrant workers remain home, mindful of increased opportunities in the hinterland.

Population data for Chinese provinces often ignores the migrant demographic, leading to inaccurate assessments of the true size of the labour market in both eastern and western provinces. Observing the trends of these workers—whose combined number exceed the total population of all but a dozen or so countries in the world—is integral to an understanding of how China will cope with the financial crisis.

The Chinese government has taken a proactive approach to the present economic reality. In November 2008, Beijing announced a stimulus package worth CNY585bn to compensate for the downturn. Nearly three quarters of the money will go to infrastructure development, with slightly over USD263bn slotted for further improvement of roads, rail lines, and airports. The stimulus package also will help buttress China's social safety net in an effort to assist the newly unemployed with jobs.

# 4.1.5 China's Economic Stimulus Package

In the wake of the global financial crisis which began unravelling in the autumn months of last year, the Chinese central government were quick to introduce a raft of measures aimed at mitigating the negative impacts of a contracting global economy on China's export driven growth.

The package which encompasses a total expenditure of four trillion Yuan (CNY) (USD586bn) will be spent upgrading infrastructure, particularly roads, railways, airports and the power grid; on raising rural incomes via land reform; and on social welfare projects such as affordable housing and environmental protection.

The package of capital spending plus income and consumption support measures confirms that damping down inflation in a runaway economy is no longer the policy priority. The top economic concern is now arresting the rapid slowdown in growth as a result of the slumps in China's exports in the wake of the crisis. In addition to the extra spending, Chinese officials have indicated a shift to 'moderately easy' monetary policy and lending limits on commercial banks are also being lifted. A change in the way value-added tax is administered has also cut taxes, accounting for USD17.5bn of the package's total

The Government selected 10 areas for extra spending to provide a boost to the economy in 2009 and 2010. These areas include:

- Housing More affordable and low-rent housing is to be constructed, slum demolition and clearance is to be accelerated, launch of a pilot program to rebuild rural homes (particularly in earthquake affected areas).
- Rural infrastructure Improvement of roads and power grids in the countryside, and water supply projects, including a huge project to divert water from the south to the north. Additional efforts to reduce poverty.
- Transport More rail links and routes for transporting coal as well as additional new airports in western provinces. In addition to this the creation of a high speed rail network is planned to free existing network for implementation of complete nationwide containerised network.
- Health and education More hospitals are to be built in smaller towns and cities. More schools in the western and central regions, and for children with special needs countrywide.



- Environment Focus on sewage and garbage treatment facilities and preventing water pollution. Accelerated green belt and natural forest-planting and replanting programs. Increased investment in energy-conservation initiatives and pollution-control projects.
- Industry Additional subsidies for high-tech and service industries.
- Wealth creation Increased grain purchases and farm subsidies to raise rural incomes, a boost in pension funds for a wide range of workers and allowances for low-income city dwellers.
- Tax Reforms to value-added tax, effective 1 January 2009 and a reduction in the corporate tax burden of CNY120 billion (USD18bn).
- Finance Removal of loan quotas and ceilings for lenders, increased bank credit for rural areas, small businesses, and companies involved in technology, iron, and cement.

On top of the central Government's pledge of CNY1.18 trillion for the stimulus package, the State Council will allow local governments to issue CNY200 billion in bonds through the Ministry of Finance (local governments are not usually allowed to issue bonds).

Other funding sources include long-term bank loans and corporate bonds issued by state-owned enterprises. If the entire CNY4 trillion were to be financed by debt issuance, total national debt would increase to 28% of GDP, which is still relatively moderate.

# 4.1.6 Environmental Degradation and the Environmental Protection Industry

China's breakneck economic growth has, at times, come at a high price in terms of the health of its population and its natural environment. Many of the problems China faces are pandemic and require nationwide solutions. As the environment gains increasing importance as a social, political and economic issue the challenges China faces may also represent opportunities.

At present, China is encountering severe water shortages, resulting from both a large population and water pollution caused by rapid economic development with little regard for environmental impact. Although the country has significantly improved its water and wastewater infrastructure, many areas, at times including Sichuan, can suffer water shortages. Accelerated urbanisation and high-speed economic growth in Sichuan continues to aggravate the water shortage problem.

Air pollution resulting from coal-fired furnaces, industrial exhaust gases, and, in particular, auto emissions continues to be a major problem in the region. Steps have been and are being taken to reduce air pollution through cleaner production programs, the introduction of emission controls, and the conversion in some taxies and buses to cleaner fuels (LNG). Thus, carbon emission control technology also provides opportunities for foreign companies.

There has been a general increase in water projects in the region creating a large, diverse and growing market for water treatment technologies, including municipal water treatment facilities for drinking water, as well as drinking water treatment equipment for the bottled water and home treatment sectors.

The government's inability to invest and to fill the huge capital demand creates opportunities to involve non-state-owned or foreign investment within Sichuan Province as a whole. The Chinese government is encouraging non-state-owned and foreign investment participation in a swath of environmentally focused projects; with one percent of GDP earmarked annually for environmental cleanup, the sector presents genuine opportunities for companies able to offer the advanced technologies and services the region needs.

Preferential policies in the sector include tax breaks for industries and projects listed in the Foreign Investment Industry Guideline. Within the overarching framework laid down by the central government, local governments have established policies more focused on the specific needs of local areas. Companies can obtain details on these policies from the Sichuan Provincial Environmental Protection Office, local governments within the province and taxation bureaus.

Forming a private and public partnership (PPP) is a common method for non-state-owned and foreign participants in the water supply and wastewater treatment sector. For specific projects, build operate-transfer (BOT), and design-build-operate (DBO) schemes are often used. Because the concept of PPP is new in China, there are not, as yet, specific regulations or guidelines regarding schemes. For this reason foreign companies and investors are likely to encounter some difficulties in assessing the opportunities and challenges for participation and the accompanying financial risks.

Clean fuels, desulphurisation, coal washing, air quality monitoring, and other related technologies for prevention and control of air pollution are also required in the region.

As for the solid waste treatment sector, advanced equipment and technology are always welcome, especially for the treatment of hazardous solid waste and medical solid waste. Whilst research centres have been created advanced environmental technology for hazardous solid waste treatment is still essentially in the research stage and is only recently being put into practice. This means there is a large-scale environmental market in Sichuan offering a wide range of market opportunities for foreign companies.

For a complete and fully comprehensive breakdown of the China's environmental issues and the market opportunities created by the growing importance of the environmental protection sector in China read CIG's *Envireport* – China's Environmental Protection Industry 2009.

# 5 Regional Overview



### 5.1 Province

# 5.1.1 Climate and Geography

Located in south-western China, Sichuan Province covers much of the Sichuan basin and is surrounded by mountainous regions to the north, west, and south. The Province, formerly known as the Kingdom of Shu, is bordered by Shaanxi and Gansu Provinces to the north, Yunnan and Guizhou provinces to the south and southeast, the Chongqing municipality to the east, and Qinghai province and the Tibet Autonomous Region to the northwest and west. The eastern part of the province is characterised by lush farmlands and temperate weather—with over 350 frost-free days per year. The western areas, near Sichuan's border with Tibet, are more mountainous and less suited to agriculture.

The Mingjiang, Sichuan's most prominent river, is a tributary of the Yangtze, which it meets at the city of Yibin. Historically lush and productive river valleys in part account for Sichuan's high population of approximately 100m people, much of which is concentrated in the eastern half of the province. The western areas have a far lower population density and are home to a number of China's non-Han ethnic groups.

Sichuan is also home to the Longmen Shan fault and is hence prone to earthquakes, such as the one that struck in May 2008 devastating the region around Wenchuan and leading to the death of nearly 70,000

people. An additional earthquake near the southern city of Panzhihua in August led to the death of 40 people as well as substantial infrastructure damage.

As with its geography, Sichuan's climate is highly variable. Eastern and south-eastern parts of the province have hot, humid summers and mild, short winters that are often encased by thick daytime fog. Western Sichuan has mild summers and very cold winters, particularly in high altitude regions where elevation can exceed 4,000 metres. The most pleasant and stable climactic zone within Sichuan is in the far south.

Most rain in Sichuan falls during the summer months, and the period between October and May tends to be relatively dry. Eastern areas that lie on the basin receive far more rainfall than the western, mountainous areas. Many of the province's high altitude mountains have year-round snow-capped peaks, though temperatures in low lying regions are seldom low enough to elicit snowfalls.

#### 5.1.2 Infrastructure

The Second World War, the ensuing Chinese civil war and subsequent neglect of the pre-reform era left Sichuan's physical infrastructure in poor shape. Additionally, mountainous terrain and other topographical challenges had previously exacerbated government difficulties in developing infrastructure.

With the announcement of Beijing's Western Development strategy, Sichuan and neighbouring provinces found themselves very much in the spotlight. As a result, the 1990s and 2000s saw a rapid acceleration in infrastructure development within the province; in particular heavy investment in Sichuan's road and rail networks. Over the same period, Sichuan has also benefited greatly from continued investment from the Asia Development Bank (ADB) and World Bank, organisations that have contributed hundreds of millions of US dollars in road development projects. These improvements have contributed to overall economic growth in Sichuan facilitating urbanization and poverty reduction on a large scale.

In the past decade, Sichuan has added major road links between its capital Chengdu and numerous cities in surrounding areas. The National Trunk Highway System (NTHS) links Chengdu with surrounding provincial capitals via high-grade expressways. A road built in the earlier part of this decade halved travel times between Chengdu and Chongqing, a federally administered municipality once part of Sichuan.

Chongqing's location on the Yangtze River—the world's busiest in terms of cargo traffic—makes its transport links to Sichuan particularly important. Although lacking the handling capacity of Chongqing, Sichuan as a province has the fourth longest length of navigable inland waterways in China; only Hunan, Guangdong, and Jiangsu surpass it. In 2008, the province of Sichuan had 10,000 km of navigable waterways that carried 37.03m tonnes of cargo. In 2007, 2,142 barges were in operation moving some 5.6bn tonne/km of freight.

While major inter-provincial highways have greatly improved Sichuan's economic situation, underdevelopment of rural roads remains an issue in remote regions of the province. While the government and non-governmental organisations such as the ADB have poured enormous sums of money into developing Sichuan's rural road network, few areas are at present well-connected to the province's major highways. These problems were illustrated by the May 2008 earthquake relief operation, during which poorly constructed and damaged roads delayed rescue teams from reaching disaster sites.

Long-distance rail travel has been available in Sichuan since the 1950s, and today several major routes traverse the province. Chengdu has regular services to Kunming, Yunnan Province, Guiyang, Guizhou Province, and Xi'an, Shaanxi Province. In addition, direct routes linking the capital with coastal cities exist but are less frequent. In general, rail service in Sichuan is slow but comprehensive. The Chinese government plans to upgrade its national rail network by 2020, installing Japanese-style links throughout the country. Sichuan's lone high-speed line connects Chengdu with Dujiangyan, one of the towns severely affected by the 2008 earthquake.

Sichuan Province has seven civil airports. The largest is Chengdu's Shuangliu International Airport, which offers flights to over 200 cities in China and 31 international scheduled and charter routes, including cities in Europe, Australasia, and North America. The six other provincial airports offer only domestic flights, mainly to locations within central and western China. A new airport built near Kangding in western Sichuan became the second highest in China upon completion at more than 4,200 metres above sea level.

# 5.1.3 May 2008 Earthquake

On May 12, 2008 a magnitude 7.9 earthquake struck Wenchuan County, Sichuan, a largely rural area roughly 80 kilometres from Chengdu. Approximately 70,000 people were killed in the quake and 4m rendered homeless, of which nearly all were within Sichuan Province. The quake was the deadliest in China since 1976 and caused billions of dollars in damage.

While comparatively few of the casualties occurred in metropolitan Chengdu, the death toll was still in the thousands. Rural areas, however, suffered the most severe infrastructure damage, most notably the collapse of numerous schools that trapped students underneath the rubble.

The Chinese government received international commendation for their speedy and transparent response to the crisis, yet in the wake of the earthquake there was widespread controversy over the quality of building materials used in the collapsed structures. In addition, substandard road links—and the region's mountainous topography—impeded search and rescue teams. The crisis underscored the vast differences in development between urban and rural China. One week after the quake, the Chinese government announced an emergency financial package intended to repair infrastructure. In addition to this, a major fiscal stimulus package announced in November in response to the global financial crisis included provisions for Sichuan, bringing the overall government disbursement to around CNY1 trillion.

The earthquake and the resulting loss of life, property, and livelihoods was a tragedy of epic proportions. Whilst news footage focused on the worst hit areas, much of the damage was in more rural outlying areas surrounding Chengdu. Although the region is still coping with the aftermath, the business environment has bounced back with surprising speed.

# **5.2** City



**The Kingdom of Shu**, one of the legendary Three Kingdoms, competed for control of China after the fall of the Han Dynasty.

Many consider the Kingdom of Shu the last Han Dynasty as the ruler was directly related to the Han lineage.

The other two states were Cao Wei in central and northern China, and Eastern Wu in southern and south-eastern China.

# 5.2.1 Brief History

Civilisations have existed in present-day Chengdu for well over 2,000 years, when the king of the ancient Shu Dynasty moved its capital there from present-day Pixian in 4<sup>th</sup> century BCE. When the Shu people were conquered by the Qin Dynasty, Chengdu entered China's orbit for the first time, though the city was briefly known as Yizhou during the later Han dynasty.

By the zenith of the Tang Dynasty in 9<sup>th</sup> century AD, Chengdu had become a major cultural centre within China, boasting the classical poets Du Fu and Li Bai as residents. A century later, Chengdu became the first city in the world to use paper currency. By the 13<sup>th</sup> century, Chengdu was known as the capital of Sichuan, a status it retains today.

Chengdu was the last major Chinese city to be conquered by the Chinese Communist Party in late 1949, more than two months after the official establishment of the People's Republic of China. Its fate has followed that of other Chinese metropolises in the years since, becoming engulfed in much of the political turmoil that characterised much of the period from 1949 to start of the reform era.

Traditionally a city with a broad manufacturing base, Chengdu turned its attention to high-tech production in the 1990s, partially as the result of direct central government directive. Today, the city is attempting to position itself as the capital of southwest China and is by far one of the most important cities in the nation's vast interior.

# 5.2.2 Climate and Geography

Chengdu sits at the western edge of the Sichuan basin and is surrounded by hills. Within the city's 208 square kilometre core lie several variations in elevation, accounting for climatic differences from the city's eastern and western sides. Chengdu is situated more than 1,000 kilometres from the nearest coast. It lies within the Sichuan basin on the fertile land of the Chengdu plain. The area is known for containing some of China's oldest and most successful irrigation projects, such as Du Jiang Yan Irrigation system which began

construction in the 3<sup>rd</sup> century BCE. Thriving agriculture has enabled this area to support one of the densest agrarian populations in the world; areas around Chengdu have the highest levels of production for rice, wheat, corn, and root crops in inland China.

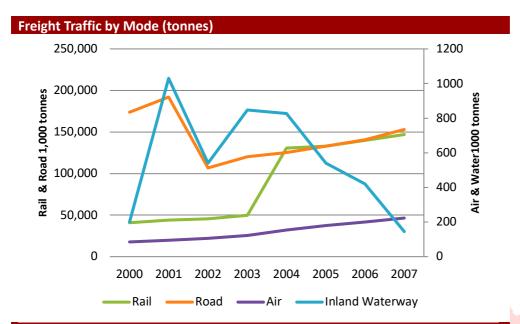
Chengdu location in a basin moderates its climate. Winters tend to be short and mild, while summers are slightly cooler and less humid than other inland Chinese cities. That being said, relatively high humidity levels exaggerate the effect of both hot and cold weather. Average daytime temperature ranges from 6.2 degrees Celsius in January to 26.3 degrees Celsius in July, and while rain occurs year round, rainfall is heaviest and most frequent during the summer.

Though the city is not visited by as much precipitation as others in China, Chengdu is notorious for the perpetual greyness of its skies. Relatively speaking, spring is the sunniest period in the city while autumn tends to be the cloudiest. Despite a relative lack of sunshine, Chengdu compensates with its mild winters; there is an average of more than 330 frost-free days per annum.

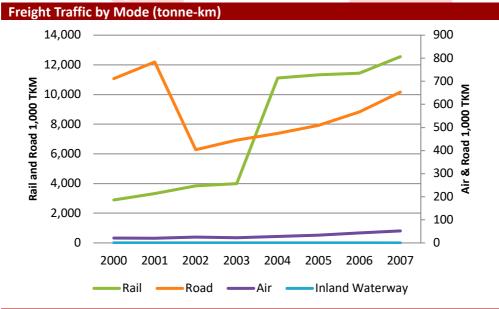
#### 5.2.3 Infrastructure

Sub-standard infrastructure development haunted Chengdu in the past, but a proliferation of construction projects this decade has greatly improved facilities in the city. These improvements have been key factors in helping Chengdu attain its status as a major logistics player in inland China.

# 5.2.3.1 Transport Infrastructure



Source: Chengdu Statistical Yearbook



Source: Chengdu Statistical Yearbook

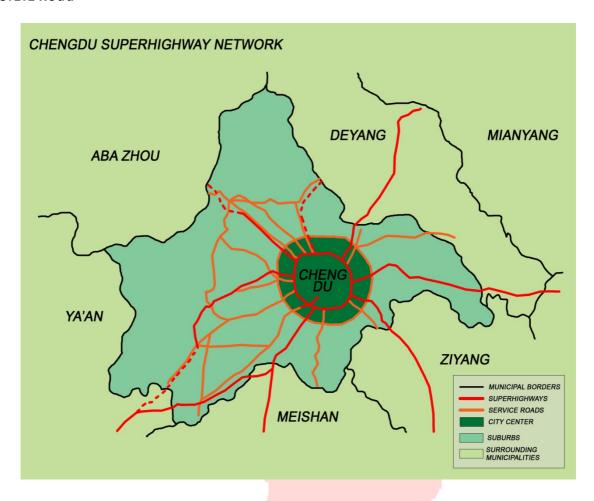
Chengdu's central location and attractive investment policies have transformed the city into the most important logistics hub in southwest China. This claim is bolstered by the presence of the Chengdu International Container Logistics Park, which at 2.5m square metres is one of the largest logistics parks in Asia. In addition, Chengdu also offers the Chengdu Bonded Logistics Centre, which provides transit, warehousing, and packaging services for imports and exports.

Notably, Chengdu has made a major push to become the centre of high-tech industry within China, prompting some observers to dub the city 'China's Silicon Valley.' This capability partially stems from the existence of the Chengdu Hi-Tech Zone, established by government directive in 1988. Eighteen Fortune

Too : I

500 companies have a presence in the zone, and Chengdu's large supply of university-educated computer engineers ensures a deep pool of skilled labour.

### 5.2.3.1.1 Road



Chengdu is one of the nodes on the National Trunk Road Network and connects with a number of provincial highways that provide access to the more remote mountainous areas.

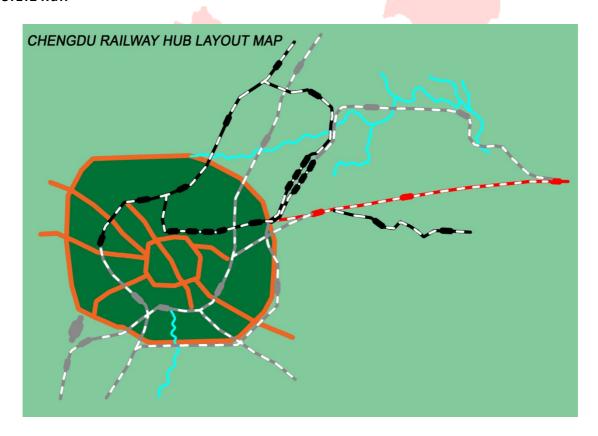
The city's central location within the province has prompted the construction of several major inter-city highways, emanating from the city in a hub and spoke formation. Highway A318 links the city to the Tibetan capital of Lhasa, among the few reliable transport links to the remote region. Additional highways connect Chengdu to the regional capitals of Xi'an, Kunming, and Chongqing, all emerging inland cities with substantial potential for growth.



#### **Understanding China's Economic Indicators**

Chengdu Road Transport Information								
Description	Destination Port	Route	Distance ( km )	Trip Duration	Container Size	Cost (CNY) One-way		
Chengdu— Shanghai	Yangshan Port	Chengdu - Xi'an - Shangqiu - Nanjing - Suzhou - Shanghai	2508	2 days	40 foot	12500		
Chengdu— Shenzhen	Yantian Port	Chengdu - Chongqing - Guiyang - Nanning - Guangzhou - Shenzhen	2400	2 days	40 foot	13000		
Chengdu— Tianjin	Tianjin Port	Chengdu - Xi'an - Zhengzhou - Shijiazhuang - Tianjin	2230	2 days	40 foot	12500		
Chengdu— Lianyungang	Lianyungan g Port	Chengdu - Xi'an - Shangqiu - Lianyungang	2491	2 days	40 foot	13000		
Source: Chengdu Municipal Government								

# 5.2.3.1.2 Rail



Within Chengdu itself, the construction of a seven-line underground transit system began in 2007, with the first line scheduled for completion in 2009. As in most other Chinese cities, breakneck population growth combined with higher consumer demand for cars has led to an alarming rise in pollution levels, a problem the image-conscious Chinese government is keen to address.

Lying at the junction of two trunk lines, Chengdu is one of southwest China's main rail hubs with four major stations—North, South, East, and West—and Qingbaijiang station north of the city. At present the Ministry

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of Railways is currently investing CNY1.17bn at Qingbaijiang station in the construction of an intermodal container centre as part of its overall strategic plan to push containerised traffic further inland. The centre, which opens in 2009, is expected to handle 2.2 to 2.5m TEUs annually.

At present, Chengdu rail container traffic flows primarily to ports in Shanghai, Shenzhen, Tianjin, and Lianyungang. There are regularly scheduled freight trains servicing those cities and transportation prices are relatively low.

Railway Container 1						
Destinations	1 tonne	10 tonnes	20 tonnes	40 tonnes		
Shenzhen North	236.65	2960.57	5997.09	11,112.38		
Shanghai Yangpu		2208.84	4499.55	8326.43		
Shanghai North	174.3	2198.34	4477.74	8287.82		
Tianjin North	159.74	1982.64	4098.85			
Tianjin Port			4195.97	7519.42		
Tianjin South	160.04	1986.74	4107.55			
Lianyungang			3993.91	7178.12		
Source: Chengdu Municipal Government						

In addition to this, as part of the government's recently unveiled financial stimulus package, plans are being made to equip the city with a high-speed rail link – similar to that which links Beijing with Tianjin at a speed of 350kmh. The government's aim in so doing is to facilitate the movement of passenger traffic from the conventional rail network thereby freeing the older infrastructure for containerised cargo traffic. At the time of writing, no further details on the project were publicly available.

Chengdu Railway Information							
Serial	Destination	Number	Frequency	Distance	Туре	Fare	
No.			(Trip/Day)	(km)		(Yuan/train)	
1	Nanjing	8804/03	0.5	1504	FTL	11201	
2	Guangzhou	81108/07	1	2149	FTL	14360	
3	Shanghai	81106/05	1	1782	FTL	12474	
4	Xuzhou	81102/01	0.5	1730	FTL	9421	
5	Lanzhou	81118/17	0.5	1520	FTL	11274	
6	Lianyungang	81102		1944	Container	3750	
						(20 foot)	
7	Shenzhen	81111		2602	Container	4800	
						(20 foot)	
8	Shanghai	81106		2327	Container	4400	
						(20 foot)	
9	Guangzhou	81107		2164	Container	5000	
						(20 foot)	
10	Shanghai	X28		2585	Luggage		
11	Guangzhou	X68		2552	Luggage		
12	Beijing	X88		2027	Luggage		
Source: Chengdu Municipal Government							

# 5.2.3.1.3 Inland Water Ways

No giant river flows through Chengdu, differentiating the Sichuan capital from inland cities such as Wuhan, Chongqing, and Lanzhou. However, the Min, a tributary of the Yangtze does run through the city and is navigable for most of its 580 kilometres. Many of the logistics projects undertaken in the city in recent

years have focused on developing road and rail networks, particularly those linking it to other regional capitals.

However, the city's relative proximity to the great Yangtze means that river freight does play a significant role in Chengdu's economy. Inland ports at Chongqing, Leshan, and Luzhou are all connected to Chengdu by express highway, an intermodal arrangement that has greatly reduced logistics costs. Of these inland ports, Leshan is closest to Chengdu, just 130 kilometres distant.

Local Port Statistics							
Port	Cargo throughput (million tons)	Container throughput (million TEUs)	Maximum lifting capacity (tonnes)	Distance from Chengdu (km)			
Chongqing	800	5	180	144			
Luzhou	20	2.5	35	290			
Leshan	20	2.5	35	290			
Source: Chengdu Municipal Government							

### 5.2.3.1.4 Air1

The city's international airport, located in the Shuangliu district, is the largest in central and western China and fifth largest in the country as a whole. Passengers can fly direct to most major domestic cities and the airport offers 31 international scheduled and charter routes. In recent years, Chengdu has added direct flights to locations such as Sydney, Frankfurt, and New York. The airport has positioned itself as the one of the busiest in inland China, though a new airport planned for Kunming may present stiff competition in the near future.

Chanadu Shi	uangliu Airport In	formation			
Airline	Departure/Arrival	Times/week	Weekly cargo capacity (tonne)	Actual loading amount (tonne)	
Chengdu— Hong Kong	Departure Arrival	16 16	100	70	
Chengdu— Bangkok	Departure Arrival	5	50	40	
Chengdu— Singapore	Departure Arrival	6	30	21	
Chengdu— Seoul	Departure Arrival	4	12	6	
Chengdu— Tokyo	Departure Arrival	4	18	9	
Chengdu— Fukuoka	Departure Arrival	7	35	10	
Chengdu— Kathmandu	Departure Arrival	2	10	4	
Chengdu— Osaka	Departure Arrival	2	8	5	
Source: Chengdu Municipal Government					

<sup>&</sup>lt;sup>1</sup> Contact details for freight forwarders operating in the region are included in the *Useful Contacts* section of this report.

#### 5.2.3.2 Communications

Chengdu is one of the eight major communications hubs in China with fibre optic trunk lines connecting it with other backbone cities. Internet bandwidth is rated at 60G/s, though connection to sites outside of China often suffer from filtering and bottlenecks resulting from the 'Great Firewall', a euphemistic term referring to the monitoring protocols employed by the Public Security apparatus. As in the rest of China, cellular phone and fixed line phone coverage is extensive.

### 5.2.3.3 Water

The city has up to date water infrastructure with a production capacity of 2.2m cubic metres per day and a pressure of 0.16 Mpa, whilst the special economic zone has a capacity of 500,000 cubic metres per day and water pressure of 0.3Mpa. Residential prices for water run a CNY1.55 per cubic metre and industrial prices run higher CNY2.05—both rates included sewage.

#### 5.2.3.4 Power

The city annually uses 13.2bn kwh supplied by the national grid and local power producers. The special economic development zone has an effective capacity of over 600,000kva and guarantees uninterrupted power. The commercial rate for electricity is CNY0.85 per kwh, the industrial rate is CNY0.79 per kwh, and the domestic rate is CNY0.46 per kwh.

### 5.2.3.5 Sewage

Facilities are capable of handling 100,000 tonnes per day and plants meet GB8978-96 level three emission standards.

The city has 1761 wastewater treatment facilities. In 2007, chemical oxygen demand (COD) tests showed that the 242m tonnes of wastewater discharged contained 72,063 tonnes of organic pollutants. Tests for ammonia and nitrogen reported 9,256.9 tonnes expelled.

# 5.2.3.6 Natural Gas

The city's total supply of 2.52bn cubic metres of natural gas is supplied by two major companies. The special economic zone's pipelines have diameters of 219mm, 159mm, 108mm, and 57mm and the commercial rate for gas is CNY1.6 per cubic metre.

# 5.2.3.7 Schools

Foreign nationals with families who live in Chengdu have a choice of several international schools for their children. Some of these schools include:

# **Chengdu International School (CDIS)**

Founded in 1997, the Chengdu International School is part of the International Schools of China (ISC) organisation and offers an American-style education for students from kindergarten through secondary school. 26 foreign teachers teach a student body numbering 250. Students at the school can compete in

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athletic competitions against students from other ISC schools throughout China. CDIS is accredited through the Western Association of Schools and Colleges (WASC)

### **QSI International School of Chengdu**

QSI Chengdu is part of the Quality Schools International network of schools and opened its doors in 2001. Programs for students aged 3 to 18 are available at the school, which offers college preparatory courses including Advanced Placement courses in six subjects. With an enrolment of 106 students, QSI Chengdu offers an American education at a state-of-the-art complex opened in 2006.

#### 6.2.3.8 Medical Facilities

### **West China School of Medicine Sichuan University**

A large hospital covering nearly 50 hectares and containing over 4,000 beds, the West China School of Medicine at Sichuan University offers foreign visitors a variety of services. The hospital has consistently ranked as one of the best in China since 1990 and offers some English-speaking doctors and nurses in addition to visiting professors from overseas.

### **Global Doctors - Chengdu Clinic**

An Australian company with branches in several countries, Global Doctors entered China in 1999 and has established a clinic in Chengdu. The clinic offers Western-standard health care 24 hours per day with English-speaking doctors and nurses.

# 5.2.4 Regional Strategy

Chengdu, as capital of southwest China's largest province, is one of the major potential beneficiaries of the 'Go West' strategy, a government policy intended to spur development of inland China through policy and economic incentives. With impressive growth figures in the past five years—figures higher than many cities on the Chinese coast—Chengdu's economic prosperity in many ways is testament to the success of the strategy.

One of Chengdu's greatest assets is its vast pool of qualified inexpensive labour. Thousands of information technology students graduate from Chengdu's tertiary institutions each year, and can immediately seek employment within the city's burgeoning high-tech industry. In 2008 alone, Sichuan had 267,800 college graduates. According to the Sichuan Provincial Department of Education, less that 50 percent of these graduates are hired on contract after graduation, leading to a surplus of skilled labour.

Though Chinese statistics often need to be taken with a grain of salt, especially considering the proliferation of new universities, Chengdu continues to produce and attract qualified workers. According to one scenario in a McKinsey Global Institute study on urbanisation, cities like Chengdu will continue to act as magnets for attracting talented labour from smaller feeder cities.

In addition, less expensive overhead costs have made Chengdu an attractive destination for multinational corporations, many of whom have opened up operations in and around the city. In recent years, the city has attracted IT companies such as Intel and now competes with Xi'an for IT focused FDI and domestic investment.

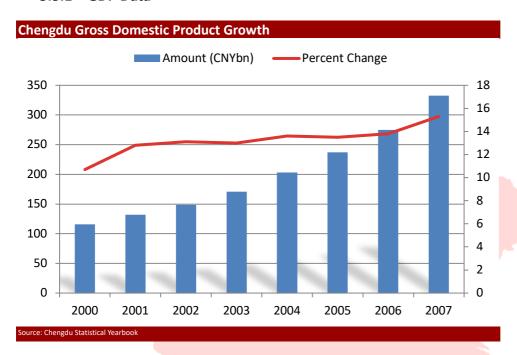
Fitting with these trends, Chengdu is one of the pivotal cities in the western region and constitutes an emerging market for domestic consumption. With a population of several hundred million, inland China has only begun to join the consumer frenzy that has gripped coastal China over the past two decades.

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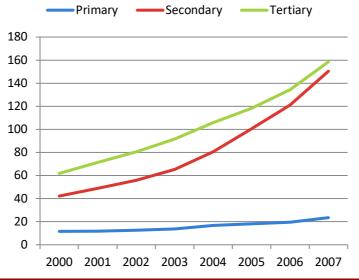
Improved infrastructure has made it an attractive base for firms wishing to focus on markets in southwest, northwest, and central China. Moreover, Chengdu is already considered one of China's "megacities" alongside the likes of Beijing, Shanghai, Guangzhou, Tianjin, Shenzhen, Wuhan, Chongqing, and Guangzhou.

# 5.3 Economic Indicators<sup>2</sup>

# 5.3.1 GDP Data



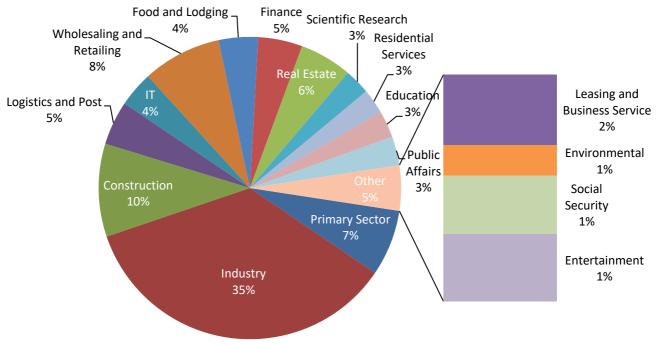




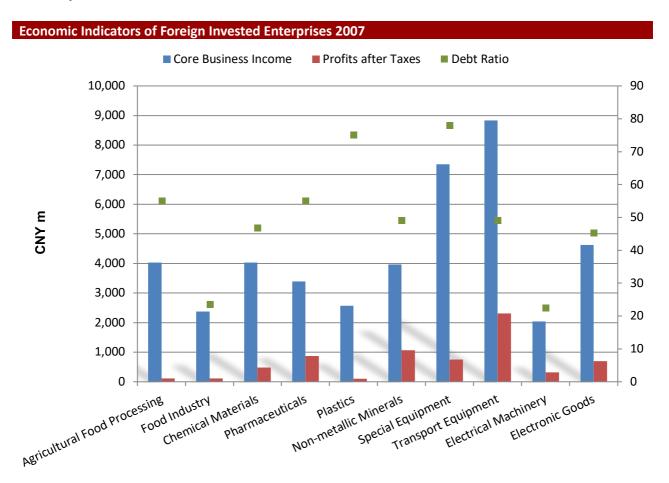
<sup>&</sup>lt;sup>2</sup> Additional economic data are included in the appendix section of this report.



# GDP Split by Industry Sub-Sector



# 2.3.1 Key Industries



Source: Chengdu Statistical Yearbook

2007 Market Share of Chengdu's Four Largest Industries						
Industry	Total	Percentage of				
	Output	Chengdu Industrial				
	(CNY bn)	Output				
Machinery	66.5	21.6				
Information Technology	52.3	17.0				
Foodstuffs	39.5	12.9				
Pharmaceuticals	15.5	5.1				
Source: Chengdu Statistical Yearbook						

# 5.3.2 Pillar Industries

Like most cities and provinces within China, Chengdu has targeted a number of "pillar industries" for growth. In Chengdu, these are: information technology, machine manufacturing, healthcare products and services, food processing, metallurgy and building materials, and petrochemicals. Whilst some are driven by domestic and foreign sources of investment, the former three have the biggest potential for companies currently looking to enter the market.





# 5.3.2.1 Information Technology

After the Communists took power in 1949, Chengdu was one of the first three electronic bases setup in China and was seen as a strategic inland hub for overseas technology—then from the USSR. In the years since, it has continued to develop a number of National Level "bases" or centres for IT development in areas such as software, information security, and integrated circuit design.

As such, it has attracted a number of electronic component manufacturing and processing facilities for IC, digital AV communications, photoelectric display devices, and optical signal and communication devices. It boasts manufacturing for finished products including computers, mobile phones and home appliances. Notably, companies like SMI, Motorola, Ericsson, Siemens, and Alcatel Nokia, and Intel all have facilities in the area.

# 5.3.2.2 Machine Manufacturing (including automobile and aerospace)

Owing in part to China's Third-Front Movement in the 1960s, Chengdu has long been an establishment of Chinese heavy industry. Chengdu is a centre for aircraft parts, automobiles and parts, engineering machinery, machine tools, mechanical fittings, farm equipment, power transmission and metering equipment, and casting and forging of parts. Key enterprises in these sectors include Toyota, Yamada, BHP, ABB, Tyco, Kobleco, and Areva.

# www.chinaeconomicindicator.com Intel

Intel's newest assembly and testing facility opened in Chengdu in 2005. The Chengdu site employs over 600 people and there are plans for expansion. Intel selected Chengdu because of its strategic location, the quality of its educational system and the well-trained workforce in the region. Approximately 4.5km from downtown, the site is located near Shuangliu International Airport in Chengdu's High-Tech Industrial Development Zone.

The Chengdu site will have four factories totalling 600,000 square feet and two stand-alone generalpurpose buildings totalling 200,000 square feet. The first factory at the site will assemble chipsets using Intel's most advanced packaging technology.

Source: Intel

### 5.3.2.3 Healthcare Industry

Over the last two decades, the pharmaceutical industry in Chengdu has progressed at a rapid pace. Whilst a number of enterprises develop western pharmaceuticals and medical equipment, many are also involved in the preparation of Chinese medicines from herbal farms. Key enterprises include Alltech Medical Systems, Kelun Industry Group, and Union Pharmaceutical. Furthermore, pre-clinical trial facilities currently represent a new opportunity for overseas investors. Frequently, Chinese enterprises invest in the construction of high-tech facilities, but lack management and scientific expertise to effectively manage and operate them, making for attractive M&A targets.

# 5.3.3 50 Largest Enterprises in Chengdu

- Sichuan FAW Toyota Motor Co., LTD
- Sichuan Tobacco Industry Co., Ltd. 2.
- Pangang Group Chengdu Iron & Steel Co., Ltd.
- Chengdu Kobelco Construction Machinery (Group)Co., Ltd.29. Chengdu Ningjiang Machine Tool Group Co., Ltd. 4.
- 5. Huiyuan Group Co., Ltd.
- Sichuan Shuijingfang Co., Ltd. 6.
- Chengdu Printing Complex Co. Ltd. 7.
- 8. New Hope Group Co.,Ltd.
- Chengdu Kobelco Construction Machinery Co.,Ltd.
- 10. Chengdu Diao Pharmaceutical Group Co., Ltd.
- 11. Sichuan Chemical Industry Holding (Group) Co., Ltd.
- 12. Chengdu Kanghong Pharmaceutical Group
- 13. Sichuan Kelun Industry Group Co., Ltd.
- 14. Chengdu Engine (Group) Co., Ltd.
- 15. Dujiangyan Lafage Cement Ltd.
- 16. TCL Corporation (Chengdu) Co., Ltd.
- 17. Sichuan Deyang Chemical Industry Co., Ltd.
- 18. Chengdu Uni-President Enterprises Food Co., Ltd.
- 19. Chengdu Power Machinery Factory
- 20. The United Laboratories (Chengdu) Co., Ltd
- 21. Chengdu Aircraft Industrial (Group) Co., Ltd.

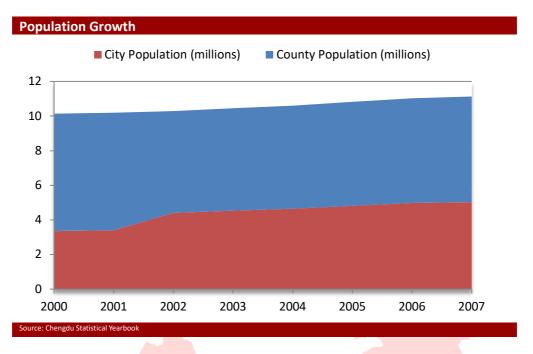
- 25. Huarun Lanjian (Chengdu) Brewery Co., Ltd.

- 26. Sichuan Aerospace Industry Corporation (SCAIC)
- 27. Chengdu Huaming Cellophane Co., Ltd.
- 28. Chengdu Guoteng Industry Group Ltd.
- - 30. Chengdu Jushi Group Co., Ltd.
  - 31. Nice Chengdu Liability Ltd.
  - 32. Chengdu Mingda Glass Ltd.
  - 33. Chengdu Enwei Investment Co.,Ltd.
  - 34. Chengdu Fengtianfang Automobile Parts Co., Ltd.
  - 35. Chengdu Guangming Glass CO.,Ltd.
  - 36. Intel Products (Chengdu) Co., Ltd.
  - 37. Chengdu Putian Telecommunications Cable Co.Ltd.
  - 38. Sichuan Yuanda Shuyang Pharmaceutical Co.. Ltd.
  - 39. Tongwei Group
  - 40. Chengdu Jintang State Electric Power Ltd.
  - 41. Chengdu Rainbow Appliance (Group) Shares Co., Ltd.
  - 42. Chengdu Vital Pharmaceutical Ltd.
  - 43. Chengdu Taibo Glass Ltd.
  - 44. Sichuan Shuneng Electric Appliance Co.,Ltd.
  - 45. Chengdu Guotai Co.,Ltd.
- 46. Chengdu Boray Printing Branch Co.,Ltd.
- 22. Chengdu Hongtian Electric Transmission Engineering Limited Tor Chengdu Institute of Biological Products
- 23. Sichuan Yadong Cement Co., Ltd.
- 24. Chengdu TMB Bearing Co., Ltd.

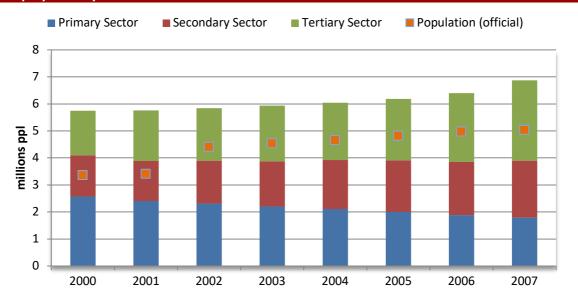
- 48. Chengdu Rongsheng Pharmaceuticals, Co., Ltd
- 49. Chengdu Lijun Industry and Commerce Co., Ltd.
- 50. Chengdu Yaguan Electronic Co., Ltd.



# 5.3.4 Demographics and Population Data<sup>3</sup>



# **Employment by Sector**



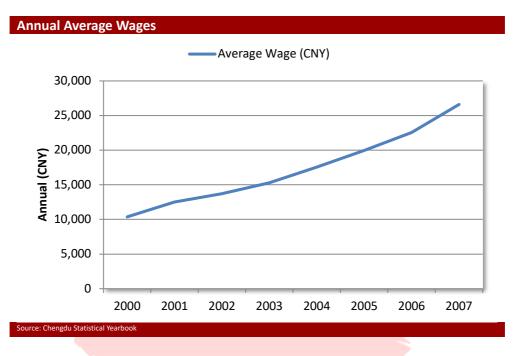
Source: Chengdu Statistical Yearbook

In Chengdu, overall employment has been growing in the secondary and tertiary sectors, the latter of which has been growing at the fastest rate. Employment in the primary sector has dropped precipitately, accounting for almost half of the employed work force at the beginning of the decade, but dropping to just 28 percent by 2008. These trends are due to a number of factors including urbanisation, automation,

<sup>&</sup>lt;sup>3</sup> Additional wage and population data are included in the appendix section of this report.

improved education, and general modernisations, together highlighting a shift in human capital towards more skilled enterprises.

In addition, analysis of official statistics for registered population indicates a large number of migrant workers in the city. Whilst skilled workers generally have little problem attaining official registration (a 'hukou' or local residence permit), migrant workers generally remain uncounted in population statistics, but will still be counted in employment figures. These workers usually take jobs in the primary and secondary sector and less often in the tertiary sector.



The city saw average wages double within the first five years of the decade and if the trend continues, they will likely triple by 2010. This, however, should not dissuade those looking to enter the market as the averages are distorted by higher paying jobs, such as those in finance, IT, scientific research, government positions, and business positions. Still, average wages for skilled labour remain a faction of their higher east coast counterparts. Additionally, staff turnover in various sectors in cities like Chengdu can be lower owing to less predatory hiring practices and migration restrictions.

#### Understanding China's Economic indicators

# 5.3.5 Retail Price Index by Category

Category	2007 Percent Change
Overall	+4.2
Food	+13.1
Cereals	+8.7
Beverages, Alcohol and Tobacco	+1.4
Clothing, Shoes, and Hats	+0.9
Textiles	+0.7
Chinese and Western Medicine and Health	+0.6
Care	
Cosmetics	0
Books, Newspapers, Magazines, and	-4.2
Electronic Information	
Cultural and Athletic Goods	-1.5
Daily Use Products	+2.2
Household Appliances and Audio-Visual	+2.8
Equipment	
Jewellery	+5.8
Fuel	+3.3
Building and Renovation Materials	+8.8
Transport and Communications	-7.9
Source: Chengdu Statistical Yearbook	

# 5.3.5.1 Note about Retail Price Index in China

Observers widely believe that price indices in China are misleading due to the under-calculation of inflation, a belief that investors are wise to consider when analysing Chinese price data.

A large part of the discrepancy simply results from China's changing economic climate over the past thirty years. The more urbanised coastal provinces account for a high percentage of China's overall economic output, and inflation figures in eastern China outstrip those in less developed parts of the country. Observers also expect inflation will continue to rise, due to several factors such as increased scarcity of land, food and resource price rises, and the implementation of new environmental safeguards.

While inflation may cause great concern among investors, China's status as a top manufacturing base is unlikely to be affected. Countries that can compete with China on cost—such as Vietnam or Bangladesh—lack the capability to manufacture such an array of sophisticated products. Nonetheless, there are steps investors worried about inflation can take to ameliorate financial concerns. One of these steps, notably, is a move into the inland provinces, fast becoming an alternative to the more traditional and expensive bases in eastern China.

# 5.3.6 Housing Price Index

Housing Price Index Change: January 2009 (Change from a baseline of 100 in January 2008)							
Place Home Sales New Housing New Housing Price (under Second-Hand							
	Price	Price	90 square metres)	Housing Price			
Chengdu	97.2	96.4	96.2	99.6			
China 99.1 98.6 99.0 99.7							
Source: National Development and Reform Commission							

A decade of continued housing market growth came to a crashing halt in Chengdu in 2008 as a result of two disparate crises; one local and the other global.

In local terms, the shock of the May 12<sup>th</sup> Wenchuan Earthquake (see section 6.1.3) temporary shook housing prices in Chengdu despite scant damage to the city itself. Assurances that Chengdu's geological position remained sound did not alleviate a sharp decline in residential home sales. According to a report by analysts at Jones Lang LaSalle, housing transactions fell by 23.4 percent in May 2008 from the month before, and housing prices dropped by 2.2 percent over the same period.

While psychological scars from the earthquake remain for many Sichuan residents, in Chengdu itself people resumed their daily activities within mere weeks of the disaster. Retail shops in Chengdu's central business district re-opened within days, and the vast majority of commercial offices resumed full operations on May 21—nine days after the earthquake.

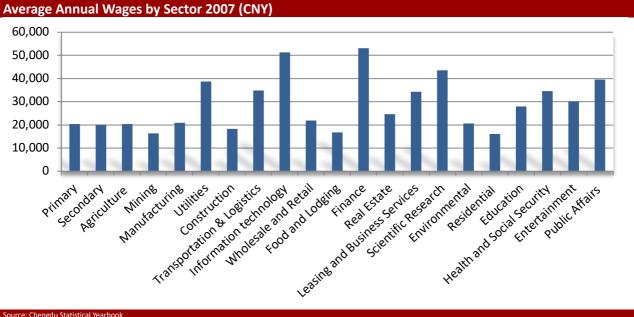
The impressive resiliency of the Chengdu housing market has led analysts to predict no damage to the city's long-term property prospects. Simply put, Chengdu's status as a burgeoning regional capital and high-tech centre remain too attractive for investors to ignore in the wake of natural disaster.

However, Chengdu's impressive recovery from the Wenchuan earthquake provided no immunity for the next calamity: the global financial crisis that swept the world in the latter months of 2008. As in the world's other major economies, housing prices fell throughout China, and Chengdu was not spared. A report by the National Development and Reform Commission released in February 2009 revealed that the home sales price index in the city fell by 2.8 percent year-on-year, while the "new housing price index" fell 3.6 percent.

While these price decreases pale in comparison to those that occurred in more developed cities such as Shenzhen, Chengdu's ten-year run of price increases came to an abrupt end. For investors, the question looms: does the current economic crunch portend long-term doom and gloom for Chengdu's property market?

According to China's *Xiaokang* Magazine, Chengdu's housing market will not remain in the doldrums forever. Government efforts to boost infrastructure—exemplified by the construction of a metro train service in the city—symbolise Chengdu's enormous growth potential.

Investors keen to make a long-term investment in the city need not be deterred by the current pop of the housing market bubble. In fact, a stabilisation or even decline in housing prices may provide a real opportunity for sharp investors to buy before prices inevitably rise again.



# **Major Government and Institutional Projects**

Aware that substandard transport infrastructure can deter investors, the Chengdu government has invested substantial sums in infrastructure.

Chengdu also has ambitious plans for its urban core, chief among them a seven-line metro system that recently began construction. The metro dovetails with a China-wide directive to encourage environmentally sound methods of transportation.

The following are major infrastructure projects either implemented or planned.

# 6.1 Road

The Chengdu city government has embarked on an ambitious program to extend its road links to nearby towns, a measure intended to cope with the city's rapid expansion in recent years.

The city government is constructing 32 highways to link with the 3<sup>rd</sup> ring road outlying areas, including the nearby cities of Nanchong and Shuangliu, the latter of which is the site of Chengdu's international airport. These roads will also connect with larger regional expressways, such as those linking Chengdu to Chongqing and Tibet.

In addition to external links, there are plans to expand Chengdu's first ring road from four to eight lanes, and to make its second ring road a high-speed artery in an effort to reduce traffic congestion.

### 6.2 Rail

The Chengdu city government plans to have seven subway lines.

Chengdu subway <sup>4</sup>			
Line Number	Line Terminuses	Line Length (km)	Number of Stations
1	Dafeng -Guangdu	31.6	23
2	East Longquan -Shiniu	50.7	26
3	Hongxing - South Banqiao	49.8	22
4	Wenjiang -Xihe	38.9	19
5	Simaqiao -Jianghe	24.6	13
6	Shawan -Sihe	22.0	13
6-branch	Liulichang -Airport	15.1	8
7	Shengtai-East Longtan	41.9	22
Source: Chengdu Municipal Government			

# 6.3 Special Processing Parks and Industrial Zones<sup>5</sup>

Chengdu Export Processing Zone is located in Chengdu Hi-tech Development Zone, south Chengdu, with a planned area of 3 square km, close to South Renmin Road and Yuanhua Road; 11.4km from downtown Chengdu, 16km from Chengdu Shuangliu International Airport, 5 km from Chengdu Railway Station. Primary industries include Precision Machinery parts, Aerospace components, bio-pharmaceuticals, and food and beverages.

Xindu Satellite City Industrial Development Zone is situated 10km from downtown Chengdu, with the first phase of 6 square km completed; the zone has a total planned area of 18 square km. The zone is located close to the Chengdu-Mianyang Highway, National Highway 318, the Chengdu-Baoji railway and the Chengdu-Chongqiang Railway. Primary industries are electronics, machinery, food, chemicals and real estate. Companies with operations in the Zone include Coca Cola and Huafeng Food Group Co., Ltd.

Sichuan-Zhejiang Cooperation Industrial Park is located in Xinlu, south Chengdu, 28km from downtown Chengdu and 80km from Leshan Port. The park is located close to the Chengdu-Kunming railway, National Highway 318, and the Chengdu-Leshan Highway. The park covers a core area of 10 square km. Primary industries are include food products and packaging, heavy machinery, building materials, fine chemicals and packaging. Companies with operations in the park include New Hope Group and Nice Group.

Chengdu APEC Technology Industrial Park, consisting of a south and west park has a total planned area of 47 square km. West Park primarily focuses on electronic information industries, bio-medicine, and precision machinery manufacturing. South Park primarily focuses on the aggregation of R&D departments and administration centres for companies invested in West Park. There are about 6,000 companies registered in the park, 500 of which are foreign invested. Of the global Fortune 500 Companies, 24 have established operations in the park; among these are included Intel, Motorola, and Alcatel.

<sup>&</sup>lt;sup>4</sup> Chinese character translations for place names are featured in the appendix section of this report.

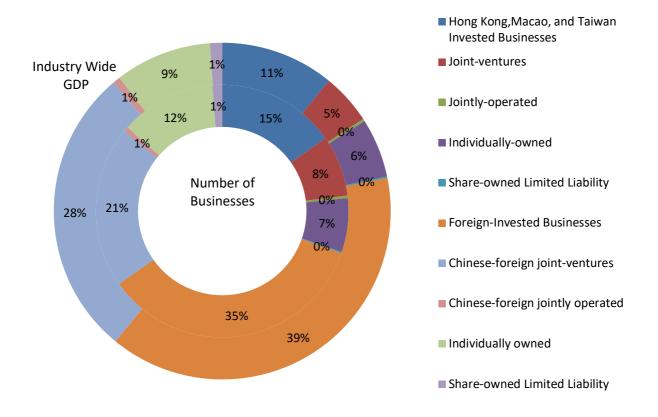
<sup>&</sup>lt;sup>5</sup> Contact details for all listed facilities are included in the *Useful Contacts* section of this report.

### 7 FDI

### 7.1 Data<sup>6</sup>

### 7.1.1 Main Economic Indicators of Foreign Invested Enterprises

### **GDP and Number of Businesses by Investment Type**

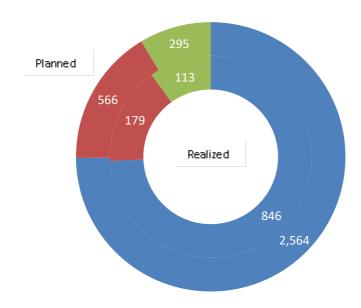


Source: Chengdu Statistical Yearbook

 $<sup>^{\</sup>rm 6}\,$  Additional FDI data are included in the appendix section of this report.



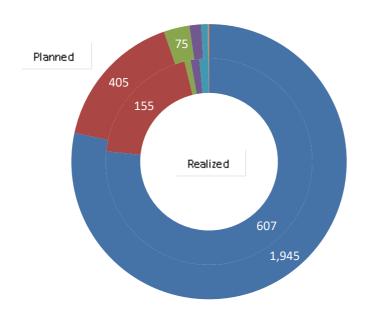




Source: Chengdu Statistical Yearbook

# Chengdu FDI By Origin (2007)





Source: Chengdu Statistical Yearbook

Chengdu FDI By Type of Investment (2007) <sup>7</sup>			
Type of Investment	Planned (USD m)	Realised (USD m)	
Total	3,422	1,138	
Foreign Independent	2,564	846	
Foreign-Chinese Joint-Venture	566	179	
Foreign-Chinese Cooperation	295	113	
Source: Chengdu Statistical Yearbook			

Chengdu FDI By Origin (2007)		
Origin Name	Planned (USD m)	Realised (USD m)
Hong Kong	1,945	607
Singapore	405	155
Taiwan	75.0	7.7
US	34.1	10.8
UK	19.3	11.3
Canada	3.3	.54
Total	3,422	1,138
Source: Chengdu Statistical Yearbook		

### 7.2 Government Policy and Investment Incentives<sup>8</sup>

Chengdu began receiving increased attention in the early 1990s after implementation of the "Go West" strategy. This government proposal—intended to spur development of China's poorer inland regions—led to the creation of various tax incentives intended to spur investment into the region.

Alongside Xi'an, the government selected Chengdu as a centre for high-tech industries, such as semi-conductor manufacturing, aerospace technologies, medical technologies, and drug development. To this end, a great deal has been spent on development of the 82.5 square km High-tech Industrial Development Zone. First proposed in 1988, and finally approved in 1991, the zone was one of the first of its kind and one of the first in western China to receive certification for ISO 14001 standards in environmental management.

<sup>&</sup>lt;sup>7</sup> According to recent government data, USD5.06bn of foreign direct investment was planned in 2008, with a total of USD2.24bn realised by the end of the year.

<sup>&</sup>lt;sup>8</sup> Additional government policy information is included in the appendix section of this report.

# 8 Approval Process for WOFE and JVs

### **Chengdu WOFE Flow Chart**

- 1. Administration for Industry and Commerce Company name pre check and filing
- 2. Bureau of Quality Supervision: Inspection and Quarantine Organization code pre filing
- 3. Bureau of Commerce: Approval certificate
- 4. Administration for Industry and Commerce Business License
- 6. Bureau of Quality Supervision, Inspection and Quarantine: Organization Code Certificate
- 7. Bank Open a company account
- 8. Local/State Tax Bureau Local/State Tax Registration Certificates
- 9. Administration of Foreign Exchange and Bank Get approval and transfer money from outside of China
- 10. Certified accountant Capital verification
- 11. Administration for Industry and Commerce Change the new/real Business License

For branches, this requires the approval of the Bureau of Commerce from the parent company's city.

For registered capital above USD30m, the approval is only allowed at the Municipal Bureau of Commerce, less than USD30m, the right of approval is given to Bureau of Commerce at district level.

5. Police Station Stamps

Chengdu municipal government launched a new policy, unique among Chinese cities, that allows enterprises to apply for a combined examination and approval, effectively accomplishing steps 4, 5, 6, and 8 simultaneously after getting an Approval Certificate (Step No.3). Within one week, an investor can skip to stages 7 and 9. This policy applies for both Chinese and foreign investors.

#### Process For Opening a WOFE or JV

- 1. Administration for Industry and Commerce (AIC)-Company name approval
  - a. The investor first finds a Chinese name for the company to be set up, and two alternative names, as there are possibilities that someone else has already registered the chosen name.
  - b. Time: One day, processing begins almost immediately after checking if the name has been used before. The AIC will issue a name approval letter to the investor.
  - c. Validity: the approved name is only valid for six months, after that the name is automatically available for other investors.
  - d. Fee: 0
  - e. Documents required:
    - i. Name Approval Application Form;
    - ii. Identification of Investor(s): a passport and in some cases a notarised photocopy of passport authenticated by Chinese embassy in the investors' country of origin.
- 2. Bureau of Quality Supervision, Inspection and Quarantine (BQSIQ)—Organisation Code
  - a. With the name approval letter from the AIC, the investor applies for a Organisation Code at the Bureau of Quality Supervision, Inspection and Quarantine. The BQSIQ will first give the investor a pre-approval letter with a Code on it, then upon receipt of Business License, the investor can apply for an Organisation Code Certificate.
- 3. Bureau of Commerce—Approval Certificate
  - a. With letters from Step 1 and Step 2, the investor applies to the Bureau of Commerce for the establishment of company. With this approval certificate, the investor can apply for a Business License.
    - i. For establishment of branches, it requires the approval of establishing branches from the Bureau of Commerce of the parent company's city
  - b. For registered capital above USD30 million, the approval is only allowed at the Municipal Bureau of Commerce. For registered capital of less than USD30 million, the approval is given to Bureau of Commerce at the district level.
  - c. Documents required:
    - i. For JV only
      - 1. Letter of Intent of memo of understanding (MOU) (written and signed by the investor)
      - 2. Application Form for the Establishment of Foreign Invested Enterprise
      - 3. Feasibility report
      - 4. Cooperation agreement, contract and Articles of Incorporation
      - 5. Appointment letters for the JV's Chairman, Vice Chairman, Legal Representative, and a name list of all directors, as well as a photocopy of their IDs
      - 6. Business License and Legal Representative's ID from the Chinese investor;
        - for investors from outside of China, registration certificate, creditability and financial information, and the legal representative's ID are required, and all documents need to be notarised and certified by the Notary Public Office and the Chinese Embassy
      - 7. Name Approval Letter issued by AIC;
      - 8. Type, specification, amount, and price of equipment the company plans to import
      - 9. Deed and Lease for business site
      - 10. When an agent is acting of behalf of the investor to file the forms, an authorisation letter is required
    - ii. For WOFE only
      - 1. Letter of Intent (written and signed by the investor);
      - 2. Application Form for the Establishment of Foreign Invested Enterprise:
      - 3. Feasibility report (created by the investors);
      - 4. Corporation Articles of the WOFE (original plus five copies);
      - 5. Appointment letters for the Chairman, Directors, Legal Representatives and a list of all director names, as well as a photocopy of their IDs;
      - 6. Registration certificate, creditability and financial information (for individual investors, a bank statement showing the investor's asset is enough, as the assets should be more than the investment), and legal representative's ID as well as the investor's ID are required, and all documents need to be notarised and certified by Notary Public Office and Chinese Embassy.
      - 7. Name Approval Letter issued by AIC;



- 8. Type, specification, amount, and price of equipment if the company needs to import equipment;
- 9. When a delegate is dealing with the registration process on behalf of the investor, an authorisation letter is required;
- 10. Deed and Lease of the business site;
- 11. Forms required by the BOC.
- 4. Administration for Industry and Commerce-Business License
  - a. With the Approval Certificate from BOC, investors can now apply for a Business License at the AIC, however, this Business License is with zero paid-in capital, only for the purpose of fulfilling the remaining establishment steps. Investors need to reply for an updated Business License after capital registration.
  - b. This application must be conducted within 30 days after receiving the Approval Certificate;
  - c. Time: 5 business days;
  - d. Fees: For firms with registered capital less than or equal to CNY10m, the fee is 0.08%;
  - e. For firms with registered capital greater than CNY10m, the fee is 0.04% of the exceeded amount;
  - f. For firms with registered capital of greater than CNY100m, there is no fee. The lowest charge is CNY50, each duplicate charge CNY10.
  - g. Documents required:
    - 1. Application Form for the Registration of Foreign Invested Enterprise;
    - 2. Approval Certificate issued by the BOC (Official Reply and Certificate Duplicate 1);
    - 3. Corporation Articles;
    - 4. ID or Certificate of the investor;
    - 5. ID and Appointment Letter of Director, Supervisor and General Manager;
    - 6. Deed and Lease of the business site;
    - 7. Minute of the Board Conference of the Company Establishment;
    - 8. Proof of the investor's creditability and financial status;
    - 9. Other forms required by the AIC.
- 5. Public Security Bureau—Seals
  - a. Each company needs five stamps: Company Seal, Legal Representative's Seal, Finance Seal, Contract Seal and Invoice Seal.
  - b. At the local Public Security Bureau, investors can apply for stamps with the Business License. Each stamp comes with a ID number. Should any of the seals be lost, the investor has to put up a notice in a PSB-designated newspaper before applying for a new chop.
  - c. Only with the stamps can the company then proceed with the remaining steps.
  - d. With stamps, the company can apply to the AIC for an Introduction Letter to Bank for Opening an Account.
- 6. Bureau of Quality Supervision, Inspection and Quarantine--Organisation Code Certificate
  - a. Time: 1 day, on the spot;
  - b. Fee: CNY108, CNY40 for an electronic duplicate;
  - c. Documents required:
    - 1. Application for the Company Establishment (signed by the legal representative);
    - 2. Business license, ID of legal representative or person in charge;
    - 3. Company seal;
    - 4. ID of agent or delegate.
- 7. Local/State Tax Bureau--Local/State Tax Registration Certificates
  - a. Before registering at Local/State Tax Bureau, the company must first open a Chinese currency account at a local bank:
  - b. This step must be conducted within 30 days upon receiving the Business License;
  - c. Documents required:
    - 1. Business license;
    - 2. Organisation Code Certificate;
    - 3. Corporation Articles;
    - 4. ID of Legal representatives;
    - 5. Deed and Lease of business site;
- 8. Administration of Foreign Exchange-- Get approval and Foreign Currency Certificate
  - a. The company now can apply to the AFE for their approval of opening a foreign currency account for the company;
  - b. When opening both Chinese and foreign currency account, the legal representative's signature or seal is required to be filed for future money transfers. While Western investors often prefer signatures, their use means that in any future transactions and business deals the signature has to be exactly the same as the

- one signed at the bank, sometimes requiring the presence of the investors themselves. This can cause an inconvenience;
- Local AFEs are built in the local branch of the People's Bank of China. Capital Project Department is in charge of company establishment capital;
- d. Documents required:
  - Application for the Foreign Currency Certificate; 1.
  - 2. Business license;
  - 3. Corporation Articles;
  - 4. Organisation code;
  - 5. Tax registrations (both local and state);
  - 6. Lease and deed of business site;
  - 7. Approval certificate from BOC;
  - 8. Forms required to be filled out by the AFE.
- Bank- Open an foreign currency account and transfer money
  - The foreign currency account shall be in the same currency as the one applied to and filed at the AFE; a.
  - The registered capital can be transferred at one time or at multiple times as stated in the Corporation Articles, and before the deadline in the Corporation Articles, which can be set by the investors. However, it is recommended that this time period does not exceed 6 months;
  - Important: registered capital must travel from outside of China into the company account in order to make it foreign invested;
  - d. The amount of transferred money is also very important, and it is recommended to have the exact amount as registered upon arrival, but investors must take transfer fees and exchange rates into consideration.
    - 1. Application for opening an account;
    - 2. ID of investor and legal representative;
    - 3. Foreign Currency Certificate;
    - 4. Approval for opening an account (issued by the AFE along with the Foreign Currency Certificate);
    - 5. Business License;
    - 6. Organisation code;
    - 7. Tax registrations (both local and state);
    - 8. Approval certificate from the BOC;
    - 9. Forms required by the bank.
- 10. Certified accountant—capital verification
  - a. A certified accountant is required to conduct the capital verification;
  - Transferred foreign currency for capital verification is calculated according to the arrival day's exchange rate, though this applies only to the capital verification. When changing them into CNY for other purposes, the market rate for the specific date will be used.
- 11. With the Capital Verification Report, the company can apply to the AIC for a changed Business License with the exact amount of paid-in capital appearing on it.



# 9 Useful Contacts

General	
Administration for Industry and Commerce	Tel: 28 8539 4114
	Fax:28 8539 4311
Chengdu Local Tax Bureau	Tel: 28 12366
Chengdu Municipal Bureau of Commerce	Tel: 28 6188 3700
	Fax:28 6188 3660
State Administration of Foreign Exchange Sichuan Branch	Tel: 28 8526 1438, 8526 1439, 8526 1011
Government Service Hall, Foreign Investment Service	Tel: 28 8691 3332, 8691 7515

Chengdu Investment Promotion Committee		
Hotline: 8008867888 Duty officer: 66452000		
Office	Contact	Address
Shanghai representative office	Tel: 21 5234 0288 Fax: 21 5234 0267	Room 2909, 580 Nanjingxi Road, Shanghai, China Post Code: 200046
Shenzhen representative office	Tel: 755 3333 1918 Fax: 755 3333 1928	Room 1503, Xinhua Insurance Tower, Mintian Road, Futian District, Shenzhen, Guangdong Province, China Post Code: 518026
Beijing investment promotion centre	Tel: 10 8565 4520 Tel: 10 8565 4580 Fax: 10 8565 4590	Room 906, Caimao Centre, Chaowai MEN, 26 Chaoyangmenwai Street, Chaoyang District, Beijing Post Code: 100020
Administrative office	Tel: 28 6188 5441 Fax: 28 6188 5444	Bldg. 5, Administrative Office Centre, 966 North Tianfu Dadao Street, Chengdu, Sichuan Province, China
Auto Industry Office	Tel: 28 6188 5492 Fax: 28 6188 5492	
Electronic and information industry Office	Tel: 28 6188 5476 Fax: 28 6188 5475	
Pharmaceuticals Office	Tel: 28 6188 5471 Fax: 28 6188 5471	
Space and nuclear Office	Tel: 28 6188 5473 Fax: 28 6188 5473	
Mould Office	Tel: 28 6188 5479 Fax: 28 6188 5479	
Office	Tel: 28 6188 5429 Fax: 28 6188 5504	
Investment service Office	Tel: 28 6188 5447 Fax: 28 6188 5434	
Industrial park coordinator	Tel: 28 6188 5491 Fax: 28 6188 5491	
Business travel promotion office	Tel: 28 6188 5457 Fax: 28 6188 5457	
Taiwan investment office	Tel: 28 6188 5460 Fax: 28 6188 5460	



# 9.1.1 Chengdu Government Contacts



na's Economic Indicators	www.chinaeconomicindicator
English	Chinese
Chengdu City Government	成都市人民政府
Mayor: Ge Honglin	市长: 葛红林
Vice Mayors: Sun Ping, Zhao Xiaowei, Fu Yonglin, Bai	
Gang, Liu Pu, Wang Zhonglin, Xie Ruiwu	副市长: 孙平,赵小维,傅勇林,白刚,刘仆,
	王忠林,谢瑞武
Website: www.chengdu.gov.cn	网站:www.chengdu.gov.cn
China Council for the Promotion of International	中国国际贸易促进委员会成都市分会
Trade, Chengdu Sub-Council	副会长: 刘淑华
Vice Chairman: Liu Shuhua	地址:中国四川省成都大业路39号大业大厦8楼
Address: 8th Floor, Daye Plaza, 39 Daye Road,	邮編: 610016
Chengdu, Sichuan Province, China	电话: 28 8666 1123
Post Code: 610016	传真: 28 8666 8825
Tel: 28 8666 1123	
Fax: 28 8666 8825	网站: <u>www.cdexpo.com.cn/ccpit/</u>
Website: www.cdexpo.com.cn/ccpit/	
website. www.cacxpo.com.cn/cepit/	
Chengdu Commerce Bureau	成都市商务局
Director: Guo Qizhou	局长: 郭启舟
Address: 966 North section, Tianfu Avenue,	地址:中国四川省成都市天府大道北段 966 号
Chengdu, Sichuan Province, China	邮编: 610042
Post Code: 610042	电话: 28 6188 3700
Tel: 28 6188 3700	
Fax: 28 6188 3660	传真: 28 6188 3660
Website: www.cdmbc.gov.cn	网站:www.cdmbc.gov.cn
Website. www.earnbe.gov.en	
Chengdu Economic Committee	成都市经济委员会
Chief of the Bureau: He Li	
	主任: 何礼
Address: 966 North section, Tianfu Avenue,	地址:中国四川省成都市天府大道北段 966 号
Chengdu, Sichuan Province, China	邮编: 610042
Post Code: 610042	电话: 28 6188 1581
Tel: 28 6188 1581	网站:www.cdgy.gov.cn
Website: www.cdgy.gov.cn	5, 6
Chengdu Administration of Industry and Commerce	成都市工商行政管理局
Chief of the Bureau: Xie Shujun	局长:谢述钧
Address: 6 East Zhimin Road, Chengdu, Sichuan	地址:中国四川省成都市致民东路6号
Province, China	邮编: 610061
Post Code: 610061	电话: 28 8539 4114
Tel: 28 8539 4114	传真: 28 8539 4311
Fax: 28 8539 4311	网站:www.cdgs.gov.cn
Website: www.cdgs.gov.cn	אַבּיזין • www.cugs.gov.cn
Changely Municipal Information Office	
Chengdu Municipal Information Office	成都市信息化办公室
Director: Liu Yong	主任: 刘勇
Address: Hulixi Yixiang, Jinniu,Chengdu, Sichuan	地址:中国四川省成都市,金牛,区互利西一巷
Province, China	邮编: 610031
Post Code: 610031	电话:28 6188 3955
Tel: 28 6188 3955	网站:www.cdcio.chengdu.gov.cn
Website: www.cdcio.chengdu.gov.cn	The state of the s
Chengdu Development and Reform Commission	成都市发展和改革委员会
Director: Fu Yi	
	主任:付毅
Address: 2 West Renmin Road, Chengdu, Sichuan	地址:中国四川省成都市人民西路2号
Province, China	邮编: 610015
Post Code: 610015	电话: 28 8664 2560, 28 8663 4557
Tel: 28 866 42560, 28 8663 4557	网站:www.cddpc.chengdu.gov.cn
Website: www.cddpc.chengdu.gov.cn	

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Address: 966 North section, Tianfu Avenue,

Chengdu, Sichuan Province, China

Post Code: 610042 Tel: 28 6188 1720 Fax: 28 6188 1722

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地址:中国四川省成都市天府大道北段 966 号

邮编: 610042 电话: 28 6188 1720 传真: 28 6188 1722 网站:www.cdst.gov.cn

Chengdu Intellectual Property Rights Bureau

Chief of the Bureau: Chen Haiyuan

Address: 4 West Renmin Road, Chengdu, Sichuan

Province, China Post Code: 610031 Tel: 28 8663 6118 Fax: 28 8663 2657

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# 9.1.2 Facility Contact Details





China's Economic Indicators www.chinaeconomicindic		
English	Chinese	
Chengdu Shuangliu International Airport	成都双流国际机场	
General Manager : Mr. Pan Xiaojun	总经理:潘校军	
Tel: 28 8570 2649, 28 8520 5063	电话: 28 8570 2649, 28 8520 5063	
Fax: 28 8570 4186	传真: 28 8570 4186	
Post Code: 610202	邮编: 610202	
Website: www.cdairport.com	网址:www.cdairport.com	
Email: <u>chengduair@cdairport.com</u>	电子邮件: <u>chengduair@cdairport.com</u>	
	E 1 PP   1 one of garden C country of the country	
Chengdu Export Processing Zone	成都出口加工区	
Office address: No. 8(1) Xinke Road, West Park,	办公地址:中国四川省成都高新区西部园区科新	
Chengdu Hi-Tech Industrial Development Zone,	路8号附1号	
Sichuan Province, China	电话: 28 8795 8128	
Tel: 28 8795 8128	传真: 28 8795 8128	
Fax: 28 8795 8128	邮编: 610731	
Post Code: 610731	网址:www.scepz.gov.cn	
Website: www.scepz.gov.cn	州坦L. <u>www.scepz.gov.cm</u>	
Chengdu APEC Technology Industrial Park	成都亚太经合组织科技产业园 (成都高新产业	
(Chengdu Hi-Tech Industrial Development Zone)	开发区)	
Tel: 28 8518 4155	电话: 28 8518 4155	
Fax: 28 8518 4066	传真: 28 8518 4066	
Post Code: 610041	邮编: 610041	
Website: www.cdht.gov.cn	网址: www.cdht.gov.cn	
	1 45m. WWW.cantagovich	
Xindu Satellite City Industrial Development Zone	新都卫星城工业开发区	
Office Address: 19 Xihuamen St. Chengdu, Sichuan	办公地址:中国四川省成都西华门街 19 号	
Province, China	电话: 28 8669 2508	
Tel: 28 8669 2508	传真 28 8669 2508	
Fax: 28 8669 2508	邮编: 610015	
Post Code: 610015	四5細: 010013	
Sichuan-Zhejiang Cooperation Industrial Park	川浙合作工业园 (四川新津工业园)	
(Sichuan Xinjin Industial Park)	电话 28 8255 2565	
Tel: 28 8255 2565	传真 28 8255 2565	
Fax: 28 8255 2565	邮编: 611430	
Post Code: 611430	网址: www.czpark.org	
Website: www.czpark.org	, v.a	
Chengdu International School (CDIS)	成都国际学校	
Address: No 399 Shuxi Lu, Zhonghai International	地址: 中国四川省成都中海国际社区蜀西路 399	
Community	号	
Chengdu, Sichuan Province, China	电话 28 8608 1162	
Tel: 28 8608 1162	邮编: 611731	
Post Code: 611731	网址: www.iscchengdu.org	
Website: www.iscchengdu.org		
	· · · · · · · · · · · · · · · · · · ·	
QSI Chengdu American garden	成都美国学校	
Address: No 188 South 3 <sup>rd</sup> Ring Road	地址: 中国四川省成都三环路三段 188 号美洲花	
Chengdu, Sichuan Province, China	园	
Tel: 28 8511 3853	电话 28 8511 3853	
Post Code: 610000	邮编: 610000	
Website: www.qsi.org/cdu home/cdu home.htm	网址: <u>www.qsi.org/cdu_home/cdu_home.htm</u>	

West China School of Medicine Sichuan University Address: Guoxuexiang Road No. 37 Chengdu, Sichuan Province, China Tel: 28 8542 2408 Post Code: 610041 Website: www.eng.cd120.com	华西医院 地址:中国四川省成都市国学巷 37 号 电话: 28 8542 2408 邮编: 610041 网址: www.cd120.com
Global Doctors Chengdu Clinic Address: Kelan Bangkok Garden No 21, Sect 4, South Renmin Road Chengdu, Sichuan Province, China Tel: 86 28 8522 6058 Website: www.eglobaldoctor.com	环球医生成都诊所 地址:中国四川省成都市民南路 4 段 21 号盘古花 园可兰阁听涛苑 1 楼 电话: 28 8522 6058 网址: www.eglobaldoctor.com

# 10.1.4 Freight Forwarders

English	Chinese
Air China Cargo Chengdu Office	中航货运成都运营基地
Address: Shuangliu International Airport,	
Chengdu, Sichuan Province, China	地址:中国四川省成都市双流国际机场
Post Code: 610202	邮编: 610202 电话: 28 8570 2991
Tel: 28 8570 2991 Shanghai Air Sea Logistics Chengdu Branch	
Address: A502, 8-40 Xi'an Road Central,	上海天原国际货运有限公司成都分公司
Chengdu, Sichuan Province, China	地址:中国四川省成都市西安中路 8-40 号
Post Code: 610072	豪瑞斯新界 A 座 502
Tel: 28 8777 9920	邮编:610072
	电话: 28 8777 9920
Chengdu Beitie Transportation Co. Ltd.	成都北铁货运有限公司
Address: 13-14 Transportation Centre, Tianhui Count, Jinniu, Chengdu, Sichuan	地址:中国四川省成都市金牛区天回乡长途汽车运输中
Province, China	心 13-14 号
Post Code: 610000	邮编:610000
Tel: 28 8358 7772	电话:28 8358 7772
China Elec-Trans International Service Ltd.	捷达国际运输公司成都分公司
Chengdu Branch	地址:中国四川省成都市西安路 63 号
Address: 211 Jinzuo Building, 63 Xi'an Road South, Chengdu, Sichuan Province, China	金座大厦 211 室
Post Code: 610072	邮编:610072
Tel: 28 8773 2399	电话:28 8773 2399
CMST Beijing International Freight	北京中储国际货运代理有限公司四川分公司
Forwarding Co. Sichuan Branch	地址:中国四川省成都市高新区创业路 1 号 918
Address: 918, 1 Chuangye Road, Gaoxin, Chengdu, Sichuan Province, China	邮编:610041
Post Code: 610041	
Tel: 28 8518 9665	电话:28 8518 9665
China Silk International Warehousing &	中丝国际创储运输成都公司
Shipping Chengdu Address: 3-1 Fenggeyayuan, 1 Xinxiwang	地址:中国四川省成都市新希望路 1 号风格雅园 3-1
Road, Chengdu, Sichuan Province, China	邮编:610041
Post Code: 610041	1 1 1/10
Tel: 28 8608 5288	电话:28 8608 5288
DACHSER Far East Ltd. Chengdu Rep. Office	超捷运东有限公司成都代表处
Address: 21D Shidu Mansion, 58 Beixin	   地址:中国四川省成都市锦江区北新街 58 号世都大厦 21
Street, Jinjiang, Chengdu, Sichuan Province, China	楼 D 座
Post Code: 610016	邮编:610016
Tel: 28 8618 0938	PIP-7III





g China's Economic Indicators	www.chinaeconomicindica
	电话:28 8618 0938
DDAO-DHL Danzas Air & Ocean Chengdu	丹沙货运成都分公司
Branch	地址:中国四川省成都市顺城大街 208 号
Address: 15F First City Plaza, 308 Shuncheng Avenue, Chengdu, Sichuan Province, China	冠城广场 15 楼 F 单元
Post Code: 610017	邮编:610017
Tel: 28 8652 7328	
EEED.	电话:28 8652 7328
EEEP Address: 49 Chuangye Road, Hi-Tech Zone,	成都随时随地现代物流有限公司
Chengdu, Sichuan Province, China	地址:中国四川省成都市高新区创业路 49 号
Post Code: 610041	邮编:610041
Tel: 28 6604 0706	电话:28 6604 0706
Exel-Sinotrans Freight Forwarding Co. Ltd.	金鹰国际货运代理有限公司成都办事处
Chengdu Office Address: 715 Asia Pacific Plaza,	地址:中国四川省成都市科华北路 58 号亚太广场 715
58 Kehua Road North, Chengdu, Sichuan	邮编:610041
Province, China	电话:28 8523 1907
Post Code: 610041	- 元山・20 6323 1507
Tel: 28 8523 1907  JHJ Chengdu Branch	   锦海捷亚国际货运有限公司成都分公司
Address: 318 Hongchuan Building, New 17	
Lingshiguan Road,	地址:中国四川省成都市人民南路四段领事馆路新 17 号
Section 4 Renmin Road South, Chengdu, Sichuan Province, China	鸿川大楼 318 室
Post Code: 610041	邮编:610041
Tel: 28 8521 0297	电话:28 8521 0297
Chongqing Meilian International Warehouse	重庆美联国际仓储运输代理有限公司成都分公司
& Transport Co., Ltd. Chengdu Branch Address: 522 Carrier Plaza,	地址:中国四川省成都市顺城大街 306 号凯乐广场 522
306 Shuncheng Avenue,	室
Chengdu, Sichuan Province, China	邮编:610017
Post Code: 610017 Tel: 28 8652 7308	电话:28 8652 7308
Rex Logistics Co., Ltd. Chengdu Office	   货捷国际运输代理有限公司成都办事处
Address: 8P Guangcheng Plaza,	地址:中国四川省成都市顺城大街 308 号冠城广场 8 楼
308 Shuncheng Avenue,	
Chengdu, Sichuan Province, China Post Code: 610017	P 单元
Tel: 28 8652 8393	邮编:610017
	电话:28 8652 8393
SDV China Ltd.	香港仕嘉货运(中国)有限公司
Address: 1101 New Times Square, 42 Wenwu Road, Chengdu, Sichuan Province,	地址:中国四川省成都市文武路 42 号新时代广场 1101
China	邮编:610017
Post Code: 610017	电话:28 8662 1054
Tel: 28 8662 1054 Schenker (H.K.) Ltd. Chengdu Rep. Office	
Address: 13A-4 Chuanxin Mansion, 18 Section	全球货运有限公司成都代表处
2 Road South, Chengdu, Sichuan Province,	地址:中国四川省成都市人民南路2段18号川信大厦13楼A-4
China Rost Codo: 610016	邮编:610016
Post Code: 610016 Tel: 28 8619 9299	电话:28 8619 9299
Shanghai Asian Development International	
Trans Pudong Co., Ltd. Chengdu Branch 1	上海亚东国际货运有限公司成都分公司一部
Address: 4 1/F Unit 3 Guojia Grace Garden, 5	地址:中国四川省成都市锦里东路 5 号国华庭 3 单元 1
Jinli Road East, Chengdu, Sichuan Province, China	楼 4 号
Post Code: 610041	邮编:610041
Tel: 28 8611 2848	电话:28 8611 2848



Shanghai Asian Development International Trans Pudong Co., Ltd. Chengdu Branch 2 Address: A1 18/F Xiti Ao Lin Garden, 1 Xiti Road, Chengdu, Sichuan Province, China Post Code: 610031 Tel: 28 8768 1408	上海亚东国家货运有限公司成都分公司二部地址:中国四川省成都市西体路 1 号西体奥林花园 18 楼 A1 邮编:610031电话:28 8768 1408
Thai Airways International-Cargo (Chengdu) Address: 2/F International Terminal Building, Chengdu Shuangliu International Airport, Chengdu, Sichuan Province, Post Code: 610202 Tel: 28 8520 5842	地址:中国四川省成都市成都双流国际机场国际候机楼 2楼 邮编:610202 电话:28 8520 5842
Victory Maritime Services (China) Ltd. Chengdu Branch Address: Suite 2-9-1 Mei Ling Ju, 16 Yulin Street East, Chengdu, Sichuan Province, China Post Code: 610041 Tel: 28 8557 7619	永利东方国际货运服务有限责任公司成都分公司 地址:中国四川省成都市玉林东街 16 号美邻居 2-9-1 室 邮编:610041 电话:28 8557 7619





# 10 Appendix

# 10.1 English to Chinese Glossary





- · ·	www.cmmaeconomicindicate
English	Chinese
3 <sup>rd</sup> Ring Road	三环路
Character ADEC To the allow to describe Double	- 2. 47 T. 47 A.
Chengdu APEC Technology Industrial Park	成都亚太经合组织科技产业园
Chengdu-Baoji railway	成都-宝鸡铁路
Chenguu-Baoji rahway	八和-玉冯坎龄
Chengdu-Chongqiang Railway	成都-重庆铁路
Chengua-Chongqiang Kanway	风郁-里八状斑
Chengdu Export Processing Zone	N In I I I I
Chengua Export Processing Zone	成都出口加工区
Chengdu-Kunming railway	成都-昆明 铁路
Changdy Lochan Highway	成都-乐山 高速公路
Chengdu-Leshan Highway	风仰-尔山 向迷公路
Chengdu-Mianyang Highway	成都-绵阳 高速公路
Chenguu-Manyang Fighway	风仰
Chengdu Railway Station	成都火车站
Chengaa Kanway Station	从的八十四
Chengdu International Airport	成都双流国际机场
chengaa meemadonarympore	700 日700 1200 1200 1200 1200 1200 1200 1200 1
Leshan Port	
LEGITATI OTC	7,116
National Highway 318	318国道
Oingheille on station	青白江站
Qingbaijiang station	
South Renmin Road	人民南路
South Remini Road	/CHIT
Sichuan-Zhejiang Cooperation Industrial Park	川浙合作工业园
Constant England Cooperation massing and	/ · [11] [1] [ [ - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
Xindu Satellite City Industrial Development Zone	新都卫星城工业开发区
, , , , , , , , , , , , , , , , , , , ,	
Yuanhua Road	元华路
Chengdu Subway	成都地铁
Line 1: Dafeng –Guangdu	一号线: 大丰 - 广都街
Line 2: East Longquan –Shiniu	二号线: 龙泉东 - 石牛村
Line 3: Hongxing - South Banqiao	三号线: 红星 - 板桥南
Line 4: Wenjiang –Xihe	四号线: 温江 - 西河镇
Line 5: Simaqiao –Jianghe	五号线: 驷马桥 - 江河
	) III (I) Sal Sales IIII See
Line 6: Shawan -Sihe	六号线:沙湾 - 四河
	) [] ([) +- ([) ++ ++++ [] (+-1) []
Line 6 branch: Liulichang -Airport	六号线支线: 琉璃场 - 双流机场
Line 7. Chamatai Fast I amatan	レロ外・仕大・帯画ナ
Line 7: Shengtai-East Longtan	七号线: 生态-龙潭东

# 10.2 Catalogue of Priority Industries for Foreign Investment in Central and Western

#### **China- Sichuan Province**

- 1. Reclaiming farmland to forests and pastures, protecting natural forests and subsequent development of national key ecological projects
- 2. Development and application of water-saving and irrigation technologies
- 3. Deep processing of rare earth and production of applied products
- 4. High yield of good quality silkworm base construction and silk products processing
- 5. Ramie textile and products
- 6. Development of resources of and production of animal and plant medicinal materials (excluding the resources under protection of the state)
- 7. End chemical industrial products of natural gas
- 8. Production of electric membrane
- 9. Construction and business operation of urban gas supply, heat supply, water supply and drainage network (controlled by Chinese party in large and medium cities)
- 10. Development of tourist areas (spots), and the construction, protection and operation of supporting facilities thereof
- 11. Road transportation of passengers

### 10.3 Encouraged, Restricted, and Prohibited FDI in China

### 10.3.1 Encouraged Foreign Investment Industries

- I. Farming, Forestry, Animal Husbandry and Fishery Industries
  - 1. Improvement of low and medium yielding field
  - 2. Planting, development and production of woody edible oil, ingredient and industrial raw material
  - 3. Planting technology, without social effects of pollution, of vegetables (including edible fungus and melon-watermelon dried fruits, teas and serial development and production of these products
  - 4. Development and production of new technology of sugar-yielding crops, fruit trees, forage grass
  - 5. Production of flowers and plants, and construction and operation of nursery base
  - 6. Planting of rubber, sisals and coffees
  - 7. Cultivation of traditional Chinese medicines (limited to equity joint ventures or contractual joint ventures)
  - 8. Reusing in fields and comprehensive utilisation of straws and stalks of crop, development and production of resources of organic fertilizers
  - 9. Planting of forest trees (including bamboo) and cultivation of fine strains of forest trees and cultivation of new breed varieties of polyploid trees and genetically engineered forest trees
  - 10. Breeding of aquatic offspring (excluding precious quality varieties peculiar to China)
  - 11. Construction and operation of ecological environment protection projects preventing and treating desertification and soil erosion such as planting trees and grasses, etc.
- 12. Breeding of aquatic products, cage culture in deep water, large-scale breeding of aquatic products and breeding ofeco-ocean products II. Mining and Quarrying Industries
  - 1. Prospecting, exploitation and utilisation of coal-bed gas (limited to equity joint ventures or contractual joint ventures)
  - 2. Venture prospecting and exploitation of petroleum, natural gas (limited to equity joint ventures or contractual joint ventures)
  - 3. Exploitation of oil and gas deposits (fields) with low osmosis (limited to equity joint ventures or contractual joint ventures)
  - 4. Development and application of new technologies that can increase the recovery factor of crude oil (limited to equity joint ventures or contractual joint ventures)
  - 5. Development and application of new technologies for prospecting and exploitation of petroleum, such asgeophysical prospecting, well drilling, well-logging and down hole operation, etc.(limited to contractual joint ventures)
  - 6.Prospecting and exploitation of such conventional oil resources as oil shale, oil sand, heavy oil and super heavy Oil (limited to contractual joint ventures)
  - 7. Prospecting, exploitation, and beneficiation of iron ores and manganese ores
  - 8. Development and application of new technologies for improving the utility of tailings and the comprehensive utilisation of recovery technology of the mine ecology
  - 9. Prospecting and exploitation of submarine flammable ice (limited to contractual joint ventures)

#### III. Manufacturing Industries

- 1. Farm Products Processing Industry
  - (1) Development and production of biology feeds, straws and stalks feeds and aquatic feeds
  - (2) Aquatic products processing, seashell products cleansing and processing, and development of function food made from seaweed
  - (3) Storage and processing of vegetables, dried fruits, fowl and livestock products
- 2. Food Manufacturing Industry
  - (1) Development and production of fond for babies and agedness, as well as function food
  - (2) Development, production and processing of forest food
  - (3) Production of natural addictive for foodstuff and food ingredients (limited to equity joint ventures or contractual joint ventures)
- 3. Drinks Manufacturing Industry
  - (1) Development and production of drinks of fruits, vegetables, albumen, tea, coffee and vegetables
- 4. Tobacco Processing Industry
  - (1) Production of secondary cellulose acetate and processing of tows (limited to equity joint ventures or contractual joint ventures)
  - (2) Production of tobacco slices in the way of paper making (limited to equity joint ventures or contractual joint ventures)
  - (3) Production of filter rods (limited to equity joint ventures or contractual joint ventures)



- 5. Textile Industry
  - (1) Production of special textiles for industrial use with high and new technology
  - (2) Weaving and dyeing as well as post dressing of high-grade loomage face fabric
  - (3) Processing of special natural fibre products satisfying the requirement of comprehensive utilisation of ecology and resources and environment protection (including other animal fibre, fibrilia, bamboo fibre, mulberry silk and coloured cotton other than wool)
  - (4) Production of clothes with computer integrated manufacturing system
  - (5) Production of top-grade carpet, embroider and drawn work product
- 6. Leather, Coat and Feather (Down and Feather) Products Industry
  - (1) Cleaning processing of leather and fur
  - (2) Post ornament and processing of leather with new technology
  - (3) Top-grade leather (sofa leather and car cushion leather)
- 7. Lumber Processing Industry and Wood Bamboo, Pine, Palm, Grass Products Industry
  - (1) Development and production of new technology and products for the comprehensive utilisation of "sub-quality, small wood and fuel wood" and bamboo in the forest area
- 8. Paper Making and Paper Products Industry
  - (1) Project based on the mode of integration of forest and paper with an annual production capacity of over 300,000 tonnes of chemical wood pulp or an annual production capacity of over 100 thousand tons of chemical mechanical wood pulp (limited to equity joint ventures or contractual joint ventures)
- 9. Petroleum Refining and Coking Industry
  - (1) Deep processing of needle coke and coal tar
- 10. Chemical Raw Material and Products Manufacturing Industry
  - (1) Production of ethylene with an annual production capacity of 600,000 tons or over (The Chinese party shall hold a relative majority of shares)
  - (2) Processing and manufacturing of derivatives of downstream products of ethylene and comprehensive utilisation of ethylene side-products such as C4-C9
  - (3) Production of ethylene with an annual production capacity of 200,000 tons or over Polyvinyl chloride resin (in the way of ethylene)
  - (4) Production of further processed products of sodium-process bleaching powder, polyvinyl chloride and organosilicon
  - (5) Production of basic organic chemical industrial raw materials such as the of benzene, methylbenzenc dimethylobenzene, etc. and its derivatives
  - (6) Production of supporting raw materials for synthesized materials: bisphenol-A production and production of propylene oxide in the way of oxidizing propylene with hydrogen peroxide)
  - (7) Production of synthetic fibre raw materials: precision terephthalic acid, vinyl cyanide, caprolactam, nylon 66 salt and polyurethane elastic fibre
  - (8) Production of synthetic rubber: liquid butadiene styrene rubber by butadiene method(excluding styrene-butadiene rubber), butyl rubber, isoamyl rubber, polyurethane rubber, acrylic rubber, chlorophydrin rubber, ethylene-propylenerubber, fluororubber, silicon rubber and other special rubber production)
  - (9) Production of engineering plastics and plastic alloys: PPO, engineering plastic nylon of 11 and 12, polyurethane, polysulfone, PAR, liquid crystal polymer and other products
  - (10) Fine chemistry industry: new products and technology for catalytic agent, auxiliary and addictive; processing
  - technology for the commercialisation of dye (pigment); production of high-tech chemicals for electronics and papermaking, food additives, feed additives, leather chemical products (excluding N,N-dimethylformamide), oil-well auxiliaries, surface active agent, water treatment agent, adhesives, inorganic fibre, inorganic nanomaterial production and deep processing of pigment encapsulation.
  - (11) Production of low hysteresis and high abrasion carbon black
  - (12) Production of environment-friendly printing ink and environment-friendly arene-oil
  - (13) Production of nature spices, synthetic spices and single ion spices
  - (14) Production of high capability coatings, water automotive coatings and assorted water resin
  - (15) Production of chlorofluorocarbon substitution
  - (16) Production of organic fluorine chemical products (excluding CFC/HCFC and tetrafluoroethylene)
  - (17) Production of fluorine recycling from phosphorus chemicals and aluminium smelting
  - (18) Production of mass coal chemical industrial products (The Chinese party shall hold the majority of shares)
  - (19) Development and production of new technology and products for the forestry chemicals
  - (20) Production of ion film for caustic soda, abio-filtration membrane and function membrane
  - 22) Development and production of new-type fertilizer: biologic fertilizer, high-density fertilizer, compound fertiliser, controlled release fertilizer, compound microbial inoculants, Compound microbial manure, degradation agent for stalks and garbage and microbial preparation of special functions
  - (23) Development and production of new varieties of effective, safe agriculture chemicals and pesticides
  - (24) Development and production of bio pesticide and bio-control products: microbial insecticide, microbial fungicide, agricultural antibiotic, insect pheromone, enemy insect and microbial herbicide
  - (25) Comprehensive utilisation and disposal of exhaust gas, discharge liquid, waste residue
  - (26) Production of organic polymer material: organic silicone modified coatings for ship shells, covering film for planes, rare earth cerium sulphide red dye, lead-free in electronic packages, serials of special sizing agent by
  - photo etching for colour Plasma Display Panel, small diameter and large specific surface area superfine fibre, high precision fuel filter paper, Li-ion battery membrane, multi-function compound accessory ingredient for plastic processing, citric acid diglyceride, fludioxonil. cvazofamid
- 11. Medical and Pharmaceutical Products Industry
  - (1) Production of new type compound medication of active composition medication (including bulk drug and preparation)
  - (2) Production of amino acids: serine, tryptophan, histamine, methionine for feed

- (3) Production of new anti cancer medication, new cardio-cerebrovascular medication and new nervous system using medication
- (4) New type, high effective and economical contraception medication and instrument
- (5) Production of new type medication using bioengineering technology
- (6) Production of high physiological active medication heterocyclic fluoride containing fluorine, like heterocyclic fluoride, and intermediate
- (7) Production of genetic engineering bacteria (AIDS bacteria, third bacteria, contraception bacteria)
- (8) Production of biology bacteria
- (9) Production of BCG vaccine and poliomyelitis vaccine
- (10) Exploitation and production of marine drug
- (11) Drug preparation: production of new formulation using new technologies of sustained-release, release, targeting and percutaneous absorption
- (12) Exploitation and production of new type of pharmaceutic adjuvant
- (13) Production of biomedicine material and ware (except flesh body, sample, human organ tissue and sample processing)
- (14) Production of animal using antibacterial raw material drug
- (15) Exploitation and production of animal using antibacterial drug, insect repellent, pesticide, anticoccidial drug and new formulation
- (16) Production of new diagnosis reagent

#### 12. Manufacturing Industry of Chemical Fibre

- (1) Production of hi-tech chemical fibre of differential chemical fibre, aramid, carbon fibre, polyethylene of high-strength and high-mode, polyphenylene sulfide (PPS) and so on
- (2) Production of Environmental Protection chemical fibre of New Solvent cellulose fibre
- (3) Production of new style of fibre and non-fibre polyester: PTT, PEN, PBT
- (4) Production of new style fibre material made use of renewable resources, biomass technology: PLA, PDO
- (5) Production of polyamide, single line production capacity of 100 ton a day
- (6) Production of meridian tyre aramid fibre and tyre cord

#### 13. Industry of Plastic Products

- (1) Exploitation and production of new technology and new production of agricultural film(photodegradable film and multifunction film)
- (2) Digestion and recycle of waste plastics
- (3) Exploitation and production of new technology and new production of plastic soft package (high barrier, multifunction film and material)

#### 14. Non-metal Mineral Products Processing Industry

- (1) Develop and produce new energy-saving, environment-protecting architecture material: lightweight high-intensity and multi-function materials for wall, high-level environment protecting decorating and finishing materials, high quality water-proof and airproof materials, and effective thermal insulation materials.
- (2) Use plastic to replace steel and wood, energy-saving and high-efficient chemical architecture material production.
- (3) Produce more than 10,000,000 sq.m. elastomer, plastic changeable asphalt waterproof coiled materials, high quality width (more than 2 meters) EPDM waterproof coiled materials and matched materials, durable PVC coiled material, TPO waterproof coiled materials.
- (4) Production of screen electromagnetic wave glass, micro-electronics glass base plate, penetrating infrared non-leaded glass, electron grade large spec quartz glass pervasion pipe, exceeding two generation and three generation micro channel plate, optic fibre panel and inverse image implement and glass fibre.
- (5) Production of glass fibre (product line with technology of wire drawing in tank furnace) and glass fibre reinforced plastic products with an annual capacity of 50,000 tons or more.
- (6) Production of sequential fibreglass original silk felt, fibreglass surface felt, micro-electronics fibreglass cloth and thin felt.
- (7) Production of coherent fibre bundle and laser medical optic fibre.
- (8) Production of sanitation porcelain with an annual production of 1,000,000 pieces or over
- (9) Standardization refine of ceramic material and production of high-level decorative materials used for ceramics.
- (10) Production of high-level refractory material used in furnaces for cement kiln, top grade(electronic)glasses, ceramics and glass fibre.
- (11) Production of ceramic carrier, AIN ceramic base piece, multiple-hole ceramics use in car catalyzing equipment.
- (12) Production of inorganic, non-metal materials and products: artificial crystal, carbon/carbon complex materials, special kind of ceramics, special kind of airproof materials, quick oil sealed materials, special kinds of cementation materials, special type latex materials, water rubber materials, heat-transfer coefficient is or less than 0.025W/mK under normal temperature heat insulation materials and so on.
- (13) Production of high tech compound materials: sequential fibre increasing thermo plasticity compound materials and prepreg, endure heat > 300°C colophony compound material moulding craftwork assistant materials, colophony compound material oar, colophony compound material top grade sports articles, special capability glass steel tube(pressure > 1.2MPa), special function compound materials and products, deep water and diving compound
- material products, medical and healing use compound material products, carbon/carbon compound materials and brake piece, high capability ceramic compound materials and products, metal compound materials and products, metal layer compound materials and products, pressure ≥320MPa super-high-pressure compound rubber pipes, air bus aviation tyres.
- (14) Production of precise high capability ceramics and functional ceramic materials: carborundum super-minute powder (purity > 99%, average granule diameter <  $1\mu$ m), Si3N4 super-minute powder (purity > 99%, average granule
- diameter <  $1\mu$ m), high pure and super-minute alumina powder(purity > 99%, average granule diameter <  $0.5\mu$ m), low temperature sintered zirconia powder(sintered temperature <  $1350^{\circ}$ C) ,high pure AlN powder(purity > 99%, average granule diameter <  $1\mu$ m), rutile TiO2 powder(purity > 98.5%), white char black(average granule diameter < 100nm=, barium titanate (purity > 99%, average granule diameter <  $1\mu$ m=.
- (15) Production of diamond film tools, thickness is 0.3mm or less super-thin artificial diamond saw piece.
- (16) Deep processing of non-metal mineral products (super-thin comminution, high level pure, fine production, modification)

- (17) Production of super high power black lead electrode.
- (18) Production of pearlite mica (granule diameter: 3-150µm).
- (19) Production of multiple dimensions and multiple direction integer weaving fabric and profile modelling fabric.
- (20) Use new dry cement kiln to innocuously dispose combusting industry castoff and life garbage.

#### 15. Non-Ferrous Metallurgical Smelting and Rolling Processing Industry

- (1) Production of diameter > 200mm silicon single crystal and polishing piece, multiple crystal silicon.
- (2) Production of high tech non-ferrous metallurgical materials: new type high capability hydrogen storing materials,

lithium hydronium battery electrode materials, compound semiconductor materials(gallium arsenide, gallium phoshpide, gallium Reexplanation, gallium nitride), high temperature superconductor materials, memory alloy materials(titanium nickel copper and iron memory alloy materials), super minute(nanometre) calcium carbide and super minute(nanometre) crystal hard ally, superhard compound materials, noble metal compound materials,

aluminium foil used for radiator, middle and high pressure cathode capacitance aluminium foil, special kind of large aluminium alloy materials, aluminium alloy precise model forge product, electrisation railway built on stilts leads,

super-thin copper strip, erosion proof heat exchanger copper alloy material, high capability copper nickel, copper and iron alloy strip, beryllium copper strip, thread, tube and stick process material, high temperature bearable tungsten filament, magnesium alloy cast, non-lead solder, magnesium alloy and its applicable products, bubble aluminium, titanium alloy strip materials and titanium jointing pipes, atomic energy grade sponge zirconium, tungsten and molybdenum deep machining products.

#### 16. Metal products industry

- (1) Production of lightened car, automobile and environment protecting new materials (bodywork aluminium board, aluminium magnesium alloy materials, automobile aluminium alloy frame and so on).
- (2) Development and production of high-grade hardware for construction, hot-water heating equipment and hardware parts.
- (3) Production and processing (including painting and processing inner and outer surface of the products) of metal packing products (thickness < 0.3mm) used to pack all kinds of grain, oil and food, fruits, vegetables, beverages, daily using materials and such contents.

#### 17. General Machine-building Industry

- (1) Manufacturing of numerically controlled machine tools of high level and key spare parts: numerically controlled machine tools which exceed quintuple linkage, digital control coordinate spindle processing centre, digital control system which exceeds quintuple linkage and servomechanism installations, high-speed and super-strong knifes for exact digital control manufacturing.
- (2) Manufacturing of multi-station forging forming machine of 1000 tons or more
- (3) Manufacturing of equipments for braking up and smashing retired cars
- (4) Manufacturing of soft FTL product line
- (5) Manufacturing of vertical articulated industrial robots, welding robots and welding equipments thereof
- (6) Manufacturing of special processing machines: complete sets of laser cutting and welding equipments, exact processing laser equipments, digital-control and low-speed wire-cuts, submicron cracker
- (7) Manufacturing of wheel or crawler crane of 300 tons or more (limited to equity joint ventures or contractual joint ventures)
- (8) Design and manufacturing of high pressure plunger pumps of pressure (35-42MPa) and engine, design and manufacturing of low-speed big torque engine of pressure (35-42MPa)
- (9) Manufacturing of electro-hydraulic proportion servo elements
- (10) Design and manufacturing of integrated multi-path valves of pressure (21-31.5MPa), pneumatic solenoid valves of less than 0.35W high-frequency electrical control valves of more than 200Hz
- (11) Design and manufacturing of hydrostatic drive device
- (12) Development and manufacturing of non-contacting gas film seal of pressure more than 10MPa, dry gas seal of pressure more than 10MPa (including experience device)
- (13) Development and manufacturing of macromolecule material device for automobiles (rub piece, changed phenolaldehyde plunger, non-metal liquid pressure mother pump and so on)
- (14) Manufacturing of car boss axletree of 3 and 4 generation (function elements of boss axletree of flange and

transducer inside or outside of the axletree, digital control machine tool or processing centre axletree of high or mid class(the processing centre should have more than three axis interlocking function and 3-4 $\mu$ m repeated precision), high-speed wire or board rolling mill axletree(assistant axletree and roller axletree of single-wire rolling mill of more than 120m/s and of thin-board rolling mill of more than 2mm), high-speed railway axletree(with speed of more than 200km/h) low-noise axletree of vibration of less than Z4(Z4, Z4P, V4, V4P), level P4, P2 axletree of various axletree

- (15) Production of high temperature resistant and insulation material (with F, H insulation class), as well as insulation shaped parts
- (16) Development and manufacturing of fluid pressure rubber sealing
- (17) Manufacturing of high binding spares of 12.9 level or more
- (18) Manufacturing of casting and forging work blanks for cars and motorcycles
- (19) Remanufacturing of machine tools, spare parts of cars (except five matured varieties) and project machines.

#### 18. Special Equipment Manufacturing

- (1) Manufacturing of mine trolley mining, loading and transporting device: mechanical drive tipper for mine of 100 tonnes or more, mobile crusher, wheeled digger of 3000m3/h or more, loading machine for mine of 5 m3 or more, electric driving mining machine of 2000 kwh or more and so on
- (2) Manufacturing of geophysical, logging equipment: MEME geophone, digital telemetry seismograph, digital imaging, computerized logging system, horizontal wells, directional wells, drilling rig equipment and apparatus, MWD logging while drilling
- (3) Manufacturing of oil exploration, drilling, gathering and transportation equipment: floating drilling systems and floating production systems which will work in more than 500 meters of water depth, working depth greater than 600 meters undersea oil production, gathering and transportation equipment, power of winch greater than 3,000 kilowatts, top driving force greater than 850 kilowatts, drilling pump more than 1,800 kilowatts of power by deep-sea oil rig, drilling depth of 9,000 meters above the desert land drilling rig and oil rig, 10 million tons / year oil refining installations with 80 tons and above Pistons edge

reciprocating compressor, NC oil Sham Tseng logging, oil Drilling Mud Hole solid operating highway tunnel monitoring equipment, ventilation. disaster prevention and relief system equipment manufacturers

- (4) Design and manufacturing of skeleton shield integrated system with diameter of 6 meters, TBM system integrating with diam of 5 meters; manufacturing of large digging drilling of calibre of 1 meter and depth of 30 meters, design and manufacturing of push bench with diam of 1.2 meters or more, manufacturing of large complete non-digging pipeline laying device with pulling power of 200 tons or more, manufacturing of consecutive wall underwater drilling machine, manufacturing of automatic vertical drilling system
- (5) Design and manufacturing of large lifting machine of 100 tons or more 320hp
- (6) Design and manufacturing of bedrail soil shifter of ground pressure of 0.03MPa or less, power of 220 hp or More large soil shifter of 520 hp or more
- (7) Design and manufacturing of purge machine of 100 mph or more, digging device in digging vessel of 5000 tons or more
- (8) Design and manufacturing of tuffcrete diosmosing-proof wall for flood control bar
- (9) Manufacturing of machine for underwater mass: soil shifter, loader and digger 9 miles under water
- (10) Manufacturing of devices of road bridge maintaining and automatic testing
- (11) Manufacturing of devices of road tunnel supervision, winding, disaster control and rescuing system
- (12) Design and manufacturing of the large-scale railway construction, and operation of large-scale road maintenance machinery and safety equipment
- (13) Manufacturing of (asphalt) shingles equipment, galvanized steel and other metal roof production equipment
- (14) Manufacturing of spot spraying polyurethane waterproof thermal insulation system equipment which could

Protect the environment and conserve energy, technology and equipment of polyurethane sealant paste preparation, technology and production equipment of modified silicone sealing paste preparation

- (15) Design and manufacturing of thin-slab continuous casting machine, high-precision strip mill (with thickness of precise 10 microns)
- (16) Manufacturing of devices of direct reverting iron and liquation reverting iron
- (17) Manufacturing of high power DC electric arc furnace of 50 tons or more
- (18) Manufacturing of colourful panting or plating board devices
- (19) Manufacturing of selecting device for multi-element, fine-powder and hard-selecting mine
- (20) Manufacturing of key devices of 800000 tons/year or more of oxene complete devices: air compressor of pyrolysis gas, oxene and elemicin, complicated powder making machine of 1000000 tons/year, centrifuge with diameter of 800 millimetre, unattackable pump and valve that can work under conditions of temperature250°C and pressure
- 15Mpa, valve that can work under conditions of temperature -55°C or less and so on (limited to equity joint ventures or contractual joint ventures)
- (21) Manufacturing of large complete devices of chemical processing of coal (limited to equity joint ventures or contractual joint ventures)
- (22) Design, manufacturing and maintaining of metal product moulds (such as extrusion moulds of pipe, stick and shape of copper, aluminium, titanium and zirconium)
- (23) Design and maintaining of punching mould of cover elements of automobile outside, clamp and test tools of automobile and motorcycle
- (24) Design and maintaining of punching mould with precision of more than 0.02 millimetre (including 0.02 millimetre), precise mould with precision of more than 0.05 millimetre (including 0.05 millimetre) and mould standard elements.
- (25) Design and manufacturing of non-metal product moulds
- (26) Manufacturing of beer filling device of 60000 bottles /h or more, drink mid or high hot filling device of 5 bottles
- /h, a septicism filling device of 36000 bottles /h or more
- (27) Manufacturing of producing technologies and key equipments for aminophenol, zymi, food additive and so on
- (28) Manufacturing of complete feed processing equipment of 10tons/h or more and key parts thereof
- (29) Manufacturing of light board and box device of 0.75-millimetre high or less
- (30) Manufacturing of single in folio colourful lithographic printing machine with speed of more than 16000 pages in folio /h(720×1020 millimetres), diprosopia in folio colourful lithographic printing machine with speed of 13000 pages in folio /h(720×1020 millimetres), colourful lithographic in folio printing machine with speed of 13000 pages in folio /h(1000×1400 millimetres)
- (31) Manufacturing of single roll lithographic printing machine with speed of more than 75000 pages in folio/h (787×880 millimetres), diprosopia single roll lithographic printing machine with speed of more than 170000 pages in folio /h (787×880 millimetres)
- (32) Manufacturing of colourful soft printing machine with speed of 300meters/m or more and coverage of 1000 Millimetres or more
- (33) Manufacturing of computer mass colour pre-coordination systems, mass colour remote handling systems, mass Speed following systems, prints quality automatic testing and following systems, no-axis turning technologies,

High-speed automatic splicer, paper giving machine and high-speed and automatic remote handling paper folding Machine, automatic overprinting system, cooling device, silanion putting system, bias-adjusting device and so on.

- (34) Deep processing technique and equipment manufacturing of plate glass
- (35) Special high-tech Industrial sewing machines manufacturing
- (36) Manufacturing of complete set of new type of paper (including pulp) making machines
- (37) Manufacturing of equipment with new technique for post ornament and processing of leather
- (38) Development and Manufacturing of new agriculture processing and storage equipment: new equipment for the processing, storage, preservation, classifying, packing, and drying of food, oil, vegetables, dried fruits and fresh fruits flowers, meat and aqua-products; agricultural product quality testing equipment; quality detection equipment of agricultural products' damage; Rheometer; Farinograph; ultrafine pulverisation equipment; Highly efficient watering equipment; 5-grade plus high efficient fruit juice condensation equipment; equipment for Disinfection of powder food in Media; Aseptic packaging equipment for Semi-solid and solid food; Packaging Materials for Aseptic packaging, DVS Bacteria Starter for Dairy Production, Disc-type Separation centrifuges



(39) Manufacturing of Agricultural machinery: facility agriculture equipment (greenhouse Automatic irrigation equipment, Auto control configuration and fertilization Equipment of Nutritious Liquid, Efficient vegetable nursery equipment, Soil nutrient analysis instruments), Tractor and associated farm tools with 120 kilowatts and above

Matching engine power, Low fuel consumption, low noise and low-emission diesel engine, Spray Machines with

Residual fog tablets Recovery Unit matching of large tractor, High-performance rice transplanter, Cotton harvesting machine, Adapted to a variety of row-spacing Self-moving Maize Reaping Machine (Hydraulic drive or mechanical drive)

- (40) Manufacturing of new technical forestry equipment
- (41) Manufacturing of equipment for reusing in fields and comprehensive utilisation of straws and stalks of crop,

Manufacturing of equipment for comprehensive utilisation of Rice Husk

- (42) Manufacturing of equipment for comprehensive utilisation of waste agriculture products and waste fowl and livestock products which are bred in scale
- (43) Manufacturing of festival fertilizer, pesticide section, water-saving technical Agriculture equipment
- (44) Manufacturing of cleaning equipment for electromechanical wells and equipments for Laundering drug production
- (45) Manufacturing of electronic endoscopes
- (46) Manufacturing of Fundus Cameras
- (47) Manufacturing of Medical imaging equipments' Key components (high magnetic field intensity and superconductor MRI, CT, X-ray computed tomography, type-B ultrasonic)
- (48) Manufacturing of Medical Ultrasonic Transducer (3D)
- (49) Manufacturing of boron neutron capture therapy equipments
- (50) Manufacturing of X-ray Stereotactic Radiotherapy System
- (51) Manufacturing of Hemodialysis, Blood Filter
- (52) Manufacturing of equipment for auto elisa immuno system (including the functions of application of sample, elisa photo meter, wash plate, incubation, data, post treatment, etc.)
- (53) New techniques of quality control of medicine products and new equipment manufacturing
- (54) New analytical techniques and extraction technologies, and equipment development and manufacturing for the effective parts of traditional Chinese medicines
- (55) Producing and manufacturing of new packing materials, new containers for medicine, and advanced medicine producing equipment
- (56) Development and Manufacturing of equipment of new type of knitting machines, Key parts and Textile testing, laboratory equipment
- (57) Manufacturing of Computer Jacquard artificial fur machine
- (58) Manufacturing of Special Equipments for solar cell production
- (59) Development and Manufacturing of Pollution control equipments
- (60) Manufacturing of City Waste disposal equipments and equipments for Comprehensive Utilisation of Rural organic waste
- (61) Manufacturing of Waste plastics, electronics, rubber, battery Recycling Equipments
- (62) Technology of hydrophilic ecological system for protecting environment and equipment manufacturing
- (63) Development and Manufacturing of 100,000 cubic meters and above Daily production seawater desalination and recycling cooling technology and complete sets of equipments
- (64) Manufacturing of special Meteorological observation and analysis equipments
- (65) Development of Seismic station, Seismic Network, and Mobile seismological observation technology System, and Manufacturing of equipments
- (66) Manufacturing of three-drum radial tire building machines
- (67) Manufacturing of Rolling resistance testing machine and Tire noise lab
- (68) Manufacturing of new Heating measurement and Temperature Control Device Technical equipments
- (69) Manufacturing of preparation, storage and transportation equipment and inspection systems of hydrogen energy
- (70) Manufacturing of new Heavy residue gasification Atomization Nozzle, Steam leakage rate of 0.5 percent and below efficient Steam Traps, 1000 ° C and above high-temperature ceramic heat exchanger manufacturer
- (71) Manufacturing of Comprehensive Utilisation of waste tire equipments
- 19. Communication and Transportation Equipment Industries
  - (1) Manufacturing of complete automobiles (foreign investments shall not exceed 50%) and construction of automobile research and development organization
  - (2) Manufacturing of automobile engine, reused manufacture of engines and construction of engine research and development organization: gasoline motor with output per litre not lower than 50 kwh, diesel motor with output per litre not
  - lower than 40 kwh and discharge capacity below 3 litres, diesel motor with output per litre not lower than 30 kwh and discharge capacity above 3 litres, motor driven by such new resources as fuel cells and compound fuel
  - (3) Manufacturing of key spare parts for automobiles as well as research and development of key technologies: complete disc brakes, complete driving rods, automatic gearboxes, fuel pumps of diesel engine, inhalant supercharger of engines, adhesive axial organ(used for four-wheel drive), hydraulic tappet, electronic cluster gauge, crankshaft and connecting bar(diesel motor above 8 litres), Anti Lock Brake System(ABS, ECU, valve body, sensor), ESP, BBW, electronic braking distribution system(EBD), driving control system, gas generator for automobile airbags, electronic fuel injection system, sprays technology on fuel common rail technology(utmost spray pressure above 1600 pa), VGT, VNT, discharge control equipment of motor meeting the pollutant discharge standard of the fourth phase of China, ITM and coupler assembly, Steer-by-Wire System, Diesel Particulate Filter(DPF), intelligent cylinder, special rubber automobile components
  - (4) Production as well as research and development of automobile electronic devices: engine and under chassis control system as well as key spare parts, in-vehicle electronic technology (automobile information system and navigation system), automobile electronic network technology (limited to equity joint ventures), components for the input (sensor and sampling system) and the output(actuator) of electronic control system, EPS electronic controller(limited to equity joint ventures) ,embedded electronic integration system(limited to equity joint ventures or contractual joint ventures), electronic-controlled air suspension, ECS, electronic valve system equipment, electronic throttle, power cell (NiH and Li-con) and control system(limited to equity joint ventures), wheel boss motor, multifunction

controller(limited to equity joint ventures), fuel cell and spare parts thereof, hydrogen storing systems for automobiles, testing system for experiment and maintaining of automobile and motorcycle models

- (5) Manufacturing of key parts for motorcycle: technology of electrical control fuel injection for motorcycle (limited to equity joint ventures or contractual joint ventures), engine discharging device which satisfy motorcycle discharging criteria stage III of
- (6) Equipment for railway transportation(limited to equity joint ventures or contractual joint ventures) : research and development, design as well as manufacturing of complete train and key spare parts (drive system, control system, brake system) of rapid transit railway, railway of passenger special line, intercity railway, trunk railway and equipment for urban railway transportation; research and development, design as well as manufacturing of passenger service facilities and equipment for rapid transit railway, railway of passenger special line, intercity railway and urban railway transportation, design as well as research and development of related information system in the process of construction of information age; research and development, design as well as manufacturing of railway and bridge facilities and equipments for rapid transit railway, railway of passenger special line, intercity railway manufacturing of equipment and fixtures for electrical railway, research and development of technologies for controlling railway noise and vibrating, manufacturing of discharging equipment for trains, manufacturing of safety monitoring equipment for railway transportation
- (7) Design, manufacturing and maintaining of civil plane: those of trunk and branch lines (Chinese part shall hold the majority of shares), general ones (limited to equity joint ventures or contractual joint ventures)
- (8) Production and maintaining of spares parts for civil planes
- (9) Design and manufacturing of civil helicopters: those of three tons or more (Chinese part shall hold the majority of shares), those of less then three tons (limited to equity joint ventures or contractual joint ventures)
- (10) Production of spares parts for civil helicopters
- (11) Manufacturing of ground and water effect plane (Chinese part shall hold the majority of shares)
- (12) Design and manufacturing of no-people plane and aerostat (Chinese part shall hold the majority of shares)
- (13) Design, manufacturing and maintaining of plan engines and spare parts as well as air assistant power Systems (limited to equity joint ventures or contractual joint ventures)
- (14) Design and manufacturing of civil air-borne equipment (limited to equity joint ventures or contractual joint ventures)
- (15) Design and manufacturing of civil rocket launcher (Chinese part shall hold the majority of shares)
- (16) Manufacturing of flight ground equipments: civil airfield facilities, support equipment for civil airfield work, ground equipment for flight test, equipment for flight simulation and practice, equipment for aeronautic testing and measuring, equipment for aeronautic ground testing, comprehensive testing equipment for machines, special equipment for aeronautic manufacturing, equipment for pilot manufacturing aeronautic materials, ground receiving and applying equipment for civil aircraft, ground testing equipment for rocket launcher, equipment for dynamic and environmental experience for rocket launcher (17) Manufacturing of mechanical and electrical products for aircrafts, temperature control products for aircrafts, test equipment for planet products and structure and organization products for aircrafts
- (18) Manufacturing of light gas-turbine engine
- (19) Design of vessels and equipment for ocean project of high and new technologies (limited to equity joint ventures or contractual joint ventures)
- (20) Maintaining, design and manufacturing of vessels (including stages) and equipment for ocean project (Chinese part shall hold the majority of shares)
- (21) Design and manufacturing of diesel engine for vessel of low, mid and high speed (limited to equity joint ventures or contractual joint ventures)
- (22) Design and manufacturing of spare parts for diesel engine for vessel (limited to equity joint ventures or contractual joint
- (23) Design and manufacturing of crankshafts of low and mid speed for diesel engine for vessel (Chinese part shall hold the majority of shares)
- (24) Design and manufacturing of stateroom machine and deck machine for vessels (Chinese part shall hold the relative majority
- (25) Design and manufacturing of communication and directing systems for vessels: communication systems, electronic directing equipment, vessel radar, electric compass automatic pilot, public broadcasting systems inside vessels and so
- (26) Design and manufacturing of overseas fishing vessels and cabin cruiser (limited to equity joint ventures or contractual joint ventures)

#### 20. Electric Machinery and Equipment Industries

- (1) Manufacture of the pivotal equipment of super-critical units of over 600,000 KW, and over 1,000, 000KW of fire and electricity station (limited to equity joint ventures and cooperative joint ventures); boiler-feed water pump, circular water pump. valve of main steam loop high temperature and pressure which is over 400°Cwork temperature and 20Mpa of work pressure
- (2) Manufacture of the equipment of over million kilowatt Nuclear-power plants (limited to equity joint ventures and cooperative joint ventures) Pump and valve of Nucleus, Nucleus II
- (3) Manufacture of the technology and equipment of Fire- electricity plant to decode and saltpetre, hop-pocket dust catcher
- (4) Design and manufacture of the equipment of nucleus-electricity and fire-electricity airproof
- (5) Manufacture of the equipment of nuclear-power of great model casting-forge
- (6) Power transmitting and transforming equipment (limited to equity joint ventures and cooperative joint ventures): nonbrilliant form transformer, high voltage implement great bushing, high voltage on-off operation implement, and freedom integer arc contact, direct current transmit electricity dried reactor, 6 inch direct current convertor clique high-power grain-valve tube, electrical apparatus contact material, and non-Pb, non-Cd solder accorded with EU command of RoHS
- (7) Manufacture of the equipment of new energy electricity-power (limited to equity joint ventures and cooperative joint ventures): photovoltaic power, geothermal power generation, tidal power generation, wave power generation, rubbish power generation, methane power generation, wind power generation over 1.5M
- (8) Manufacture of sterling generating set

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  - (9) Empolder and manufacture of straight line and plane motor and drive system
  - (10) Manufacture of solar air conditioning, heating system, solar dryer
  - (11) Manufacture of biomass drying pyrolysis system, biomass, and gasification unit
  - (12) Manufacture of ac-fm voltage regulation drawbar
  - (13) Manufacture of intelligent moulded case circuit, (3800V, 1000A), large project intelligent cabinet or drawer type circuit breaker, belt-type intelligent electronic control distribution device
  - 21. Communication equipment, computer and other electronic equipment manufacturing
    - (1) Digital video camera, digital sound-playing equipment and player equipment manufacturing
    - (2) Manufacture of flat panel display such as TFT-LCD, PDP, OLED, FED (including SED) and the material of flat panel display
    - (3) Manufacture of such parts as optical engine, light source, projection screen, high-resolution projection tube and
    - LCOS module used in large screen colour projection display
    - (4) Manufacture of digital audio and visual coding or decoding equipment, digital broadcasting TV studio equipment, digital cable TV system equipment, digital audio broadcast transmission equipment, digital television converter, digital television broadcasting Single Frequency Network (SFN), satellite digital TV up-linking station, front-end equipment manufacturing of SMATV
    - (5) Manufacture of high-performance single-lens reflex with more than 6 million pixels
    - (6) Design of integrate circuit, and manufacture of large digital integrate circuit with its wire width less than 0.18 micron, manufacture of simulated and digital analogy integrate circuit less than 0.8 micron and the encapsulation and test of such advanced equipment as BGA, PGA, CSP, MCM
    - (7) Large and medium-sized computer, high-performance computer with its operation more than 100 trillion times, portable micro computer, high-rank server with its operation more than 1 trillion times per second, large scale simulated system, large industrial controller and the manufacture of controller
    - (8) Manufacture of computer digital signal process system and board card
    - (9) Manufacture of figure and image recognition process system
    - (10) Development and manufacture of large-capability optical and disk driver
    - (11) Manufacture of high-speed storage system and intelligent storage equipment with its capability more than 100 TB
    - (12) Manufacture of large-breath (more than 900mm) high-definition coloured printing equipment, high-definition coloured printer head with its precision more than 2400dbi, and large-breath (more than 900mm) high-definition coloured Xerox
    - (13) Manufacture of Computer Assistance Design (three-dimensional CAD), Computer Assisted Testing (CAT),

Computer Aided Manufacture (CAM), Computer Aided Engineering(CAE) and other computer application system

- (14) Development and manufacture of software product
- (15) Development and manufacture of specialized electronic material (excluding the development and manufacture of optical fibre perform rod)
- (16) Manufacture of specialized equipment, testing equipment, tools and moulds
- (17) Manufacture of new type electronic components and parts; slice components, sensitive components and sensors, frequency monitoring and selecting components, mix integrated circuit, electrical and electronic components, photoelectric components, new type components for machinery and electronics, high-density interlinked build-up board, multilayer flexible board, flexible printing circuit board and packaging substrate
- (18) High-tech green battery manufacture: dynamic zinc and nickel storage cell, zinc and silver storage cell, lithium-ion batteries, high-capability, air-proof and repair-free lead-acid battery, solar battery, fuel battery, column-shaped zinc-air battery and etc.
- (19) High-brightness LBD with its luminous efficiency more than 501m/W, epitaxial slice LBD (blue) with its luminous efficiency more than 501m/W, white luminous tube with luminous efficiency more than 501m/W and its power more than 200mW
- (20) Development and manufacture of RFID chip
- (21) Development and manufacture of key components and parts used in high-precision digital CD drive
- (22) Reproduction of read-only compact disk and manufacture of recordable compact disk
- (23) Design and manufacture of civil satellites {Chinese partner shall hold the majority of shares}
- (24) Manufacture of civil satellites effective payload (Chinese partner shall hold the majority of shares)
- (25) Manufacture of spare pans for civil satellites
- (26) Manufacture of telecommunication system equipment for satellites
- (27) Manufacture of receiving equipment of satellite navigation and key components
- (28) Manufacture of optical communication measurement and instrument and light transceiver with its speed more than 10 GB/s
- (29) Ultra Broad Band (UWB) communication equipment manufacture
- (30) Manufacture of wireless Local Area Network (Wide Area Network)
- (31) Manufacture of Optical Cross Connect (OXC), Automatic Switch Optical Network(ASON), optical fibre communication and transmission equipment more than 40G/sSDH and Coarse Wave Division Multiplexing(CWDM)
- (32) Manufacture of Asynchronous Transfer Mode (ATM) and IP digital communication system
- (33) Development and manufacture of third-generation and the following mobile communication system mobile phone, base station, core network equipment and network testing equipment
- (34) Development and manufacture of high-end router, network switcher more than 1 kilo mega
- (35) Manufacture of air traffic control system equipment (limited to joint venture and cooperation)
- 22. Machinery Industries for Instrument and Meter, Culture and Office
  - (1) Manufacture of field-bus control system and its key components and parts
  - (2) Development and manufacture of large-scale sophisticated instruments: including electron microscope, laser scanning microscope, scanning tunnelling microscope, laser with its power more than 2kw, industrial chromatograph, GC/MS, nuclear magnetic resonance spectrometer, energy dispersive analysis system, X-ray fluorescence spectrometer, diffraction analysis system, industrial CT, large-scale balance measuring machine, automatic testing system of on-line mechanical quality, ultra-speed centrifuge with its rotating speed more than 100000r/min, large-scale metallurgical microscope, three coordinate measuring machine, laser comparator, electrical prospecting instrument, airborne electrical prospecting and gamma-ray spectrometry measuring instrument more than 500 m, borehole gravimeter and 3-dimensional magnetograph, high-precision microgal and aviation gravity gradiometer,

High-performance welding rare earth material with permanent magnetism, portable geological radar

- (3) Manufacture of high-precision digital voltmeter, current meter (with measuring range of seven bit and a half and above)
- (4) Watt-less Power manufacture of automatic compensation equipment
- (5) Manufacture of two-phase flow meter and solid flow meter
- (6) Manufacture of automatic plating machine for electron gun
- (7) Manufacture of industrial NDT X-ray equipment governing the volt more than 800 kv
- (8) Manufacture of new technical equipment for safety production and environmental protection
- (9) VXI bus automatic test system (in accordance with IEEE1155 international standards)
- (10) Development and manufacture comprehensive management system for under-mine monitoring and disaster forecasting apparatus and coal safety measurement
- (11) Manufacturing of the equipment for engineering measurement and global geographical observation equipment: digital triangle surveying system, Digital programmed system for three-dimensional topography model (acreage>1000×1000mm, horizontal error<1mm, altitude error <0.5mm), ultra wideband seismograph( $\phi$  < 5cm, frequency band0.01-50HZ, equivalent quaking speed noise<10-9m/s), integrated earthquake data processing system, extensive under-well earthquake and auspice observation apparatus, sophisticated controllable epicentre system,
- engineering velocity measuring system, high-precision GPS receiver (precision 1mm + 1ppmm), INSAR graphics receiving and processing system, absolute gravimeter with the precision less than 1 microgram, satellite gravimeter,
- Doppler weather radar adopting coherent technology or double polarization technology, visibility measuring apparatus, meteorological sensor, (including temperature, pressure, humidity, wind, precipitation, cloud, visibility,
- radiation, frozen earth, depth of snow), anti lightning stroke system, multilevel soot and dust sampler, three-dimension supersonic anemoscope, high-precision intelligent total station machine, three-dimensional laser scanner, high performance diamond bit used for drilling, laser ranger finder without cooperative target, wind profiler(affixed with RASS), GPS electronic probe system, CO2/H2O general observation system, boundary layer laser Doppler radar, granule chromatography, (3nm-20µm) , high-performance data collector, under-water glider
- (12) Manufacture of new-tech equipment of environmental-protection testing instrument: air quality testing, water quality testing, new-tech equipment of fume on-line detecting instrument, apparatus for emergency treatment and completeset new differential coefficient analysis system, automatic calibration, composite, low-drift, on-line remote measurement and remote controlled apparatus and system and etc.
- (13) Manufacture of air-pollution prevention and control equipment: high-temperature-proof and erosion-proof filtering material, wet desulphurisation complete-set equipment in coal-fuelling factory, low-NOX fuelling equipment, catalysts for denitrification of fuel gas and complete set of denitrification equipment, purified equipment for the polluted organic gas, purified equipment for gas expelled from diesel-driven automobile
- (14) Manufacture of equipment for water-pollution prevention and control: horizontal screw centrifugal dehydrator, membrane and its material, ozoniser more than 10kg/h, NO2 generator with more than 10kg/h, ultraviolet disinfection device, small domestic sewage treatment device in the rural area
- (15) Manufacture of the equipment for treating solid refuse: earth-leak-proof membrane in refuse burying factory, the device for treating dangerous solid waste, methane-for-electricity equipment in refuse burying factory, the equipment for comprehensively using the domestic animal and fowl waste in large scale
- (16) Manufacture of environment motoring apparatus: SO2 automatic sampler and calcimeter, NOX, NO2 automatic sampler and calcimeter, O3 automatic monitor, CO automatic monitor, automatic sampler and calcimeter for soot and dust, automatic sampler and calcimeter for soot, portable calcimeter for harmful and toxic gas, automatic analyzer for organic pollutants in the air, COD automatic online monitor, BOD automatic online monitor, automatic online monitor for turbidity, DO automatic online monitor, TOC automatic online monitor, Automatic online monitor for ammonia nitrogen, radiation dose monitor, ray analyzer
- (17) Manufacture of instrument and equipment for hydrological data collecting, processing, transmitting and flood warning
- (18) Manufacture of ocean exploring apparatus and equipment: deep-sea underwater video camera and underwater camera, multi-beam explorer, shallow and deeper sub bottom profiler, navigation warm-salt profiler, fluxgate compass, hydraulic wire line winch, underwater airproof electronic connector, energy recycle device used in filtration-proof seawater desalination with its efficiency more than 90%, high-pressure pump used in filtration-proof
- seawater desalination with its efficiency more than 85%, filtration-proof seawater desalination membrane( desalination rate more than 99.7%), low-temperature multifunction distilled seawater desalination equipment with its daily production more than 20, 000 tons, Marine ecosystem inspection buoy, section probing buoy, disposable measuring instrument of electrical conductivity, temperature and depth (XCTD), on-the-spot water quality measuring apparatus, intelligent chemical transducer for measuring the water quality of the ocean (continues work for 3-6 months), electromagnetic current meter sensor, navigating acoustic Doppler current profiler(self-contained, direct-read, used-in-ship), electricity conductivity rate deep-section profiler, acoustic responding emancipator(set deep into the ocean)
- 23. Other manufacturing industries
  - (1) Development and utilisation of clean-coal technical product (coal gasification, coal liquefaction, water-coal, industrial lump-
  - (2) Coal ore dressing by washing and comprehensive utilisation of powered coal (including desulphurised plaster), coal gangue
  - (3) Production of the all biodegradable material
- IV. Production and Supply of Power, Gas and Water
  - 1. Construction and operation of electricity power by employing the clean fuel technology of integral gasification combined circulation (IGCC), circulating fluidized bed more than 0.3 million kwh, Pressurized Fluidized Bed Combustion Combined Cycle (PFBC) more than 0.1 million kwh
  - 2. Construction and operation of back pressure combined and heat power
  - 3. Construction and management of hydropower stations with the main purpose of power generating
  - 4. Construction and management of nuclear-power plants (Chinese partner shall hold the majority of shares)



- 5. Construction and management of new energy power plants (solar energy, wind energy, magnetic energy, geothermal energy, tide energy and biological mass energy, etc.)
- 6. Utilisation of sea water (direct use of sea water, seawater desalination), using industrialization to recycle industrial sewage
- 7. Construction and operation of urban water-supply plant
- V. Communication and Transportation, Storage, Post and Telecommunication Services
  - 1. Construction and management of grid of national trunk railways (Chinese partner shall hold the majority of shares)
  - 2. Construction and management of feeder railways, local railways and related bridges, tunnels and ferry facilities (limited to equity joint ventures or contractual joint ventures)
  - 3. Comprehensive maintenance of infrastructure of high-speed railway, special railway line, intercity (Chinese partner shall hold the majority of shares)
  - 4. Construction and management of highways, independent bridges and tunnels
  - 5. Road freight transportation companies
  - 6. Construction and management of public dock facilities of ports
  - 7. Construction and management of civil airports (the Chinese party shall hold the relative majority of shares)
  - 8. Air transportation companies (Chinese partner shall hold the majority of shares)
  - 9. General aviation companies for agriculture, forest and fishery (limited to equity joint ventures or contractual joint ventures)
  - 10. International liner and tramp maritime transportation business (the Chinese party shall hold the relative majority of shares)
  - 11. International containers inter-model transportation
  - 12. Construction and management of oil (gas) pipelines, oil (gas) depots and petroleum wharf
  - 13. Construction and management of the facilities of coal delivery pipelines
  - 14. Construction and management of storage facilities relating to transportation services

#### VI. Wholesale and Retail Trade Industry

- 1. Wholesale, retail and logistic distribution of general goods
- 2. Modern logistics

#### VII. Rent and business service

- 1. Accounting and auditing ((limited to equity joint ventures or contractual joint ventures)
- 2. Information consulting agencies of international economy, science and technology, environmental protection
- 3. Engaged in such information technology and business flow outsourcing services as system application management maintenance, information technology supportive management, bank background service, financial settlement, human resource service, software development, call centre, data processing by means of accepting service outsourcing

#### VIII. Scientific research, technology service and geological exploration

- 1. Biological engineering technique and bio-medical engineering technique
- 2. Isotope, irradiation and laser technique
- 3. Sea development and sea energy development technology, comprehensive technology of sea chemical resources, development of the relevant products and deep-processing technology, sea medicine and biochemical product development technology
- 4. Sea surveying technology (sea tidal wave, meteorology, environmental monitoring) sea bed probing, exploration and evaluation technology of ocean resource
- 5. Comprehensively use the high chemical additional value technology to distil chemical potassium, bromine, magnesium from dense sea water after desalination and its deep procession
- 6. Development of energy-saving technology
- 7. Technology for recycling and comprehensive utilisation of resource, development and application of the recycling technology of the waste dispelled by enterprises
  - 8. Technology for environment pollution treatment and monitoring
  - 9. Energy-saving and consumption-reduction in chemical fibre production and the new technology to deal with polluted air, water and solid waste
  - 10. Technology for preventing from desertification and desert improvement
  - 11. Comprehensive management technology for balancing grass and domestic animal
  - 12. Application technique of civil satellite
  - 13. Research and development centres
  - 14. Incubator for hi-tech, new products developing, and incubation of enterprises
- IX. Water, environment and public facility management industry
  - 1. Construction and management of key water control projects for comprehensive utilisation (the Chinese party shall hold the relative majority of shares)
  - 2. Construction and management of urban access-controlled roads
  - 3. Construction and management of metro and city light rail (Chinese partner shall hold the majority of shares)
  - 4. Construction and management of treatment plants for sewage, garbage, the dangerous wastes (incineration and landfill), and the facilities of environment pollution treatment

#### X. Education

- 1. Advanced educational institution (only limited to joint venture or cooperative)
- XI. Public health, social security and social welfare
  - ${\bf 1}.$  Service agencies for the elderly, the handicapped and children
- XII. Culture, sports and entertainment
  - 1. Operation of the performance site ((the Chinese party shall hold the relative majority of shares)
  - 2. Operation of the gymnasium, body-fitting, competition performance, sports training and agency service

#### 10.3.2 Restricted Foreign Investment Industries

- I. Farming, Forestry, Animal Husbandry and Fishery Industries
  - 1. Breeding and seeds developing production of new train crop breed (Chinese party shall hold the majority of shares)



- 2. Processing of the logs of precious varieties of trees (limited to equity joint ventures or contractual joint ventures)
- 3. Cotton (raw cotton) processing

#### II. Mining Industries

- 1. Exploring and mining of special and scarce coals exploration (Chinese partner shall hold the majority of shares)
- 2. Exploring and mining of barite (limited to equity joint ventures or contractual joint ventures)
- 3. Exploring and mining of precious metals (gold, silver, platinum families)
- 4. Exploring and mining of precious non-metals such as diamond
- 5. Exploring and cradling of phosphorite
- 6. Mining of szaibelyite and szaibelyite iron ores
- 7. Mining of Celestine
- 8. Mining of Ocean Manganese Nodule (Chinese partner shall hold the majority of shares)

#### III. Manufacturing Industries

- 1. Farming Subsidiary Foodstuff Industry
  - (1) Processing of soybean, rapeseed edible oil (Chinese partner shall hold the majority of shares), deep-processing of corn
  - (2) Manufacturing of biology liquid fuel
- 2. Beverage Manufacturing Industries
  - (1) Processing of green lea and special tea with China's traditional crafts
  - (2) Carbonic acid beverage manufacturing
- 3. Tobacco Industries
  - (1) Manufacturing of threshing and curl tobacco leaf
- 4. Printing and Copy of Recording Vehicle
  - (1) Print of publication (Chinese partner shall hold the majority of shares, except packing and presentation)
- 5. Petroleum Processing and Coking Industries
  - (1) Construction and management of refineries which annual produce less than 800 ten thousand tons
- 6. Chemical Raw Material Products Manufacturing Industry
  - (1) Sodium hydroxide and potash production
  - (2) Production of sensitive materials
  - (3) Production of benzidine
  - (4) Production of chemical products from which narcotics are easily made (ephedrine, 3, 4-idene dihydro phenyl-
  - 2-acctonc, phenylacetic acid, 1-phenyl-2-acetone, heliotropin, safrole, isosafrole, acetic oxide)
  - (5) Production of fluorine-chlorocardon, hydrogen- fluorine-chlorocardon, tetrafluoroethylene, fluorinationaluminium and hydrofluoric acid
  - (6) Production of polybutadiene, emulsion polymerization buna S, thermoplastics buna S
  - (7) Production of sulfate process titanium dioxide, open hearth process permanganate
  - (8) Production of baron, magnesium, iron ores
  - (9) Barium salt production
- 7. Medical and Pharmaceutical Products Industry
  - (1) Production of chloramphenicol, penicillin G, lincomycin, gentamicin, dihydrostreptomycin, amikacin, tetracycline hydrochloride, oxytetracycline, medemycin, kitasamycin, ilotyin, ciprofloxacin and offoxacin
  - (2) Production of analgin, paracetamol, Vitamin B1, Vitamin B2, Vitamin C, Vitamin E
  - (3) Production of immunity vaccines, bacterins, antitoxins and anatoxin (BCG vaccine, poliomyelitis, DPT vaccine, measles vaccine, Type-B encephalitis, epidemic cerebrospinal meningitis vaccine) which included in the State's Plan
  - (4) Production of material medicines for addiction narcotic and A class psychoactive drug (Chinese partner shall hold the majority of shares)
  - (5) Production of blood products
  - (6) Production of non-self-destructible expendable injectors, transfusion systems, blood transfusion systems, blood bags
- 8. Chemical Fibre Production Industry
  - (1) Production of chemical fibre drawn work of conventional chipper
  - (2) Production of rayon staple viscose fibre
- 9. Rubber Products
  - (1) Old tire recondition (not including radial tire), and production of industrial rubber fittings of low-performance
- 10. Non-Ferrous Metal Smelting and Rolling Processing Industry
  - (1) Non-ferrous metal refining of tungsten, molybdenum, stannum (except tin compounds), antimony (including antimony oxide and antimony sulphide)
  - (2) Non-ferrous metal refining of electrolytic aluminium, copper, lead, zinc and another non-ferrous metal
  - (3) Smelting and separation of rare earth metal (limited to equity joint ventures or contractual joint ventures)
- 11. Metal Manufacturing
  - (1) Manufacture of containers
- 12. Common Purpose Equipment Manufacturing Industry
  - (1) Manufacture of all kinds of general (p0) axletree and accessory (steel ball, cage), rough
  - (2) Manufacture of wheeled model, crawler crane less than 300 tons
- 13. Special Purpose Equipment Manufacturing Industry
  - (1) Production of low or middle class type-B ultrasonic displays
  - (2) Manufacture of equipment for producing long Dacron thread and short fibre  $\,$
  - (3) Manufacture of crawler dozers of less than 320 horsepower, hydraulic excavator less than 30 tons, wheel loader less than 6tons, grader of less than 220 horsepower, road roller, fork-lift truck, non-calzada dumper truck, road surface milling rework machinery, garden machine and tools, production of commodity concrete machinery (pump, agitating lorry, pump vehicle)
- 14. Manufacturing of transport and communication facilities

- (1) Repairing, design and manufacture of common ship (including subsection) (Chinese partner shall hold the majority of shares)
- 15. Manufacturing of Communication Apparatus, Computers and another Electric Installation
  - (1) Production of satellite television receivers and key parts
  - (2) Manufacture of fiscal cash register
- IV. Production and Supply of Power, Gas and Water
  - 1. Construction and management of conventional coal-fired power of condensing steam plants whose unit installed capacity is less than 300,000kW, within the small power grid in Xizang, Xinjiang, Hainan provinces, and the coal-fired power of condensing-extraction steam plants with dual use unit cogeneration
  - 2. Construction and management of power network
- V. Communication and Transportation, Storage, Post and Telecommunication Services
  - 1. Railway freight transportation companies
  - 2. Railway passenger transportation companies (Chinese partner shall hold the majority of shares)
  - 3. Corporate of highway passenger transport
  - 4. Corporate of enter-leave country fleet operation
  - 5. Corporate of water transportation (Chinese partner shall hold the majority of shares)
  - 6. General aviation companies engaging in photographing, prospecting and industry (Chinese partner shall hold the majority of shares)
  - 7. Tele communication companies: telecommunication increment service (the foreign capital less than 50 percent) motion tone and data service in basic telecom, interior business and international business (the foreign capital less than 35 percent,49 percent no later than 11th in December in 2007 is permitted)
- VI. Wholesale and Retail Trade Industries
  - 1. Commercial companies of commodity direct selling, mail order selling, Internet selling, franchising, commissioned operation, commercial management
  - 2. Wholesale, retail and logistic distribution of grain, cotton, vegetable oil, sugar, medicines, tobaccos, automobiles, crude oil, capital goods for agricultural production(Chinese should hold the majority of shares of the multiple shops which have more than 30 branch stores and sale different kinds and brands of commodities from multi-suppliers)
  - 3. Distributing and selling of audiovisual products (excluding movies)(joint venture or Chinese should hold the majority of shares)
  - 4. Commodity auctions
  - 5. Ship agent (Chinese should hold the majority of shares), tally for foreign vessels (limited to equity joint ventures or contractual joint ventures)
  - 6. Wholesaling product oil and construction and operation of gasoline stations (Chinese should hold the majority of shares of the multiple shops which have more than 30 branch stores and sale different kinds and brands of commodities from multi-suppliers)

#### VII. Banking and Insurance Industries

- 1. Banks, financial leasing companies, finance companies, trust investment companies, currency brokerage companies
- 2. Insurance companies (the share of life-insurance companies is less than 50%)
- 3. Security companies (confined to A share consignment-in, B share, H share and government and company bonds consignment-in and transaction, the foreign-capital is less than one-third), security investment fund management companies (the foreign-capital is less than 49%)
- 4. Insurance brokerage companies
- 5. Futures companies (Chinese should hold the majority of shares)

#### VIII. Real Estate Industry

- 1. Development of pieces of land (limited to equity joint ventures or contractual joint ventures)
- 2. Construction and operation of high-ranking hotels, villas, high-class office buildings and international exhibition centres
- 3. Real estate transaction in second-grade market and medium and brokerage companies
- IX. Leasing and Commercial Service Industry
  - 1. Legal consulting
  - 2. Market Research (limited to equity joint ventures or contractual joint ventures)
  - 3. Status enquiry and grade service companies
- X. Scientific Research and technical Services Industries, Geological Prospecting
  - 1. Mapping companies (Chinese partner shall hold the majority of shares)
  - 2. Inspection, verification and attestation companies for imported and exported goods
  - 3. Photography service (including trick photography like air photography, except mapping aerial photography, limited to equity joint ventures)
- XI. Irrigation, environment and public utilities management
  - 1. Construction and management of fuel gas in big city, heating power and water supply and sewage net

#### XII. Education

- 1. Common high school education mechanism
- XIII. Public Health, Sports and Social Welfare Industries
  - 1. Medical treatment establishments (limited to equity joint ventures or contractual joint ventures)

#### $\ensuremath{\mathsf{XIV}}.$ Art, Sports and Entertainment Industries

- 1. Production and publication of broadcasting and TV programs and film-making (limited to contractual joint ventures)
- ${\bf 2.}\ Construction\ and\ operation\ of\ cinemas\ (Chinese\ partner\ shall\ hold\ the\ majority\ of\ shares)$
- 3. Construction and operation of large theme park
- 4. Brokering agency of stage performances
- XV. Other industries restricted by the State or international treaties that China has concluded or taken part in

### 10.3.3 Prohibited Foreign Investment Industries

- I. Farming, Forestry, Animal Husbandry and Fishery Industries
  - 1. Cultivation of China's rare precious breeds (including tine genes in plants industry, husbandry and aquatic products industry)



- 2. Production and development of genetically modified plants' seeds
- 3. Fishing in the sea area within the Government jurisdiction and in in-land water
- II. Mining and Quarrying Industries
  - 1. Exploring and mining of tungsten, molybdenum, tin, antimony, fluorite
  - 2. Exploring, mining and dressing of radioactive mineral products
  - 3. Exploring, mining and dressing of rare earth metal
- III. Manufacturing Industry
  - 1. Beverage Industry
    - (1) Processing of green lea and special tea with China's traditional crafts (famous tea, dark tea, etc.)
  - 2. Medical and Pharmaceutical Products Industry
    - (1) Processing of traditional Chinese medicines that have been listed as the Regulations on Conservation and
    - Management of Wild Chinese Medicinal Material Resources and Rare and Endangered Plants in China
    - (2) Application of preparing technique of traditional Chinese medicines in small pieces ready for decoction, like steam, frying, moxibustion, calcining, and production of the products of secret recipe of traditional Chinese patent medicines
  - 3. Non-Ferrous Metal Smelting and Rolling Processing Industry
    - (1) Smelting and processing of radioactive mineral products
  - 4. Special Equipment Manufacture Industry
    - (1) Manufacture of Weapons and Ammunition
  - 5. Electric Machinery and Equipment Manufacture Industry
    - (1) Manufacture of open-lead-acid cells, mercury Button Type Silver Oxide Cells, paste dioxide-zinc battery and nickel cadmium cells
  - 6. Industry Products and Other Manufacturing Industries
    - (1) Ivory carving
    - (2) Tiger-hone processing
    - (3) Production of bodiless lacquer ware
    - (4) Production of enamel products
    - (5) Production of Xuan-paper (rice paper) and ingot-shaped tablets of Chinese ink
    - (6) Production of carcinogenic, teratogenic, mutagenesis and persistent organic pollutant products
- IV. Production and Supply of Power, Gas and Water
  - 1. Construction and management of conventional coal-fired power of condensing steam plants whose unit installed capacity is less than 300,000kW, within the small power grid in Xizang, Xinjiang, Hainan province, and the coal-fired power of condensing-extraction steam plants with dual use unit cogeneration
- V. Communication and Transportation, Storage. Post and Telecommunication Services
  - 1. Companies of air traffic control
  - 2. Companies of postal services
- VI. Leasing and Commercial Service Industry
  - 1. Social investigation
- VII. Scientific Research and technical Services Industries, Geological Prospecting
  - 1. Development and application of human stem cells and gene diagnosis therapy technology
  - 2. Geodetic survey, marine charting, mapping aerial photography, administrative region mapping, relief map of map compilation and navigation electronic map compilation of common map compilation
- VIII. Irrigation, environment and public utilities management
  - 1. Construction and management of nature reserve and international signify marshy
  - 2. Development of resources about wild animals and plants be native to domestic protected by nation
- IX. Education
  - 1. Institution of compulsory education and special education, like military, policeman, politics and party school
- X. Art, Sports and Entertainment Industries
  - 1. News agencies
  - 2. Business of publishing, producing, master issuing, and importing of books, newspaper and periodical
  - 3. Business of publishing, producing, master issuing and importing of audio and visual products and electronic publications
  - 4. Radio stations, TV stations, radio and TV transmission networks at various levels (transmission stations, relaying stations, radio and TV satellites, satellite up-linking stations, satellite receiving stations, microwave stations, monitoring stations, cable broadcasting and TV transmission networks)
  - 5. Companies of publishing and playing of broadcast and TV programs
  - 6. Companies of films making, issuing, business
  - 7. News website, network audiovisual service, on line service location, internet art management
  - 8. Video screening companies
  - 9. Construction and management of golf course
  - 10. Gambling industry (including gambling turf)
  - 11. Eroticism
- XI. Other Industries
  - 1. Projects that endanger the safety and performance of military facilities
- XII. Other industries restricted by the State or international treaties that China has concluded or taken part in State Development and Reform Commission, Ministry of Commerce 2007-10-31

### 10.3.4 Focal Policies of National 11th Five-Year Plan for Environmental Protection



#### (1) Reduction of CO2 emissions and improvement in the quality of water

- · Ensure the achievement of CO2 reduction target
- Ensure safety of drinking water sources
- Facilitation of the prevention and control of water pollution of key river basins

#### (2) Reduction of SO2 emissions to prevent and control air pollution

- Ensure the achievement SO2 emission reduction target
- · Comprehensive improvements in urban air quality
- Enhancement in the prevention and control of industrial waste gases
- Strengthening the prevention and control of vehicle emission pollution
- Intensification of noise pollution control
- Control in the emissions of greenhouse gases

#### (3) Control solid waste pollution and promote recycling and reuse of solid waste

- Implementation of projects to dispose of hazardous and medical waste
- · Implementation of innocuous disposal of domestic garbage
- Promotion of comprehensive utilisation of solid waste

#### (4) Protection of ecological environment, improvement in level of security for ecological safety

- Development of national zoning for areas with "ecological functions"
- Initiation of activities for the conservation of key areas with "ecological functions"
- Development of quality for nature reserves
- Strengthening the conservation and safety management of species resources
- Intensification of environmental supervision on development and construction activities

#### (5) Control of Rural Environment, Promotion of the Development of New Socialist Countryside

- Focus on the prevention and control of soil pollution
- Comprehensive environmental control in rural areas
- Prevention and control of rural pollution

# (6) Strengthening marine environmental protection, focusing on the prevention and control of pollution as well as ecological damage of coastal sea waters

- Work toward reducing pollutants from land-based activities
- Acceleration of pollution control in key sea areas
- Prevention and control of port and ship pollution
- Protect marine ecological environments
- Prevent and control marine environmental disasters

#### (7) Strict supervision and management to ensure nuclear and radiation environmental safety

- Improvement in the quality of construction of nuclear facilities and operation safety levels
- Improvement in management of radioactive isotopes and radiation devices
- Acceleration in control of radioactive pollution
- Improvement in prevention and control of electromagnetic radioactive pollution

#### (8) Enhance management capacity building and raise law enforcement supervision

- Establishment of advanced environmental monitoring and early warning systems
- Establishment of a complete environmental law enforcement supervision system
- Development of an environmental emergency response system
- Improvement in China's comprehensive environmental assessment capacity
- Development of the "Jinhuan Project" (a national and local environmental protection information system)
- Strengthening the supporting capacity in the innovation of environmental science and technology



# 10.4 Appendix- Data

# 10.4.1 Chengdu GDP and its Composition by Industry by Year

Industry	2000 (CNY m)	2004 (CNY m)	2005 (CNY m)	2006 (CNY m)	2007 (CNY m)
Total	115,680	203,110	237,076	275,047	332,416
Primary Sector	11,637	16,825	18,205	19,513	23,510
Secondary Sector	42,213	80,559	100,650	121,161	150,402
Industry	32,872	60,960	75,734	92,367	117,341
Construction	9,341	19,599	24,916	28,794	33,061
Tertiary Sector	61,830	105,723	118,221	134,374	158,505
Public Transport, Warehousing, and Post	7,122	11,306	12,189	13,889	15,644
Information Technology, Computing, and Software	5,357	8,763	9,671	10,909	12,611
Wholesaling and Retailing	12,101	19,534	21,737	24,291	28,022
Food and Lodging	5,272	9,378	10,575	11,903	13,993
Finance	6,571	10,203	11,290	13,086	15,736
Real Estate	5,154	11,232	12,747	14,815	18,642
Leasing and Business Service	1,673	3,061	3,620	4,242	5,003
Scientific Research, Technological Services, and Geologic Exploration	3,164	5,601	6,305	7,467	9,092
Water conservation, environment, and public service facilities management	828	1,484	1,625	1,815	2,187
Residential and Other Services	3,443	6,122	6,861	7,600	8,908
Education	3,833	6,660	7,609	8,218	9,484
Health, Social Security, and Social Welfare	1,675	2,835	3,079	3,577	4,130
Culture, Sport, and Entertainment	1,751	3,052	3,521	4,073	4,786
Public Management and Social Organisation	3,883	6,493	7,394	8,489	10,268

# 10.4.2 Growth Rate and Contribution Rate of Value Added of Private Economy

Industry	2001	2001	2002	2002	2006	2006	2007	2007
madstry	Percent	Contribution	Percent	Contribution	Percent	Contribution	Percent	Contribution
	Gain	Rate to GDP						
		Growth		Growth		Growth		Growth
Total	12.8	100	13.1	100	13.8	100	15.3	100
Public Owned	11.1	54.1	11.1	52.2	8.4	33.2	9.8	33.1
Economy								
Private Economy	15.5	45.9	16.2	47.8	20.1	66.8	21.2	66.9
Individually Owned	15.5	41.4	16.2	43.5	19.5	57.6	20.5	57.0
Foreign Owned	15.4	3.0	15.4	2.9	24.2	6.1	29.5	7.3
Hong	17.3	1.5	16.3	1.4	26.1	3.0	22.8	2.6
Kong/Macao/Taiwan								
Owned								
Primary Sector	8.3	1.3	14.9	2.2	7.0	1.1	6.5	0.9
Individually Owned	8.3	1.3	14.9	2.2	7.0	1.1	6.5	0.9
Secondary Sector	16.5	19.5	16.3	19.5	25.2	39.3	25.4	39.0
Individually Owned	16.8	16.4	16.5	16.4	24.4	31.1	24.5	30.6
Foreign Owned	15.3	2.3	`5.4	2.3	26.9	5.7	28.2	5.9
Hong	14.4	0.8	14.7	0.8	34.4	2.6	31.8	2.5
Kong/Macao/Taiwan								
Owned								
Industry	15.9	14.6	15.0	13.9	26.9	31.5	29.1	34.1
Individually Owned	16.1	11.5	14.9	10.8	26.3	23.2	29.1	25.6
Foreign Owned	15.3	2.3	15.4	2.3	26.9	5.6	28.3	5.9
Hong Kong/Macao/Taiwan	14.5	0.8	14.7	0.8	34.5	2.6	32.0	2.5
Construction	18.6	4.9	20.9	5.6	20.1	7.9	13.4	5.0
Individually Owned	18.7	4.9	20.9	5.6	20.1	7.8	13.4	4.9
Foreign Owned	8.9		13.9		16.5		8.6	
Hong	9.3		7.5		21.5		8.6	
Kong/Macao/Taiwan								
Owned								
Tertiary Sector	15.5	25.1	16.2	26.1	16.4	26.3	18.3	27.0
Individually Owned	15.4	23.7	16.2	24.9	16.7	25.5	18.2	25.5
Foreign Owned	15.6	0.7	15.1	0.6	11.1	0.5	36.4	1.4
Hong	21.9	0.7	18.8	0.6	9.7	0.4	0.7	
Kong/Macao/Taiwan								
Owned								
Transportation,	11.6	1.4	15.7	1.9	12.2	1.5	20.1	2.1
Warehousing, and								
Post								
Wholesale and Retail	12.8	6.6	16.8	8.4	14.1	6.9	16.0	7.1
Food and Lodging	15.8	4.4	12.5	3.5	16.1	4.1	17.0	4.0
Real Estate	27.2	6.8	24.1	6.6	19.7	6.2	18.9	5.6

# 10.4.3 Main Indicators of Chengdu High-Tech Developing Zone (CNY m)

Industry	2001	2006	2007
Total GDP	5,500	18,200	23,900
Secondary Sector	3,000	12,190	16,760
Industry	2,470	9,500	13,550
Tertiary Sector	2,400	6,000	7,160
Technology, Industry, and Trade Total Revenue	13,800	50,200	63,100
Pillar Industries	3,700	17,500	25,500
Electronics	2,300	9,600	16,300
Medicine	1,300	5,700	7,000
Industry Profit and Taxes	796	3,210	4,150
Total Retail Sales of Social Computer Goods	1,343	4,740	5,780
Fiscal Revenue	893	3,770	8,270
Local Fiscal Revenue	446	2,030	5,940
Foreign Trade Items in Use (number)	47	71	82
Overall Foreign Trade Contracted (USD m)	84.62	1,463,100	1,537,000
Overall Foreign Trade Realised (USD m)	66.30	651.09	908.30
Total Fixed Asset Investment	3,324	17,540	22,303
End of Year Population (thousands)	133.5	211.9	229.4
Number of Workers (thousands)	64.3	150.8	163.6

# 10.4.4 Total Investment in Fixed Assets by Sector (CNY m)

Industry	2006 Total	2006 Capital	2006	2007 Total	2007 Capital	2007
,	Investment	Investment	Renovation	Investment	Investment	Renovation
			Investment			Investment
Total	126,750.38	90,076.89	36,182.08	147,889.93	96,177.90	50,652.50
Agriculture, Forestry,	2,512.26	2,382.07	41.83	3,036.54	2,893.12	
Animal Husbandry,						
Fisheries						
Mining/Extraction	567.66	438.70	128.96	152.45	58.04	94.41
Manufacturing	48,150.73	14,570.13	33,454.09	67,994.35	21,387.80	46,468.54
Electricity, Gas and	4,832.03	3,046.81	1,785.22	4,614.33	2,074.51	2,526.89
Water Production and						
Supply Electricity	3,960.92	2,208.34	1,752.58	3,150.93	1,007.22	2,143.71
Gas Production and	168.02	163.02	5.00	261.57	88.07	173.50
Supply	108.02	103.02	3.00	201.57	88.07	1/3.50
Water Production and	703.09	675.45	27.64	1,201.83	979.22	209.68
Supply	703.03	073.13	27.01	1,201.03	373.22	203.00
Construction	1,070.32	862.32	190.60	1,541.86	293.19	1,239.44
Public Transport,	8,544.15	8,428.20	70.45	6,613.37	6,305.73	238.07
Warehousing, and Postal	-,-	,		1,7	.,	
Communication						
Public Transport	6,837.72	6,825.72	9.00	5,525.15	5,306.97	208.61
Warehousing	1,706.43	1,602.48	61.45	997.99	918.21	19.78
Postal Communication						
Information	1,553.04	1,457.54	95.50	743.31	701.65	28.90
Communication,						
Computing, and						
Software						
Telecommunications and	1,553.04	1,457.54	95.50	743.31	701.65	28.90
All Other Information						
Transmission Wholesale and Retail	2.462.40	2 207 66	140 52	1 721 06	1 620 12	56.25
Wholesale and Retail Trade	2,462.49	2,307.66	140.53	1,731.96	1,630.12	50.25
Food and Lodging	928.67	840.78	73.59	1,528.00	1,507.74	
Finance and Insurance	1,533.82	1,466.88	66.94	142.41	137.45	
Real Estate	1,134.89	1,127.03	00.51	1,332.64	1,332.64	
Leasing and Business	1,002.11	957.31	33.00	1,055.64	1,055.64	
Services	2,002.11	337.132	55.55	1,000.0	2,000.0	
Scientific Research,	1,047.49	961.28	86.21	727.20	643.15	
Technological Services,						
Geological Exploration						
Water, Environment, and	41,683.38	41,550.55	78.61	44,925.25	44,546.17	
Public Facilities						
Management						
Water Management	1,083.27	1,029.96	53.31	1,032.69	1,032.69	
Environmental	308.89	300.89	8.00	138.12	138.12	
Management	40 204 22	40.240.70	17.20	42.754.44	42.275.26	
Public Facilities  Management	40,291.22	40,219.70	17.30	43,754.44	43,375.36	
Management Residential and Other	220.22	228 20	11.04	215.92	202.92	
Services	239.33	228.29	11.04	213.92	202.92	
Education	6,334.65	6,317.29	1.41	6,080.79	6,075.04	
Health, Social Security,	1,059.45	1,039.79	12.66	1,645,52	1,582.41	
and Other Services	2,033.43	2,000.70	12.00	1,010,02	2,302.41	
Culture, Sport, and	1,531.37	1,508.60	5.21	1,807.66	1,765.66	
Entertainment	.,	.,	,,	_,	.,	
Public Management and	1,245.23	1,211.17		2,000.73	1,984.92	
Social Organisations						

# 10.4.5 2007 Main Economic Indicators of Overseas-Funded Industrial Enterprises

Туре	Number of Businesses	Number of Money-Losing Enterprises	Industry-wide GDP (CNY m)
Total	319	79	55,211.73
Registration Types			
Hong Kong, Macao, and Taiwan Invested Businesses	97	24	12,058.33
Joint-ventures	50	12	5,365.86
Jointly-operated	2	12	262.24
Individually-owned	44	12	6,272.45
Share-owned Limited Liability	1	12	157.58
Foreign-Invested Businesses	222	55	43,153.40
Chinese-foreign joint-	132	31	30,823.99
ventures	132	31	30,623.33
Chinese-foreign jointly operated	4		785.46
Individually owned	78	24	10,253.04
Share-owned Limited Liability	8		1,290.92
Industry Type			
Light Industry	163	43	24,184.95
Heavy Industry	156	36	31,026.78
Business Size			
Large-Scale Enterprise	1		1,729.65
Medium-Scale Enterprise	73	8	32,591.16
Small-Scale Enterprise	245	71	20,890.92
Industry Name	2.0	, -	20,030.32
Agricultural Food Processing	21	9	4,340.27
Food Industry	28	7	2,540.91
Rice-Origin Manufacturing	13	3	3,628.59
Textiles	3	1	108.64
Garments, Shoes, and Hats	4	2	190.67
Leather, Fur, Down Feather	4	0	471.72
Wood, Bamboo, Rattan, Grass	3	3	37.18
Furniture Manufacturing	6	3	671.31
Paper Manufacturing	10	3	491.29
Printing and Reproduction of	9	4	940.52
Recorded Material			
Cultural, Educational, and Sporting Goods	2	0	44.60
Chemical Materials	25	8	4,757.17
Pharmaceuticals	29	1	4,285.13
Chemical Fibre Manufacturing	2	0	189.70
Rubber Manufacturing	2	0	134.67
Plastics	19	9	2.591.30
Non-metallic Minerals	18	2	4,080.04
Ferrous Smelting	1	0	191.09
Coloured Smelting	3	1	284.12
Fabricated Equipment	11	4	648.86
General Equipment		2	953.20
Special Equipment	18	2	
	15		4,366.08
Transport Equipment	27	4	9,213.04
Electrical Machinery	13	7	2,247.94
Communications, Computers, and other Electric Goods	21	1	6,192.73
Other Instrumentation	5	1	313.67
Crafts	1	0	57.05
Electricity and Heat	3	0	179.48
Gas	3	1	1,060.78

# 10.4.6 2007 Main Economic Indicators of Overseas-Funded Industrial Enterprises (CNY m)

Туре	Assets	Liability	Owner-Equity	Paid-Up Capital
Total	61.306.52	31,340.79	29.965.73	16.077.34



ding China's Economic indicators			<u>www.cninaec</u>	<u>onomicindicato</u>
Registration Types				
Hong Kong, Macao, and	11,642.52	5,799.42	5,843.11	3,251.15
Taiwan Invested Businesses				
Joint-ventures	5,713.76	3,131.73	2,582.04	1,268.90
Jointly-operated	64.17	19.04	45.14	6.29
Individually-owned	4,645.09	2,426.96	2,218.13	1,575.96
Share-owned Limited	1,219.50	221.69	997.80	400.00
Liability				
Foreign-Invested Businesses	49,664.00	25,541.37	24,122.62	12,826.19
Chinese-foreign joint-	31,194.20	17,514.30	13,679.90	8,558.80
ventures				
Chinese-foreign jointly	1,001.54	426.40	575.14	197.49
operated				
Individually owned	15,692	6,442.90	9,249.40	3,643.76
Share-owned Limited	1,775.96	1,157.78	618.18	426.14
Liability				
Industry Type				
Light Industry	22,750.51	10,218.24	12,532.26	6,134.93
Heavy Industry	38,556.01	21,122.55	17,433.47	9,942.41
Business Size				
Large-Scale Enterprise	3,843.57	3,290.15	553.42	56.47
Medium-Scale Enterprise	38,046.94	18,200.41	19,846.54	9,302.38
Small-Scale Enterprise	19,416.01	9,850.23	9,565.77	6,718.49
Industry Name				
Agricultural Food Processing	1,697.71	933.25	764.46	472.52
Food Industry	4,703.72	1,106.53	3,597.19	910.68
Rice-Origin Manufacturing	2,694.23	1,078.19	1,616.04	1,196.28
Textiles	109.13	49.05	60.08	35.39
Garments, Shoes, and Hats	64.64	27.03	37.60	21.94
Leather, Fur, Down Feather	115.45	85.93	29.51	17.38
Wood, Bamboo, Rattan,	22.13	10.55	11.57	9.01
Grass				
Furniture Manufacturing	447.55	114.42	333.13	82.63
Paper Manufacturing	1,095.72	751.83	343.90	331.31
Printing and Reproduction of	754.07	475.89	278.18	248.39
Recorded Material				
Cultural, Educational, and	40.39	28.91	11.48	9.68
Sporting Goods				
Chemical Materials	3,772.31	1,765.41	2,006.88	1,009.64
Pharmaceuticals	7,116.76	3,911.82	3,204.94	1,256.52
Chemical Fibre	272.08	146.95	125.13	117.29
Manufacturing				
Rubber Manufacturing	82.29	31.65	50.63	16.38
Plastics	4,154.19	3,118.39	1,035.80	1,004.80
Non-metallic Minerals	7,070.70	3,472.10	3,598.60	2,673.19
Ferrous Smelting	568.32	314.49	253.83	234.96
Coloured Smelting	124.00	56.09	67.92	34.50
Fabricated Equipment	892.18	573.94	318.23	190.71
General Equipment	858.68	373.53	485.15	255.25
Special Equipment	6,751.53	5,258.46	1,493.11	430.00
Transport Equipment	6,954.57	3,416.18	3,538.39	2,000.37
Electrical Machinery	3,170.95	710.12	2,460.83	1,248.26
Communications,	5,058.46	2,291.48	2,766.98	1,177.43
Computers, and other				
Electric Goods				
Other Instrumentation	362.30	165.66	196.74	71.55
Crafts	12.05	8.29	3.77	1.00
Electricity and Heat	300.22	43.24	256.98	216.48
Gas	2,040.19	1,021.51	1,018.68	803.80

### 10.4.7 2007 Main Economic Indicators of Overseas-Funded Industrial Enterprises (CNY m)

Туре	Core Busine	ess Profits after Taxes	Income Tax Paid	Value-Added Due	Tax
Total	52,143.65	7,809.86	549.03	2,051.38	
Registration Types					



ding China's Economic Indicators			www	.chinaeconomicindicat
Hong Kong, Macao, and Taiwan Invested Businesses	10,251.19	1,098.97	49.43	358.04
Joint-ventures	4,974.57	465.25	14.62	168.42
Jointly-operated	147.17	11.13	0.09	4.93
Individually-owned	4,832.29	424.45	34.56	179.69
Share-owned Limited Liability	297.06	198.14	0.16	5.00
Foreign-Invested Businesses	41,892.46	6,710.89	499.60	1,693.34
Chinese-foreign joint- ventures	32,436.70	5,070.19	400.63	1,125.81
Chinese-foreign jointly operated	579.60	195.70	7.15	122.51
Individually owned	7,532.08	1,309.14	70.94	402.34
Share-owned Limited Liability	1,344.08	135.85	20.88	42.68
Industry Type				
Light Industry	20,834.71	2,339.69	93.20	813.61
Heavy Industry	31,308.94	5,470.17	455.83	1,237.77
Business Size				
Large-Scale Enterprise	5,236.87	471.04	67.20	129.82
Medium-Scale Enterprise	29,817.51	6,028.19`	355.77	1,402.77
Small-Scale Enterprise	17,089.27	1,310.63	126.06	518.79
Industry Name				
Agricultural Food Processing	4,027.74	114.99	4.63	23.07
Food Industry	2,376.85	114.14	7.21	82.81
Rice-Origin Manufacturing	2,786.72	446.89	33.27	148.06
Textiles	109.77	3.79	0.17	2.14
Garments, Shoes, and Hats	140.23	8.40		1.83
Leather, Fur, Down Feather	430.79	5.11	0.86	0.91
Wood, Bamboo, Rattan, Grass	32.92	-1.10		0.34
Furniture Manufacturing	647.21	111.36	12.17	34.03
Paper Manufacturing	466.25	71.34	5.42	40.98
Printing and Reproduction of Recorded Material	754.65	30.26	0.75	19.06
Cultural, Educational, and Sporting Goods	41.42	2.53	0.25	1.53
Chemical Materials	4,029.58	482.52	60.94	103.30
Pharmaceuticals	3,386.07	865.10	12.92	328.36
Chemical Fibre Manufacturing	153.18	8.82	0.09	3.85
Rubber Manufacturing	115.59	18.92	2.16	4.14
Plastics	2,567.24	100.90	4.22	48.45
Non-metallic Minerals	3,968.49	1,068.08	62.56	225.00
Ferrous Smelting	177.45	20.04	1.16	
Coloured Smelting	304.13	10.89	2.75	2.57
Fabricated Equipment	535.81	54.67	1.10	9.90
General Equipment	745.31	69.09	8.62	21.95
Special Equipment	7,346.67	750.59	102.13	168.52
Transport Equipment	8,832.81	2,311.15	175.73	418.93
Electrical Machinery	2,035.31	314.59	3.89	50.47
Communications, Computers, and other Electric Goods	4,630.18	695.15	12.94	248.29
Other Instrumentation	258.03	16.44	1.25	10.00
Crafts	15.82	7.35	1.83	0.26
Electricity and Heat	179.54	46.60	5.67	19.82
Gas	1,047.89	61.25	24.42	32.81

# 10.4.8 2007 Main Economic Indicators of Overseas-Funded Industrial Enterprises (%)

Туре	Deficit	Production Rate	Asset Contribution Rate	Debt Ratio	Weekly Asset Circulation
Total	24.8	98.9	13.4	51.1	1.8
Registration Types					



ding China's Economic Indicators				www.chinaec	<u>onomicindicato</u>
Hong Kong, Macao, and Taiwan Invested Businesses	24.7	99.1	10.2	49.8	1.9
Joint-ventures	24.0	97.0	9.1	54.8	1.6
Jointly-operated		100.0	17.7	29.7	6.4
Individually-owned	27.3	100.4	9.8	52.3	2.6
Share-owned Limited Liability		119.5	16.5	18.2	0.7
Foreign-Invested Businesses	24.8	98.9	14.2	51.4	1.8
Chinese-foreign joint-	23.5	98.4	16.8	56.2	1.8
ventures					
Chinese-foreign jointly operated		103.0	19.8	42.6	1.8
Individually owned	30.8	99.6	9.1	41.1	1.8
Share-owned Limited	0.0	102.9	9.1	65.2	1.5
Liability					
Industry Type					
Light Industry	26.4	98.2	11.0	44.9	2.4
Heavy Industry	23.1	99.5	14.8	54.8	1.6
Business Size					-
Large-Scale Enterprise		99.4	13.1	85.6	1.8
Medium-Scale Enterprise	11.0	99.2	16.5	47.8	1.9
Small-Scale Enterprise	29.0	98.5	7.4	50.7	1.7
Industry Name	23.0	33.3		30	217
Agricultural Food Processing	42.9	99.7	7.7	55.0	4.9
Food Industry	25.0	99.6	2.8	23.5	2.6
Rice-Origin Manufacturing	23.1	99.2	16.7	40.0	2.3
Textiles	33.3	103.6	6.1	45.0	1.5
Garments, Shoes, and Hats	50.0	99.0	13.6	41.8	4.2
Leather, Fur, Down Feather	30.0	138.0	7.0	74.4	5.4
Wood, Bamboo, Rattan,	100.0	87.1	-4.7	47.7	2.5
Grass					
Furniture Manufacturing	50.0	98.8	24.4	25.6	2.8
Paper Manufacturing	30.0	94.6	8.0	68.6	1.0
Printing and Reproduction of Recorded Material	44.4	89.0	5.4	63.1	1.5
Cultural, Educational, and Sporting Goods		95.5	7.3	71.6	1.7
Chemical Materials	32.0	96.2	13.7	46.8	2.2
Pharmaceuticals	3.5	94.6	13.5	55.0	1.4
Chemical Fibre Manufacturing		93.2	4.1	54.0	1.4
Rubber Manufacturing		93.0	24.3	38.5	2.0
Plastics	47.4	105.3	3.5	75.1	0.9
Non-metallic Minerals	11.1	100.3	16.2	49.1	2.3
Ferrous Smelting		100.0	4.9	55.3	3.0
Coloured Smelting	33.3	98.9	9.3	45.2	5.0
Fabricated Equipment	36.4	97.6	6.5	64.3	1.7
General Equipment	11.1	92.4	8.4	43.5	1.5
Special Equipment	13.3	96.5	11.8	77.9	1.5
Transport Equipment	14.8	98.6	33.5	49.1	2.0
Electrical Machinery	15.4	106.0	10.1	22.4	1.2
Communications,	33.3	99.4	14.3	45.3	2.2
Computers, and other Electric Goods					
Other Instrumentation	20.0	98.5	4.5	45.7	1.3
Crafts		100.0	61.0	68.8	1.7
Electricity and Heat		94.7	15.6	14.4	1.7
Gas	33.3	100.0	2.8	50.1	1.7
Gus	33.3	100.0	2.0	50.1	1.2

# 10.4.9 Chengdu Population<sup>9</sup>

Year	Overall Population (millions)	City Population (millions)	County Population (millions)
2000	10.13	3.36	6.77

<sup>&</sup>lt;sup>9</sup> According to government estimates, Chengdu had a population of 11.25m in 2008



2001	10.20	3.41	6.78
2002	10.28	4.40	5.89
2003	10.44	4.53	5.92
2004	10.60	4.65	5.95
2005	10.82	4.82	6.00
2006	11.03	4.97	6.06
2007	11.12	5.03	6.10

# 10.4.10 Employment by Sector

Year	Overall Employment	Primary Sector	Secondary Sector	Tertiary Sector	Primary Sector (% total)	Secondary Sector (% total)	Tertiary Sector (% total)
2000	5,741,000	2,576,000	1,520,000	1,646,000	44.9	26.5	28.6
2001	5,758,000	2,410,000	1,481,000	1,866,000	41.9	25.7	32.4
2002	5,844,000	2,315,000	1,583,000	1,946,000	39.6	27.1	33.3
2003	5,933,000	2,210,000	1,666,000	2,057,000	37.2	28.1	34.7
2004	6,040,000	2,109,000	1,808,000	2,123,000	34.9	29.9	35.2
2005	6,190,000	2,002,000	1,906,000	2,283,000	32.3	30.8	36.9
2006	6,401,000	1,888,000	1,967,000	2,547,000	29.5	30.7	39.8
2007	6,871,000	1,793,000	2,103,000	2,975,000	26.1	30.6	43.3

# 10.4.11 Chengdu Average Wage

Year	Average Wage (CNY)
2000	10373
2001	12493
2002	13712
2003	15275
2004	17556
2005	19962
2006	22564
2007	26606



# 10.4.12 2007 Average Wage of Fully Employed Staff and Workers (CNY)

Industry	Overall Average	State-Owned Economy	Collective Economy	All Other Kinds
By Career, Business, Office*	26,606	32,556	15,733	19,207
Business	23,391	30,917	14,886	18,997
Career	31,211	31,818	19,654	23,688
Office	40,056	40,056	13,034	23,000
By Sector	40,030	40,030		
Primary	20,349	21,068	13,600	
Secondary	20,071	25,844	13,546	17,583
Tertiary	33,222	35,536	20,744	24,377
By Industry	33,222	33,330	20,744	24,377
Agriculture ,Forestry, Fisheries, Animal Husbandry	20,349	21,068	13,600	
Mining	16,349	16,623	14,899	15,619
Manufacturing	20,849	28,976	12,931	18,213
Electricity, Gas, Water Production	38,704	47,632	23,799	30,799
Construction	18,246	22,426	13,588	15,828
Transportation, Warehousing, and Post	34,810	36,732	10,808	29,338
Information technology, computing, software	51,240	51,288		51,107
Wholesale and Retail	21,839	29,962	13,678	17,153
Food and Lodging	16,750	20,684	11,155	15,052
Finance	53,134	55,260	35,787	58,664
Real Estate	24,608	31,083	17,015	22,660
Leasing and Business Services	34,289	37,599	20,873	19,050
Scientific Research, Technology, and Geological Exploration	43,517	43,933	24,412	39,057
Water, Environment, and Public Facilities Management	20,647	22,927	13,462	12,040
Residential and Other Services	16,068	22,134	10,030	15,705
Education	27,880	27,826	16,693	32,794
Health, Social Security, and Social Welfare	34,608	37,897	21,874	23,300
Culture, Sport, and Entertainment	30,132	30,230	25,605	29,615
Public Affairs	39,594	39,594		

# 10.4.13 Agricultural Production Statistics 2007

Item	Production	Percent Growth from 2006
Grain	34,480	6.1
Oil	2,285	5.2
Cotton	17	6.4
Hemp	69	4.9
Sugarcane	1,270	1.9
Tobacco	169	-15.5
Vegetables	29,950	0.8
Tea	131	15.9
Meat	10,930	6.1
Pork	7.41m	
Beef and Mutton	1,016	6.5
Poultry	2,250	8.6

# 11 Disclaimer

To the best of our knowledge, the information contained in this report is accurate. However, neither CEO nor Supply Chain Asia is responsible for actions taken based on information herein. Readers are urged to exercise due diligence before any business arrangement.

