

How China Built 'iPhone City' With Billions in Perks for Apple's Partner

A hidden bounty of benefits for Foxconn's plant in Zhengzhou, the world's biggest iPhone factory, is central to the production of Apple's most profitable product.

By [DAVID BARBOZA](#) • DEC. 29, 2016



Drivers at a rest area between Zhengzhou and Shanghai. Unmarked trucks carry loads of iPhones destined for other parts of China. Gilles Sabrié for The New York Times

ZHENGZHOU, China — A vast, boxy customs center acts as a busy island of

commerce deep in central China.

Government officers, in sharply pressed uniforms, race around a maze of wooden pallets piled high with boxes — counting, weighing, scanning and approving shipments. Unmarked trucks stretch for more than a mile awaiting the next load headed for Beijing, New York, London and dozens of other destinations.

The state-of-the-art facility was built several years ago to serve a single global exporter: [Apple](#), now the world's most valuable company and one of China's largest retailers.

The well-choreographed customs routine is part of a hidden bounty of perks, tax breaks and subsidies in China that supports the world's biggest [iPhone](#) factory, according to confidential government records reviewed by The New York Times, as well as more than 100 interviews with factory workers, logistics handlers, truck drivers, tax specialists and current and former Apple executives. The package of sweeteners and incentives, worth billions of dollars, is central to the production of the iPhone, Apple's best-selling and most profitable product.

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It all centers on Zhengzhou, a city of six million people in an impoverished region of China. Running at full tilt, the factory here, owned and operated by Apple's manufacturing partner [Foxconn](#), can produce 500,000 iPhones a day. Locals now refer to Zhengzhou as "iPhone City."

The local government has proved instrumental, doling out more than \$1.5 billion to Foxconn to build large sections of the factory and nearby employee housing. It paved roads and built power plants.

It helps cover continuing energy and transportation costs for the operation. It recruits workers for the assembly line. It pays bonuses to the factory for meeting export targets.

All of it in support of iPhone production.

"We needed something that could really develop this part of the country," said Li Ziqiang, a Zhengzhou official. "There's an old saying in China: 'If you build the nest, the birds will come.' And now, they're coming."

American officials have long decried China's support of its state-owned companies, calling the subsidies and other aid an unfair competitive advantage in a global marketplace. But the Zhengzhou operation shows the extent of China's effort to entice overseas multinationals to set up production facilities in the country.

Local and provincial officials, in an effort to create jobs and drive growth, have courted manufacturers with incentive packages that make it easier and cheaper to do business. Beijing, for decades, has encouraged such efforts at

the national level, by developing special economic zones that offer tax breaks to multinationals and exempt them from costly and cumbersome rules.

In this way, China is not unlike other countries, including the United States, where states and cities vie for companies. To compete in the era of globalization, multinationals, which face pressures from shareholders and customers, must seek the best opportunities, increasingly by relying on a highly interconnected supply chain spread across the world.

But the reasons behind their choices are not always transparent. In China, the competition for companies is secretive and rarely exposed to public scrutiny or debate — and it is often focused on manufacturing partners, rather than multinationals themselves.

China's lure is strong. Dell, Hewlett-Packard and Samsung have all flocked to China to lower their production costs, bolster their bottom lines and tap into the world's largest consumer market. And many rely on local manufacturing partners like Foxconn.

While Apple came later than many technology companies, it now generates nearly a quarter of its revenues from sales in China and has some of the fattest profit margins in the business. As such, the Zhengzhou operation provides an especially illustrative look at China's importance to American technology companies — and specifically iPhone production and more recently, Apple's consumer sales.



The Zhengzhou customs operation is inside a so-called bonded zone, where products can be imported and exported virtually. Gilles Sabri  for The New York Times

A 32-gigabyte iPhone 7 costs an estimated \$400 to produce. It retails for roughly \$649 in the United States, with Apple taking a piece of the difference as profit. The result: Apple manages to earn 90 percent of the profits in the smartphone industry worldwide, even though it accounts for only 12 percent of the sales, according to Strategy Analytics, a research firm.

It is difficult to tally the total value of government benefits for the Zhengzhou operation, or to determine the exact effect on the profits of Foxconn or Apple. The subsidies aren't disclosed by the Chinese government or Foxconn. They aren't available in public records. And Apple says it was not a party to Foxconn's negotiations.

The confidential government records obtained by The Times detail multiple meetings over several years in which Zhengzhou city officials discussed their “support” for iPhone production, calling the benefits a “preferential policy.” The records offer a snapshot of those benefits, including the specific aid for Foxconn in multiple areas, like infrastructure, labor, taxes and exports.

As China’s largest private employer, Foxconn, a Taiwanese company, has enormous leverage in the negotiations for those incentives. The company’s size and scale — and the sway that they afford in China — is connected to Apple. Foxconn is Apple’s largest supplier. Apple is Foxconn’s largest customer.

The two companies are intertwined in Zhengzhou. When the factory opened, Apple was Foxconn’s only customer here. Even now, the American technology company accounts for almost all of the production at the Zhengzhou plant, where about half of the world’s iPhones are made. Apple is also the main exporter using the customs facility here.

In response to questions, Apple said it was aware of the government’s infrastructure support. But the company added that it had no knowledge of specific grants, subsidies or tax breaks given to its manufacturing partner.

Foxconn, in a separate statement, said it was grateful for the support of the government, noting that it was “no different than similar tax breaks all companies get in locations around the world for major investments.”



Foxconn workers leaving at the end of the day shift through the gates of the Zhengzhou bonded zone. Gilles Sabrie for The New York Times

A growing backlash against globalization puts Apple and other big multinationals directly in the sightlines of two increasingly combative giants: the United States and China.

President-elect Donald J. Trump has vowed to bring down the full force of the government on American companies that move jobs overseas, [threatening punitive tariffs](#) on the goods they sell back at home. Apple has been a frequent target of Mr. Trump, who said during the campaign that he would get the technology company to [“build their damn computers and things in this country.”](#)

China, under the leadership of President Xi Jinping, [is growing less tolerant](#)

and more suspicious of Western influence, particularly American technology companies and the huge influence they have over Chinese consumers. A state-owned publication called Apple one of the “guardian warriors” that have “seamlessly penetrated” China and may pose a threat to national security.

China, no longer content with just being the world’s factory floor, is moving aggressively to develop its own technology giants. Beijing is pressuring local governments to cut subsidy programs that the country heartily encouraged even just a few years ago. And big exporters, courted and protected for decades by Beijing, now face broad scrutiny.

[Regulators shut down](#) Apple’s iTunes Movies and iBooks Store last spring, just six months after the services were introduced in China. The Chinese authorities fined the technology giant [for failure to fully pay its taxes](#). And Apple went through a national security review in China for the iPhone 6, delaying its release in the country.

Apple is now engaged in the corporate version of shuttle diplomacy. In December, the company’s chief executive, Timothy D. Cook, along with other Silicon Valley executives, met with Mr. Trump in New York, part of an effort [to build bridges](#) with the incoming administration. It followed a similar goodwill tour in China in August, when Mr. Cook sat down with the country’s vice premier at Zhongnanhai, the government’s walled leadership compound in what was once part of Beijing’s Imperial City.

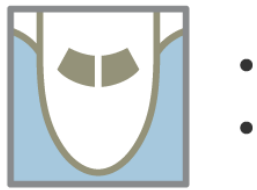
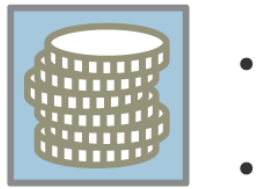
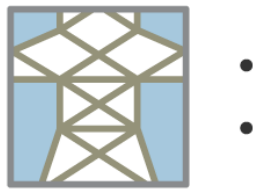
The two countries are playing a high-stakes game.

Apple, like many multinationals, depends on a vast global supply chain that includes multiple companies and countries, each with its own expertise and advantages — [a complexity that is often lost](#) in the political debate over trade. The iPhone is a collection of intricate parts that are made around the world and assembled in China, spurring employment in many countries; Apple says

it supports two million jobs in the United States.

A Hidden Bounty

About half of the world's iPhones are made at the Foxconn facility in Zhengzhou, a city in one of China's poorest regions. The local government has provided sweeteners and incentives to Foxconn, Apple's manufacturing partner — a package of benefits that supports iPhone production there in a variety of areas.



- Benefits supplied to Foxconn by the Zhengzhou government
- Built and partly financed the construction of a huge manufacturing complex at a cost of \$600

million.

Spent around \$1 billion to build housing that could accommodate hundreds of thousands of workers.

Provides a discount that reduces the cost of power by 5 percent annually.

Built infrastructure, including power generators and a 24-kilometer pipeline.

Eliminated corporate taxes and value added taxes for five years, then halved the usual rate for the next five years.

Granted a \$250 million loan from the municipal treasury.

Helps recruit and train workers, as well as paying subsidies for new hires.

Lowered the amount of social insurance and other payments by up to \$100 million a year.

Offers bonuses tied to the growth of exports.

Pays out a subsidy to help defray the cost of shipping goods.

As China and the United States both brandish a new form of economic nationalism, they risk disrupting the system, without necessarily achieving their goals. And multinationals and their manufacturing partners would face serious financial trade-offs.

As the Zhengzhou operation shows, China not only provides a large pool of labor; it also offers incentives that would be difficult to replicate in the United States or anywhere else. The trove of benefits in Zhengzhou flows through the production process for the iPhone, from the factory floor to the retail store.

Foxconn receives a bonus when it meets targets for exports. Those subsidies, according to the government records, totaled \$56 million in the first two years of production, when the factory was exclusively dedicated to the iPhone.

The bonus is small on each of the tens of millions of iPhones produced during that period. But the subsidies add up: The government records list more than a dozen other forms of financial aid at the Zhengzhou operation.

The Zhengzhou government eliminated corporate taxes and value-added taxes that Foxconn pays for the first five years of production; they are half the usual rate for the next five. The city lowered Foxconn's social insurance and other payments for workers, by up to \$100 million a year.

The customs operation is also in a so-called bonded zone, an area that China essentially considers foreign soil, subject to different import and export rules. This setup allows Apple to sell iPhones more easily to Chinese consumers.

Pursuing the iPhone

Apple was late to China.

In a bid to lower costs, some of the biggest American technology companies, including Compaq, Dell and Hewlett-Packard, began dismantling their domestic manufacturing in the 1980s and moving work overseas, largely to Asia. Not Apple. The company's co-founder, Steven P. Jobs, believed that software and hardware development had to be closely integrated.

Rather than close plants, Apple decided to build them — in Colorado, Texas and California. Apple would maintain some of them long after Mr. Jobs left the company in 1985. The plants were highly automated, with the walls painted white, just as Mr. Jobs liked them, and they were promoted as a symbol of American ingenuity.

“This is a machine that is made in America,” Mr. Jobs trumpeted in 1984, after Apple opened a manufacturing facility in California to produce the Macintosh personal computer.

Finances forced Apple to change course. As Mac sales plummeted and inventories began to bulge in the mid-1990s, Apple had to embrace outsourcing, something with which it had only just experimented. After Mr.



Jobs returned to the company in 1997, he turned to his new operations chief, Mr. Cook, who had recently joined from Compaq, to figure out how.

Under the direction of Mr. Cook, Apple shifted more business to Foxconn, then an up-and-coming Taiwanese contract manufacturer that had started to gain a following among big American brands like Compaq, IBM and Intel. The partnership freed up Apple to focus on its strengths — design and marketing. Apple would come up with a new idea, and Foxconn would find ways to produce millions of units at a low cost.

“They have brilliant tooling engineers, and they were willing to invest a lot to keep pace with Apple’s growth,” said Joe O’Sullivan, a former Apple executive who worked in Asia.

Foxconn

facility

Area of

detail

demand that accompanied each hit product. Foxconn’s factories could quickly produce prototypes, increase production and, during peak periods, hire hundreds of thousands of workers.

Foxconn’s founder, the Taiwanese billionaire Terry Gou, provided political

When Apple’s sales took off after the introduction of the iPod in 2001, Foxconn had the heft and expertise to meet the

clout. Over the years, he frequently visited China to meet local officials and members of the decision-making Politburo to lobby for subsidies, cheap land, workers and infrastructure for facilities that churned out iPods, iPads and iPhones.



The Zhengzhou government pledged to spend more than \$10 billion on an airport just a few miles from the iPhone factory. Gilles Sabrié for The New York Times

“The reason Foxconn’s so big is Terry Gou,” said Tony Fadell, a former Apple executive who helped design the iPod. “He said he’d create the manufacturing, and the Chinese government would give him some of the money to do it. As Terry grew with the Apple business, no one else could compete.”

After the first iPhone was rolled out in 2007, Foxconn moved to expand

production and began scouting new locations around China — unleashing a fierce competition among cities eager for the business. Officials from various regions camped out at hotels in Shenzhen, where Foxconn had its main operations.

“These have become like Olympic competitions,” said Gao Yuning, who teaches public policy at Tsinghua University in Beijing.

The Zhengzhou government saw the factory as a huge opportunity for development in an area that had been bypassed by China’s boom. Officials wanted to rebrand a place derided as a source of migrant laborers and unfairly tarnished as a land of thieves and counterfeiters.

City officials lavished money and favorable investment terms on Foxconn, according to the government records. They promised discounted energy and transportation costs, lower social insurance payments, and more than \$1.5 billion in grants for the construction of factories and dormitories that could house hundreds of thousands of workers.

The city created a special economic zone for the project and provided a \$250 million loan to Foxconn. The local government also pledged to spend more than \$10 billion to vastly expand the airport, just a few miles away from the factory.

“We know that China has all sorts of policies to promote development, and this one ticks all the right boxes,” said Barry Naughton, an authority on the Chinese economy at the University of California, San Diego.



Behind an open-air mall, dormitories for Foxconn factory workers. The local government built large sections of employee housing as part of its deal with Foxconn. Gilles Sabrié for The New York Times

The city moved quickly. Factories were built, licenses were approved and assembly lines began operating in August 2010, just a few months after the government signed the deal. In Zhengzhou, the Chinese government effectively took a huge tract of land on the barren, dusty plains of central China and transformed it into a sprawling industrial park.

“I was impressed,” said Jeff Williams, Apple’s chief operating officer, who was part of the early discussions about setting up a factory. “They were very focused.”

Made, and Sold, in China

When Apple first moved into China, the country was largely a low-cost

production site. It quickly evolved into one of the world's biggest consumer markets, with more than a billion potential customers.

But Apple initially had to take the “Hong Kong U-turn” to get its products into the hands of Chinese consumers.

Since China began opening its economy to the outside world in the 1980s, the government's policies have encouraged manufacturing and exports with the creation of special economic zones. But those same policies have discouraged domestic consumption of overseas brands.

Most products made in China by big multinationals had to be physically shipped out of the country and then brought back so that they could be taxed as imports — hence, the U-turn employed by many companies.

In 2005, Apple's best-selling portable music device, the iPod, was manufactured in southern China. To comply with the country's stringent rules, iPods were loaded onto a cargo ship and sent to Hong Kong. Often, when the ship arrived, it was simply turned around and sent back to China.

“This was really a legacy of China's old export-oriented economy,” said Edwin Keh, the former head of global procurement at Walmart, who worked for the retailer and other multinationals in China for 20 years. “Back then, we built supply chains good at making things in the East and selling them in the West.”

Apple and other multinationals wanted a better system.

By the time Apple released the iPhone in 2007, China faced growing pressure to loosen its restrictions and give global companies easier access to its market. Apple and other companies believed that shipping goods to Hong Kong was a waste of time and energy. They wanted to send goods from the

factory gate in China directly to their stores and distribution centers inside the country.

In discussions with Zhengzhou officials, Foxconn insisted that the operation be located inside a bonded zone, equipped with customs right at the factory gate to facilitate iPhone exports. It also wanted the factory to be built within a few miles of the city's airport, to expedite Apple's global shipments.

Although it wasn't the first city to create such a cohesive operation, Zhengzhou provided a convenient system, since it would serve what would become the world's largest iPhone manufacturing facility.

A bonded zone functions much like a diplomatic territory, in that the government regards it as foreign soil. The zone eliminates the need for global brands to pay duties or taxes on imported components. And it makes it unnecessary to physically export the goods. In those zones, products can be imported and exported virtually at customs, without crossing a single border. After that, they can move swiftly around the country, or out to the rest of the world.

As the final assembly point for the iPhone, China also functions as a base for Apple's global tax strategy.

In the Zhengzhou bonded zone, typically at customs, Foxconn sells the finished iPhones to Apple. After purchasing the iPhones, Apple then resells the goods to Apple subsidiaries. The process largely takes place electronically.



Workers leaving the night shift at the Foxconn factory in Zhengzhou cross paths with those arriving for the early shift. The facility can produce 500,000 iPhones a day. Gilles Sabrié for The New York Times

The process also plays out with other Apple goods that are produced in the country. Apple can assign some profits on these goods to an affiliate in Ireland, a tax-advantageous locale, according to a 2013 American congressional report on the company's tax practices. It is a practice commonly employed by many big technology brands and is not unique to China.

“U.S. multinationals are the world leaders in tax avoidance strategies,” said Edward D. Kleinbard, the former chief of staff of the congressional Joint Committee on Taxation. “In doing so, they create stateless income — income that has become unmoored from the countries to which it has an economic connection.”

According to the congressional report, the process allowed Apple to move tens of billions of dollars offshore and substantially reduce its tax bill, which one senator called the “holy grail of tax avoidance.” The European Union in August ordered Ireland to claw back more than \$14.5 billion from Apple in unpaid taxes from a decade-long period.

Apple said it follows all applicable tax rules, insisting that the company pays all its taxes. The company said it had made some changes to its tax procedures to comply with new laws, including registering a subsidiary in Ireland that previously had no tax jurisdiction. It is appealing the ruling in the European Union.

In Zhengzhou, local officials have lauded the package of incentives provided to Foxconn, confident that the city's iPhone production will continue to pay huge dividends.

In August 2014, the city's top leaders held a special meeting to discuss “deepening collaboration” with Foxconn, according to the government records obtained by The Times. They crowed that Zhengzhou was the “biggest production base for Apple iPhone worldwide.”

There were 94 production lines producing the iPhone 6 and iPhone 5s, and the government said about 230 million smartphones had already been exported from Zhengzhou, making it one of the nation's crucial export centers. Production capacity had reached half a million iPhones a day. The city's tax revenue was rapidly rising.



A model of the Zhengzhou airport, which is not far from the main iPhone manufacturing site. Gilles Sabrié for The New York Times

Officials had a name for it all: “Zhengzhou Speed.”

A State-Recruited Army

A crushing work force begins arriving for the early shift at 6:30 a.m. They travel by foot, by bus, by motor scooter and even by pedicab.

They file steadily into dozens of factory sites, spread out across 2.2 square miles. At the peak, some 350,000 workers assemble, test and package iPhones — up to 350 a minute.

Apple’s labor force, the size of a national army, relies heavily on the generosity of the Zhengzhou government.

As part of its deal with Foxconn, the state recruits, trains and houses employees. Provincial officials call townships and villages to ask for help finding potential workers.

“Every city’s department of labor and ministry of human resources is involved,” said Liu Miao, who runs a private recruiting center in Zhengzhou.

The government pays recruiters a subsidy for every worker they hire, Mr. Liu said. “If the demand is high, then they will pay more,” he said. “If the demand is low, then the payment will be low, too.”

Cities like Zhengzhou have handed out subsidies to manufacturers in the hope of driving economic gains. But increasingly those local interests don’t align with the national agenda, creating a raft of uncertainty for multinationals operating in China.

As the economy slows, Beijing has started to shift its development path away from manufacturing and exports and toward innovation and consumption. It wants to empower Chinese brands and foster homegrown technology.

To advance its cause, Beijing has started to rethink the investment policies that support overseas companies. In November 2014, China’s State Council, the country’s cabinet, directed local governments to evaluate and eliminate any preferential treatment, including subsidies and tax breaks that benefited multinational exporters.

The threat prompted a pushback, mostly notably by Foxconn which, along with other international businesses, fought to keep existing incentives. Since then, Beijing has backed off the issue.

But the broad trend lines are clear: Overseas companies will no longer get the welcome they once received. The Chinese government is tightening access to

its huge market and pressuring Western technology companies to advance domestic goals — in a coordinated action that one congressional study in the United States called a [new form of “techno-nationalism.”](#)

“The government wants to know what you can give to China,” said James McGregor, who lives in Shanghai and has for decades advised American companies operating in China. “And they have the market and the muscle. They’re not playing around anymore.”

Chinese regulators have been penalizing overseas companies, like the American mobile chip giant Qualcomm, which was forced to reduce prices for companies that sell smartphones within the country. It is a market increasingly dominated by Chinese brands like Huawei and Xiaomi that undercut Apple and Samsung on price.

China is also scrutinizing Western technology companies over national security issues. Beijing has increased [oversight of the internet](#) with new cybersecurity rules and forced state companies to reduce spending on overseas technology. It pressed Apple to hand over its source code. Apple said it refused.

Apple has agreed to the government’s request to store more of its local data on Chinese servers. It must also undergo “security audits” on new models of the iPhone before gaining approval to sell the product.

Beijing also expects American companies to help develop China’s own capabilities. Apple is teaming up with UnionPay, a state-backed financial services company. It has [invested \\$1 billion](#) in the Chinese ride-hailing service Didi Chuxing, which has significant backing from state companies.

Mr. Cook, Apple’s chief executive, has also carefully cultivated Apple’s image as a big employer, a good corporate citizen and a major economic contributor.

He comes to China regularly. He has donned factory uniforms and walked the assembly line in Zhengzhou. He has courted regulators, the heads of state telecom giants and the country's top leaders, including Mr. Xi.

In an interview with Chinese state television last year, Mr. Cook explained how Apple was planting trees in the country, calling the effort a "pillar of its environmental strategy." He detailed plans to build a massive solar project to power Apple's stores, headquarters and offices throughout the country. He also boasted about creating over three million jobs in China, half of them in manufacturing.

At the Hall of Purple Light in the government's walled leadership compound in Beijing, Mr. Cook promised in August to build the company's first research and development center in the country and to support the government's big focus on high-end manufacturing.

Opposite him sat the vice premier, Zhang Gaoli. Beside him sat his partner. There was the chairman of Foxconn, Mr. Gou. Also present was the party leader of the province where Zhengzhou is located, Xie Fuzhan.