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Regional development

Bootstrapping a backwater

GUIYANG

The biggest centres of tech industry in China are on the coast. Two stories look at how inland provinces are trying to change that

A ROBOT taller than the Arc de Triomphe towers over a new theme park on the edge of Guiyang, the capital of the southern province of Guizhou. Attendants at Oriental Science Fiction Valley dress in blue-and-silver space suits. They greet visitors with salutes used by the Vulcans in "Star Trek". The main attraction is an indoor rollercoaster. It simulates an air battle over a futuristic city with the help of virtual-reality headsets that are handed out to every rider. Outside, a troop of black-clad security guards armed with big sticks adds a genuine air of menace.

Such space-age fantasy appears incongruous in Guizhou. The mountainous region is one of China's poorest provinces (see map, next page). More than 4m of its 35m inhabitants live on less than $1.90 a day, according to the government. In 2016 less than 45% of them used the internet. Five years ago, however, Guizhou started selling itself as a good place for big companies to store vast reservoirs of data. Now it is experiencing a tech boom. Beneath a hill not far away from the amusements, Tencent, an internet giant, has finished excavating a bomb-proof cavern with five massive entrances. It will house one of the company's largest server centres. Last year Apple said it would invest $1bn in the region. On April 25th it broke ground there on its first data centre in China.

China has a history of trying to develop important industries deep inland. In the 1960s Mao began moving much of China's weapons production and other manufacturing away from coastal areas that were easy to attack. Now the country wants to lead the world in big data, artificial intelligence and other cutting-edge pursuits. The coast would make sense: that is where the techies mainly congregate. China, however, is encouraging some of this business to move beyond the wealthy boom towns of the seaboard.

The digital solution

Security is only one, minor, reason. In 2015, when the central government declared that Guizhou would be a "National-level Pilot Zone" for big-data development, it had two main motives. The first was to fulfil a promise to stimulate regions that have benefited least from China's rapid development (last year the country's leader, Xi Jinping, showed his support for backward Guizhou by attending a Communist Party congress as a delegate of the province). The second was to show that China's less industrialised regions can modernise without the dirty factories that have left urban areas elsewhere in China choking in smog. The number of tourists visiting Guizhou jumped by 40% last year—many of them attracted by its beautiful landscapes.

Officials say there are more than 8,500 big-data firms in Guizhou, more than eight times as many as in 2013. Much of the action in the province is taking place in and around Guiyang, a verdant city of 3m people surrounded by tree-covered karst. A guide displays a map of the area, pointing to its data centres. As well as those of Tencent and Apple, they include facilities for Foxconn of Taiwan, South Korea's Hyundai and China's three state-owned telecoms firms. A new complex being built by Huawei, a telecoms equipment-maker, will resemble a Swiss lakeside town.

Guizhou is a reasonable enough place to house large servers. Land is cheaper than on the coast. Electricity costs less, thanks to local hydropower and the province's position on the route of big transmission lines that bring power from China's sparsely populated west. It has a milder climate than southern coastal cities, making it easier to keep servers cool. It is not prone to natural disasters.

Tech executives also have political motives for investing in Guizhou. They want to be seen to support the government's pet projects. Investing in Guizhou has been a chance to curry favour with the party's rising stars, who are sometimes dispatched to the province as a sort of trial by fire. As party chief of Guiyang from 2013 to 2017, Chen Gang was one of the tech cluster's architects. He is now in charge of one of Mr Xi's big schemes—the building of Xiong'an New Area, a whole new city near China's capital. Chen Min'er, Guizhou's boss until last summer when he took over as party chief of Chongqing, is another person whom companies have wanted to butter up. In October he gained an additional title: member of the ruling Politburo.

But will Guizhou's data-hosting industry transform its economy? Warehouses filled with servers require huge upfront investments but few staff. The bigger spoils flow from sprightlier businesses that know how to crunch data. Guizhou also wants to attract those. One of the perks of becoming ▸▸

a big-data pilot zone was being allowed to supply such firms with reams of government-held data to process for profit.

Between May 26th and 29th many company bosses flew in from their coastal headquarters for a "Big Data Expo" held in Guiyang. Billboards filled the city with such pithy slogans as: "Acutely grasp the historical opportunity of informatisation development." But getting firms to stay will be tricky. A few years ago officials enticed Huochebang—a startup that helps find loads for lorry-drivers and which was recently valued at more than $6bn—to move to Guiyang from Chengdu, a much bigger and trendier city. But many of its best-paid staff continue to work at offices in coastal cities, notes Dan Wang of Gavekal Dragonomics, a research outfit.

The government of Guizhou is an enthusiastic champion of companies that make the province their home, says William Li of Esgyn, a database firm with offices in Guiyang and two other Chinese cities. Yu Yueqing, who owns a business that crunches educational data, agrees. He left Guiyang after graduating in 2009, but decided to move his eight-year-old company back to the city last year. However, he still struggles to find enough qualified staff. For the foreseeable future, his research team will continue working in Beijing.

It is unclear whether Guizhou's political fortune will change now that the pilot's early proponents—the two Mr Chens—have moved to other provinces with their own tech dreams. When a routine letter of congratulation from Mr Xi was read aloud at Guiyang's recent expo, the province's current boss, Sun Zhigang, described it as "historic" and "a milestone". Such sucking up is common among officials across China. Given the competition, Mr Sun may have good reason to indulge in it. ■

Digital infrastructure

A web of silk

XI'AN

China talks of building a "digital Silk Road". A city on the ancient one is cashing in

CHINA'S vague but much-vaunted Belt and Road Initiative (BRI) has been providing buzzword fodder for government leaders and official sloganeers since 2013, when the country launched the scheme to extend its political and economic influence abroad by investing in infrastructure and other big projects. The "belt" refers to an overland push across Eurasia and the "road" to a maritime route to South Asia and beyond. But in recent months some new rhetoric (consistent in its challenging use of metaphor) has been promoting a virtual dimension: a "digital Silk Road".

Xi Jinping, China's president, has revealed few details, beyond that it will encompass quantum computing, nanotechnology, artificial intelligence, big data and cloud storage. In April he said it would involve helping other countries to build digital infrastructure and develop internet security. The digital Silk Road will help to create "a community of common destiny in cyberspace", suggests Chen Zhaoxiong, a vice-minister of information technology.

Whatever that means, the western city of Xi'an is eager to cash in. The city was once China's imperial capital (its army of terracotta warriors lures millions of tourists). It was also a hub on the ancient Eurasian Silk Road, which China cites as its inspiration for the BRI. That connection has encouraged Xi'an's government to claim a role for the city in the building of a digital road. Its officials speak of it as a potential rival of Silicon Valley or Bangalore.

Compared with Guiyang in the south, another inland city with such aspirations (see previous article) but a shortage of skilled people, Xi'an has a lot going for it. The city of 8m is home to 63 colleges and universities, as well as hundreds of research institutes. They produce 300,000 graduates each year, most of them scientists. Xi'an has a long history, stretching back to the Mao era, of supplying technicians needed by defence industries.

Officials expect Xi'an Software Park, part of the city's main tech centre, to employ 250,000 tech experts by 2021, compared with 165,000 in 2016. They predict that over the same period its revenue will rise by more than 150% to 500bn yuan ($78bn). Hardly a tech convention goes by in Xi'an without talk of the digital Silk Road. Earlier this month city officials held a conference about civil-military co-operation in building one. At a programmers' festival in November, animations on huge screens showed data crackling westward from Xi'an to Istanbul. Speakers were greeted like rock stars by throngs of aspiring young programmers.

Xi'an's efforts to attract tech firms, such as offering housing subsidies to their staff, are paying off. Huawei, a maker of telecoms equipment, has built its largest programming research-facility there. HSBC, a bank, uses developers in Xi'an to produce a variety of software, including versions for cyber-security and market analysis. What is happening in Xi'an, says Frank Tong, HSBC's head of innovation, "is for real." Unlike Guiyang, the city has considerable pull for young techies. It is only a bit less cosmopolitan than Beijing or Shanghai. Yet its housing is far cheaper.

The central government has been cheering Xi'an's efforts. In April China's official news agency said the city was in the "fast lane" to becoming a "Silicon Valley in the west" of the country. That may be an exaggeration. The toll of China's heavy online censorship may not hinder the code-crunching of programmers. But for the kind of world-class nerds that Xi'an wants to attract, it must be a deterrent. ■