Growing China

Regional contributions to economic success

IBM Institute for Business Value

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Advancing the vision

China's economic growth over the past 30 years has been extraordinary, helping more than one-half billion people transcend poverty and turning China into a highly urbanized industry titan.[1] To understand the challenges and opportunities before China, the IBM Institute for Business Value surveyed 1,150 Chinese executives, who revealed a renewed vision for the Chinese economy. Following up on our 2016 study, "China's challenge: Maintaining economic leadership in an uncertain world," this analysis looks specifically at China's major regions in the form of city tiers.[2] Each major tier faces unique challenges while charting a path forward to sustained economic growth and prosperity.

A path toward sustained prosperity

As outlined in our earlier study, China's growth over the past two decades has been unprecedented. Never in the history of the world have so many people been brought into the middle class so quickly. China's cities have become booming metropolises with near-universal literacy and ongoing improvements in education and healthcare.[3]

In this environment, the Chinese executives we surveyed indicated they are optimistic about the future. And they say that the nation has an increasingly important role to play in the global economy. Fifty-three percent say that China will remain a leading producer of high-value-added products and services. Forty-eight percent say that China can become a global leader in sustainability initiatives. Forty-six percent indicate the nation will be a global leader in research and development (R&D). Forty-five percent say it will continue to be a leading technological innovator. And 47 percent say they expect the nation to remain one of the world's biggest and most dynamic consumption markets.

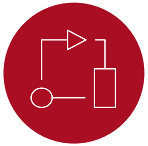
Executives identified several paths to achieving this vision. Eighty percent of those surveyed say the country should begin aggressively building business ecosystems across industries, and 80 percent indicate initiatives that promote innovation are vital. Seventy-eight percent highlight the importance of transforming workforce skills, as well as promoting new technologies. Seventy-eight percent prioritize transformation of education to support continued economic expansion. And 77 percent say promoting more entrepreneurship is key.

But looking more deeply across the survey data, it is clear that executives recognize that the growth trajectories of the country's regional tiers will likely differ based on their specific economic characteristics and unique strategic priorities.

Disaggregating expansion

72% of tier I executives say workforce transformation is crucial to accelerated growth

55% of tier II executives identify an urgent need to expand workforce skills



68% of tier III executives tell us that innovation is the most valuable skill needed in the future

To simplify analysis, we grouped major Chinese cities into three tiers. Tier I cities comprise significant commercial metropolises that produce in excess of RMB 1,500 billion each year, and include Beijing, Shanghai, Guangzhou and Shenzhen. Tier II cities produce between RMB 500 and 1,500 billion per year, and include Changsha, Dalian, Nanjing and Wuhan. Tier III cities comprise smaller but still significant economies producing up to RMB 500 billion per year, and include Huhehaote, Langfang and Nanchang (see the "Methodology" section for full tier decomposition).

Tier I

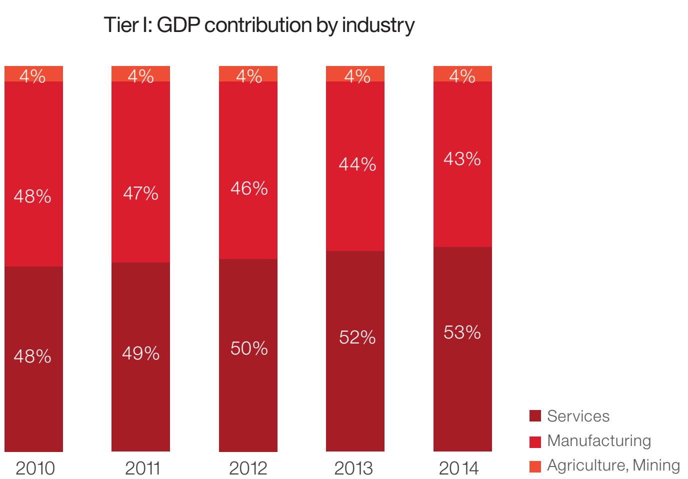
Tier I cities comprise highly developed economic centers. Most are located near the eastern coast of mainland China. Gross domestic product (GDP) of tier I cities was over RMB 6 trillion in 2014, accounting for almost 11 percent of overall GDP across the nation. Living standards tend to be high in tier I cities, with GDP per capita averages of more than RMB 54,000 in 2014, having grown more than 25 percent over the previous five years.[4]

The services sector accounts for more than half of GDP in tier I cities, with a continuing upward trend over time. In cities such as Shanghai and Beijing, the proportion of services is significantly greater – 65 percent and 78 percent respectively. With inflow of labor to tier I cities in high demand, growth continues to be driven predominantly by an increasing services sector (see Figure 1).[5] Indeed, 90 percent of all economic growth in tier I cities is estimated to come from services, which continues to be the powerhouse of economic expansion.[6]

When asked to identify the most important growth areas over the next five years, tier I executives' top choice was a more highly skilled workforce (see Figure 2). Tier I executives were also asked what factors would accelerate growth further, and emphasized three specifically: Seventy-two percent said workforce transformation, 63 percent said innovation was important for revenue growth and 68 percent said the continued transition away from manufacturing and agriculture toward services.

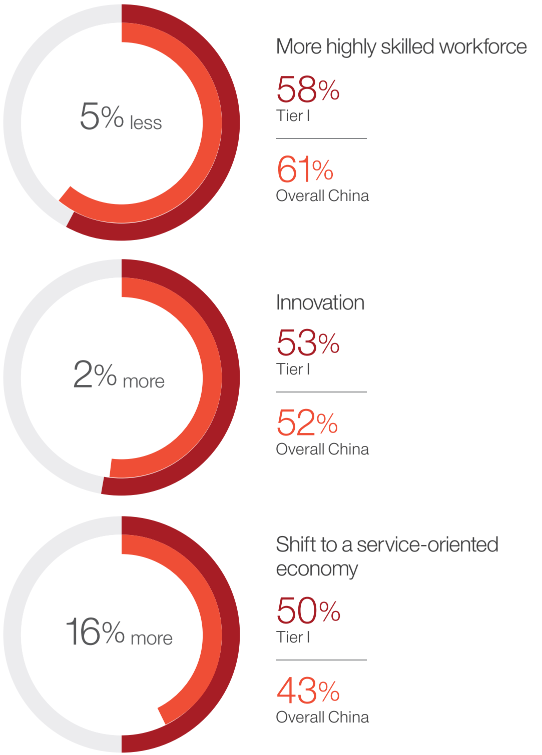
For example, Overseas Chinese Town (OCT) Group, a large state-owned enterprise with substantial interests in real estate, hotels and tourism, sought to improve training of talent.

Figure 1
Services comprise the single largest activity among tier I cities



Source: National Bureau of Statistics of People's Republic of China

Figure 2
Tier I executives identified key growth areas



Source: IBM Institute for Business Value analysis

OCT has initiated a series of training activities for a range of roles across the organization – from customer-facing personnel to senior leadership. Programs help employees manage the demands of rapid growth in the business more effectively, contributing to almost 12 percent year-on-year growth in quarterly reported revenues in March 2017.[7]

Ping An Insurance Company of China, which was the first insurance company in China to adopt a formalized shareholder structure, set up an innovation center to encourage and accelerate innovation and development of new business models. Ping An also established a venture capital fund worth RMB 1 billion to provide funding, managerial expertise and a launch platform for innovative new start-ups.[8]

And SAIC Motor, the largest Chinese auto company based on market capitalization, is transforming from traditional manufacturing to comprehensive service provisioning by accelerating technology uptake and promoting business model innovation. SAIC Motor is working to form a new ecosystem encompassing online-to-offline auto-service trading models, as well as new opportunities to expand financial services.[9]

Tier II

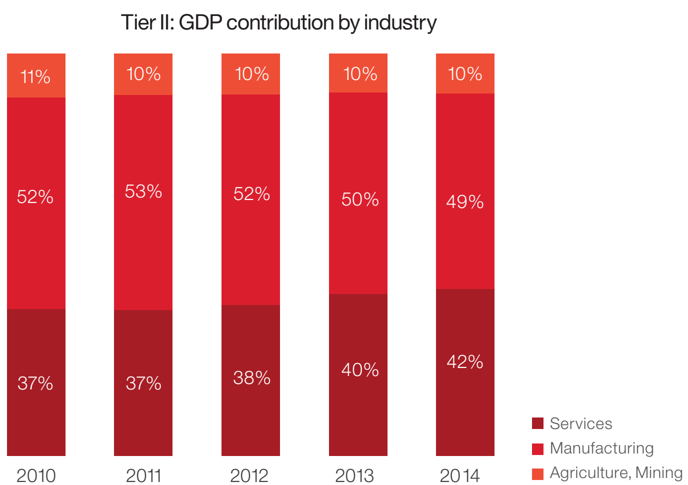
Tier II comprises several capital cities or other large cities from heavily developed provinces. Many are located in southern and eastern China. GDP of tier II cities would now exceed RMB nine trillion, which makes up approximately 16 percent of overall GDP. Average GDP per capita of tier II cities was approximately RMB 48,000 in 2014, with high growth expected into the future.[10]

Manufacturing comprises the highest proportion of tier II GDP, accounting for approximately 49 percent of the total (see Figure 3). Services contribution to GDP of tier II has been consistently growing – by 2014, it had grown to as much as 42 percent. Based on current trends, services could overtake manufacturing in tier II sometime in the early-to-mid 2020s. The importance of agriculture has remained relatively constant between 2010 and 2014, making up approximately 10 percent of tier II GDP.

Many tier II cities recognize the need for domestic consumption to drive continued rapid growth, and cities such as Changsha and Nanjing are already investing in several significant projects that

Figure 3

Manufacturing is the highest contributor to tier II GDP, while services' impact is steadily increasing



Source: National Bureau of Statistics of People's Republic of China

Figure 4
Tier II executives identified key growth accelerators

Source: IBM Institute for Business Value analysis

promote domestic consumption.[11] In a similar vein, cities like Dalian provide additional workforce training to more quickly develop critical workforce skills needed to sustain future growth.[12]

And cities like Wuhan and Hefei are taking measures to welcome new, strategically important industries, such as manufacturing of electric vehicles.[13] With the greater opportunities evident in many tier II cities, along with larger cities being seen as reaching a critical size, new university graduates are reportedly increasingly pursuing the career opportunities that tier II cities afford.[14]

When asked what factors would accelerate growth further, executives in organizations located in tier II regions identified these same factors (see Figure 4). Fifty-six percent of tier II executives surveyed indicated that their economies need to continue focusing on domestic consumption. Fifty-five percent highlighted the need for more highly skilled workers. And 47 percent indicated that a clear focus on gaining new, highly strategic industries is key.

For example, GoerTek Inc., a Chinese electronics and audio equipment manufacturing company, acquired majority shares in the Danish company, Dynaudio A/S, to accelerate development of new audio technologies. Strengthening GoerTek's research capabilities, while simultaneously boosting Dynaudio's access to the large Chinese market, has helped both firms achieve a rapid increase in sales.[15]

Hisense Group, a Qingdao-based white-goods manufacturer and multinational company, established Hisense University to facilitate new employee training covering best practices, corporate culture and history with a tightly coordinated mentoring program. Hisense is also providing opportunities for employees to engage in additional development through regular weekly feedback meetings and formalized higher education.[16]

And Sany Group, based in Beijing and the sixth largest heavy-equipment manufacturer in the world, is investing RMB 50 billion across several solar photovoltaic projects around China over the next half decade. With a strategy centered around innovation, Sany says it plans to connect engineering tools equipped with internet capabilities to applications across industries, including development of a new insurance platform.[17]

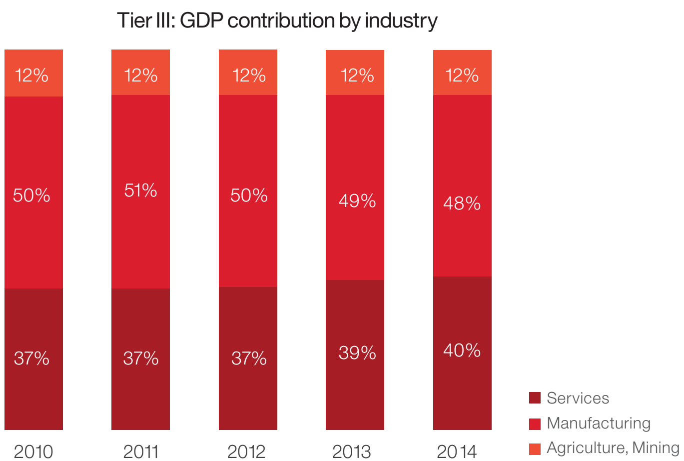
Tier III

Tier III comprises smaller major cities, many of which are located in central and western China. GDP of tier III cities is around RMB 7.5 trillion, which constitutes approximately 14 percent of China's GDP overall. Average GDP per capita of tier III was around RMB 31,000 in 2014.[18]

Manufacturing remains the most important sector in tier III economies, comprising approximately 48 percent of tier III overall GDP (see Figure 5). As is the case with tier II, the contribution of services to tier III GDP has grown steadily over the past decade, reaching around 40 percent by 2014. Agriculture remains important, comprising approximately 12 percent of GDP.

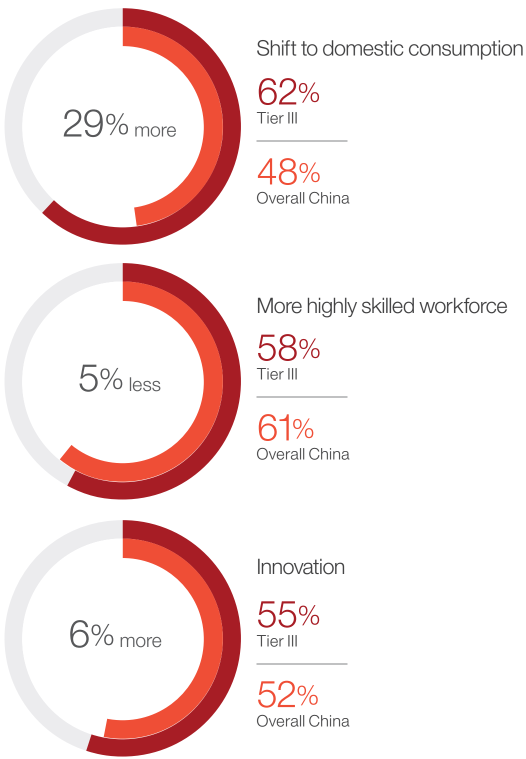
Figure 5

Manufacturing is the primary economic activity in tier III cities, with the services sector progressively gaining ground



Source: National Bureau of Statistics of People's Republic of China

Figure 6
Tier III executives identified key growth areas



Source: IBM Institute for Business Value analysis

Even more than their tier II compatriots, tier III cities recognize domestic consumption as a central growth driver (see Figure 6). And tier III cities such as Haikou have launched promotional activities designed to accelerate domestic consumption – including events, exhibitions and marketing campaigns in both digital and analog forms – to promote innovative, healthy and eco-friendly products and services for citizens.

At the same time cities such as Longyan and Wulumuqi are providing funding and other support to launch innovative new projects, expected to attract highly skilled talent to their regions. Tier III cities are also pursuing other innovation initiatives, such as Baoji's encouragement of cooperation between enterprises, universities and research institutes, and Wulumuqi's initiatives to promote start-up entrepreneurs.[19]

In terms of growth accelerators, tier III executives surveyed also focus on consumption, talent acquisition and innovation. Sixty-two percent say that domestic consumption is a key growth driver. Fifty-five percent highlight the need to attract top talent, which is often more difficult for regional centers than it is for major cosmopolitan metropolises. And 68 percent say that innovation is essential.

For example, the Wanda Group, a Chinese conglomerate with interests in commercial real estate, hospitality, media and entertainment, leisure, sports, technology and finance, has centered its growth strategy on consumption expansion of tier III cities. Recognizing that much of the market opportunity in higher-tier regions is already well covered, Wanda is linking its future growth to that of emerging new centers.[20]

Yili Group, based in Hohhot, Inner Mongolia, and the largest dairy producer in China, partnered with several top universities to establish an enterprise business school. Yili's intent was to expose its management team to the latest industry best practices. As part of the initiative, Yili provides employees at all levels and functions with customized training to improve professional skills, while actively advancing efforts to promote a corporate culture of continuous learning and development.[21]

And Chery Automobile Co., Ltd., one of China's most innovative automakers, employs more than 6,000 R&D specialists, and has registered more than 7,000 patents. Chery Automobile is now collaborating with Makerspace, a Chinese internet company, to create a first-of-its-kind technology-sharing platform that helps automakers develop new products by advancing technology and other assets around alternative energy vehicles.[22]

Next steps

Organizations within each tier or region can take specific actions to help accelerate growth.

Next steps for tier I

- Promote open innovation: Recognize that much advanced innovation is serendipitous – promote expansion of open environments in which sharing of ideas is encouraged.
- Expand connectedness: Pursue opportunities to engage in or form growth-oriented business ecosystems that tap new expertise, markets and innovations.
- Deepen relationships: Create physical and virtual environments in which new and existing collaborations are expanded and aligned toward achieving common growth objectives.

Next steps for tier II

- Think global: Even while expanding domestic consumption, actively build new global collaborations, such as participating in or creating international innovation platforms.
- Build capabilities: Promote mechanisms to identify and build new capabilities that align to high-growth areas, including those around data and new technologies such as artificial intelligence.
- Embrace innovation: Work to create globally recognized centers of advanced innovation in key target areas with a view to attracting both domestic and international investment.

Next steps for tier III

- Recognize disruption: Embrace the idea that disruptive forces are inevitably impacting industries, and recognize that being at the vanguard of disruption is necessary to leapfrog more highly developed regions.
- Develop skills: Invest in new skills to face a more challenging business environment, such as finding ways to attract top talent away from other skills-rich regions.
- Encourage entrepreneurialism: Pursue mechanisms that foster entrepreneurialism and innovation, including collaborations and rapid adoption of new technologies.

Key questions

- Which regions have the right mix of characteristics and capabilities to accelerate your organizations' growth potential?
- What strategies will your organization need to engage and retain the most dynamic personnel?
- How can your organization collaborate and partner more effectively to accelerate innovation and entrepreneurialism?

For more information

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Notes and sources

1 Eckart, Jonathan. "8 things you need to know about China's economy." The World Economic Forum. June 23, 2016. https://www.weforum.org/agenda/2016/06/8-facts-about-chinas-economy/; Kamrany, Nake M. and Frank Jiang. "China's Rise to Global Economic Superpower." The Huffington Post. http://www.huffingtonpost.com/nake-m-kamrany/chinas-rise-to-global-eco_b_6544924.html; Davidson, Steven, Wei (Vivian) Ding and Anthony Marshall. "China's challenge: Maintaining economic leadership in an uncertain world." IBM Institute for Business Value. August 2016. https://www-935.ibm.com/services/us/gbs/thoughtleadership/chinaschallenge/

2 Davidson, Steven, Wei (Vivian) Ding and Anthony Marshall. "China's challenge: Maintaining economic leadership in an uncertain world." IBM Institute for Business Value. August 2016. https://www-935.ibm.com/services/us/gbs/thoughtleadership/chinaschallenge/

3 Ibid.

4 GDP data. The World Bank website. Accessed April 1, 2017. http://data.worldbank.org/indicator/NY.GDP.DEFL.ZS?page=1; GDP data. National Bureau of Statistics of the People's Republic of China. Accessed April 1, 2017. http://www.stats.gov.cn/tjsj/

5 Xi, Lin. "Shenzhen becomes the most attractive Tier 1 city with overwhelming high-tech emerging industries." ycwb.com. April 28, 2016. http://news.163.com/16/0428/12/BLO7QD6600014AEE.html

6 "Tertiary industry contributes nearly 90% of Beijing's economic growth in 2015." Beijing Daily. February 2, 2016. http://www.bj.xinhuanet.com/bjyw/2016-02/16/c_1118056910.htm

7 "Training and Development." OCT website. Accessed May 31, 2017. http://www.chinaoct.com/category.aspx?NodeID=147; "XSHE:000069 Shenzhen Overseas Chinese Town Co Ltd Quarterly Report." Morningstar.com. March 31, 2017. http://quote.morningstar.com/stock-filing/Quarterly-Report/2017/3/31/t.aspx?t=XSHE:000069&ft=&d=432462d6fb977471ebfc090d186dbb3b; "2016 China top 30 annual best employers from Shenzhen named by zhaopin.com." Qilu Evening News. January 13, 2017. http://news.qlwb.com.cn/2017/0113/837051.shtml

8 "About Ping An Insurance (Group)." Ping An Insurance website. Accessed May 31, 2017. http://about.pingan.com/en/index.shtml#; Wang, Tao. "Ping an group set up the innovation center, Innovation is important to the organization." Xinhuanet.com. August 3, 2012. http://news.xinhuanet.com/fortune/2012-08/03/c_112619369.htm; Kang, Qinru and Ping Xie. "Ping An established Pingan Venture Capital." China.com. August 2, 2012. http://finance.china.com.cn/roll/20120802/919408.shtml; Ye, Jing. "Ping An property insurance award "Innovation award in the quality of service." ycwb.com. November 4, 2015. http://www.ycwb.com/ePaper/ycwbdfb/html/2015-11/04/content_829622.htm; Guowei Peng. "Ping An Securities won the award of '2016 Brokerage Internet Innovation Award'." people.com.cn. August 9, 2016. http://cq.people.com.cn/GB/365413/news/201689/20168992301579084.htm

9 "SAIC Motor moves up 25 places, reaches 60th rank in Fortune Global 500 list." SAIC Group Motor website. July 27, 2015. http://www.saicgroup.com/english/latest_news/saic_motor/44003.shtml; "Demei Chen: SAIC Motor aims to become a comprehensive service provider." auto.163.com. October 16, 2014. http://auto.163.com/14/1016/11/A8M32MO9000857IS.html; "SAIC Motor set a new model for the transformation of Chinese auto industry." autohome.com.cn. July 21, 2016. http://www.autohome.com.cn/dealer/201607/67958630.html

10 GDP data. The World Bank website. Accessed April 1, 2017. http://data.worldbank.org/indicator/NY.GDP.DEFL.ZS?page=1; GDP data. National Bureau of Statistics of the People's Republic of China. Accessed April 1, 2017. http://www.stats.gov.cn/tjsj/

11 Long, Jingguan and Mengyu Wang. "There will be steady growth in Midwest." epaper.southcn.com. July 31, 2012. http://epaper.southcn.com/nfdaily/html/2012-07/31/content_7109159.htm

12 "Dalian holds the first cross border e-commerce high-end talent training class." Dalian TV. December 19, 2016. http://www.mofcom.gov.cn/article/resume/n/201612/20161202266551.shtml

13 "The emerging, strategically important industries will face acceleration in Wuhan." mofcom.gov.cn. May 14, 2015. http://www.mofcom.gov.cn/article/resume/n/201505/20150500971508.shtml; "Four emerging, strategically important industries will launch." hf365.com. May 3, 2016. http://news.hf365.com/system/2016/05/03/014953416.shtml

14 "Tier 2 cities attract more job hunters." Youth.cn. December 7, 2015. http://news.youth.cn/jy/201512/t20151207_7388434.htm

15 "About Us." GoerTek website. 2016. Accessed May 31, 2017. http://www.goertek.com/en/about/index.html; "GoerTek In. Opens European HQ and Sparks Audio Innovations in Denmark." Ministry in Foreign Affairs in Denmark. January 19, 2016. http://www.investindk.com/News-and-events/News/2016/GoerTek-Inc-Opens-European-HQ-and-Sparks-Audio-Innovations-in-Denmark; "Abstract of Annual Report 2015." GoerTek Inc. April 2016. http://www.goertek.com/en/upload/Reports/Abstract%20of%20AR%202015.pdf

16 "Hisense Profile." Hisense Group. 2014. Accessed May 31, 2017. http://www.hisense.cn/en/about/hspr/hsgr/; "Hisense sound talent development system." hbrc.com. March 5, 2014. http://www.hbrc.com/rczx/news-1426607.html; "Hisense Electric." Forbes Media LLC. 2016. http://www.forbes.com/companies/hisense-electric/

17 "Company Profile." Sany Group. 2016. Accessed May 31, 2017. http://www.sanyglobal.com/about/company-profile/; "Chinese Giant SANY Plans $7.7 Billion Distributed Solar Investment." Sustainable Enterprises Media, Inc. March 27, 2016. http://cleantechnica.com/2016/03/27/chinese-giant-sany-plans-7-7-billion-distributed-solar-investment/; Yibo, Zhao. "Jiu Long Property Insurance is founded, Sany invests into insurance industry." The Beijing News. March 19, 2016. http://epaper.bjnews.com.cn/html/2016-03/19/content_627121.htm?div=-1; Yan, Fang and Matthew Miller. "UPDATE 1-China's Sany Heavy Industry Co reports jump in Q1 profits." Reuters. April 28, 2016. http://www.reuters.com/article/sany-heavy-indl-results-idUSL3N17T29G

18 GDP data. The World Bank website. Accessed May 1, 2017. http://data.worldbank.org/indicator/NY.GDP.DEFL.ZS?page=1; GDP data. National Bureau of Statistics of the People's Republic of China. Accessed April 1, 2017. http://www.stats.gov.cn/tjsj/

19 "Hainan launches 6-month promotion activities to drive consumption, people can enjoy discount both online and offline." Hksw.gov.cn. May 28, 2015. http://www.hksw.gov.cn/e/action/ShowInfo.php?classid=134&id=2752; "Establish Tier 3 cities by talents." Fjsen.com. September 21, 2016. http://lyjynews.fjsen.com/2016-09/21/content_18486545_2.htm; "Wulumuqi plan to become an innovative city in the thirteenth Five-Year plan period." cnr.cn. October 3, 2016. http://news.cnr.cn/native/city/20161003/t20161003_523176369.shtml; "Tier 3 cities in west seek for their own innovative way." xinhuanet.com. February 24, 2016. http://news.xinhuanet.com/politics/2016-02/24/c_128745379.htm; "Wulumuqi launch 48 policies to promote innovation." cnr.cn. February 7, 2017. http://news.cnr.cn/native/city/20170207/t20170207_523568467.shtml

20 "Group profile." Wanda Group website. Accessed April 1, 2017. https://www.wanda-group.com/corporate/; Lingwei, Wu. "Two figures tell you, how Wanda group is expanding to Tier 3 and Tier 4 cities in a decade." Qdaily. August 2, 2016. http://www.qdaily.com/articles/30430.html

21 "A Profile of Yili." Yili website. 2016. Accessed May 31, 2017. http://www.yili.com/about/synopsis.html; "Yili puts employees at the core of the enterprise and proactively implements HR strategy." shuyang.tv. March 22, 2013. http://www.shuyang.tv/news/qy/2013-03-22/53041.html; Guoping, Li. "Yili Group earned award of Model Enterprise of Staff Training and Development." northnews.cn. November 22, 2012. http://www.northnews.cn/2012/1122/980689.shtml; Xiaofang, Xue. "Yili earned award of National Model Enterprise on Employment again." northnews.cn. December 18, 2013. http://szb.northnews.cn/bfxb/html/2013-12/18/content_1073064.htm

22 "Overview." Chery Automobile Co., Ltd. 2014. http://www.cheryinternational.com/corporate-overview.html; Tingting, Zhan. "Chery Auto: independent innovation polishes Chinese brand." Xinhuanet. April 23, 2015. http://news.xinhuanet.com/finance/2015-04/23/c_1115064825.htm; "Chery Launched the First Platform for Car Sharing Technology." gasgoo.com. July 18, 2016. http://autonews.gasgoo.com/0/40007915.html; "China's top 10 innovation leader." ce.cn. April 17, 2013. http://www.ce.cn/cysc/ztpd/2013/nh/jx_4/201304/17/t20130417_83622.shtml; Yixiao, Zhang and Yu Sanchun."Chery ranked among 'China's Most Admired Companies' for two consecutive years." Wuhunews.cn. August 1, 2015. http://www2.wuhunews.cn/whnews/daily/2015/08/2015-08-01997493.htm

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