

China's 20 Most Innovative Cities (2017)

Business Policy and City Clusters in China
May 2018

FUNG BUSINESS INTELLIGENCE

Overview

- This report presents the top 20 cities in China ranked by the latest *China City Technology and Innovation Development Index*
- The index was compiled and published by the Capital Institute of Science and Technology Development Strategy, the China Institute of Innovation and Development of the Beijing Normal University and the Institute of Innovation and Entrepreneurship of the Xihua University
- Beijing** and **Shenzhen** were the highest ranking cities according to the 2017 index, both scoring 0.587, followed by **Shanghai** and **Guangzhou**
- An analysis of the index revealed the strengths and weaknesses of each city. For example, Beijing had a strong talent pool and houses leading institutions. However, its policy environment was not considered very friendly for businesses. Shenzhen, on the other hand, had desirable technological conditions but weak external influence
- While most of the top ranking cities are located in eastern and southern coastal areas, some central and western cities like **Xi'an**, **Hohhot** and **Urumqi** also made it to the Top 20

- The index evaluates the elements influencing technology and innovation development in 287 cities in China
 - ✓ **Talents for innovation:** practitioners in the innovation and technology industry and potential talent pool
 - ✓ **R&D funding:** government expenditure on the industry and education
 - ✓ **Policy environment:** policies designed to encourage entrepreneurship and foreign investment
 - ✓ **Cultural environment:** learning resources including teacher/student ratio and library inventory
 - ✓ **Living environment:** provision of hospitals, public transportation and green parks
 - ✓ **Financial services:** number of companies listed on the second-board and over-the-counter (OTC) markets and availability of financing
 - ✓ **Technological conditions:** mobile phone ownership and internet broadband wireless access
 - ✓ **Technological achievements:** research papers and patent registrations, etc.
 - ✓ **Economic output:** economic indicators, e.g. per capita dispensable income of urban residents
 - ✓ **Economic structure:** share of industry in provincial GDP
 - ✓ **Green development:** energy consumption and conservation, air quality and urban waste management
 - ✓ **External impact:** contribution to the national and regional development in innovation

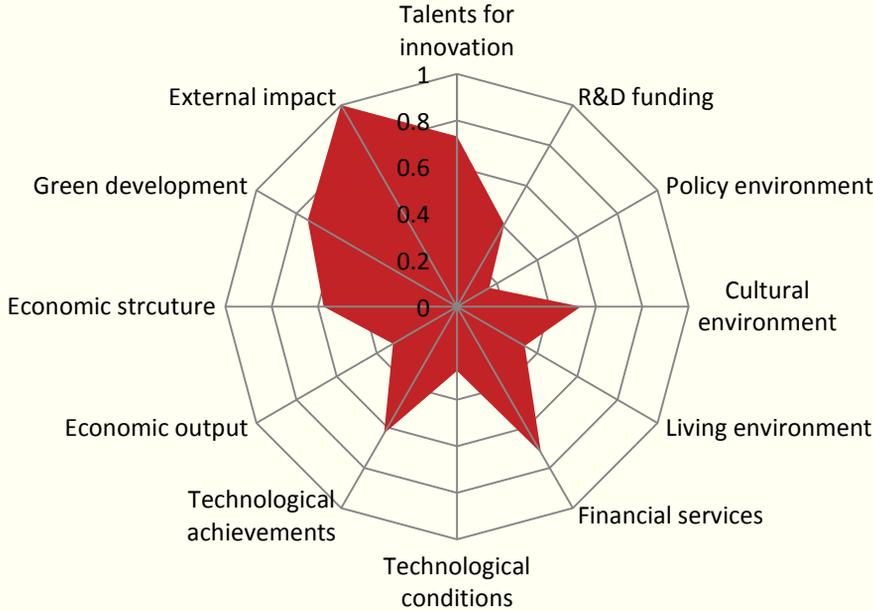
The Technology and Innovation Development Index of Chinese cities 2017 (Top 20)



No. 1 & 2: Beijing & Shenzhen

Beijing

Overall index: 0.587

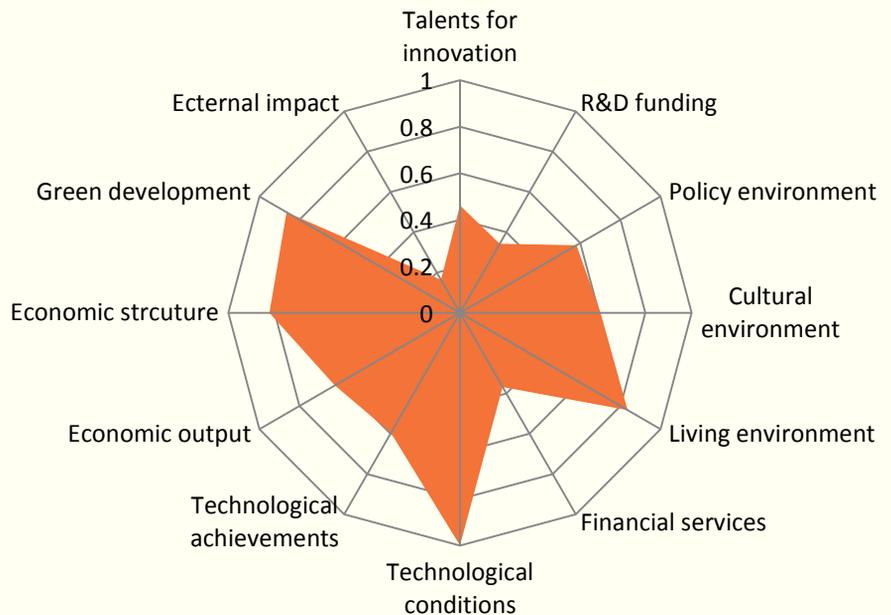


- Beijing ranked top in **external impact** (1.000), **financial services** (0.726) and **technological achievement** (0.630)
- It also scored 0.732 in **talents for innovation** and was ranked in the fourth place among all 287 cities
- However, its **policy environment** (0.161) was not considered very friendly for innovation and technology enterprises, ranking at the bottom of the list

Shenzhen

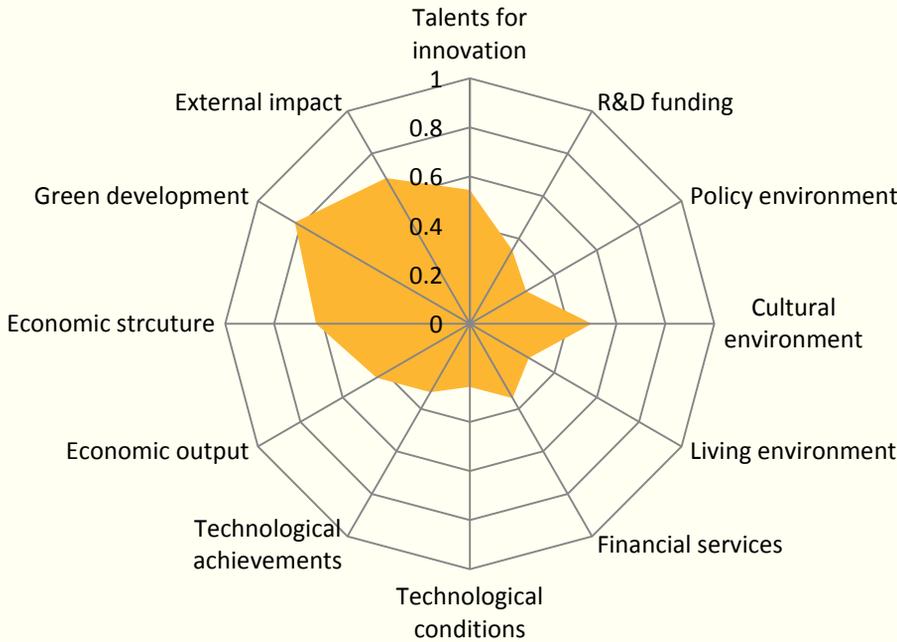
Overall index: 0.587

- Shenzhen had the most desirable **technological conditions** (1.000) that outranked other cities
- It also generated high **economic output** (0.624) and provided favorable **living environment** (0.836) and **cultural environment** (0.607)
- However, its scores were low in **external impact** (0.164) and **R&D funding** (0.343). As other municipal governments have been stepping up their R&D inputs, Shenzhen only ranked 117th in this category



No. 3 Shanghai

Overall index: 0.499

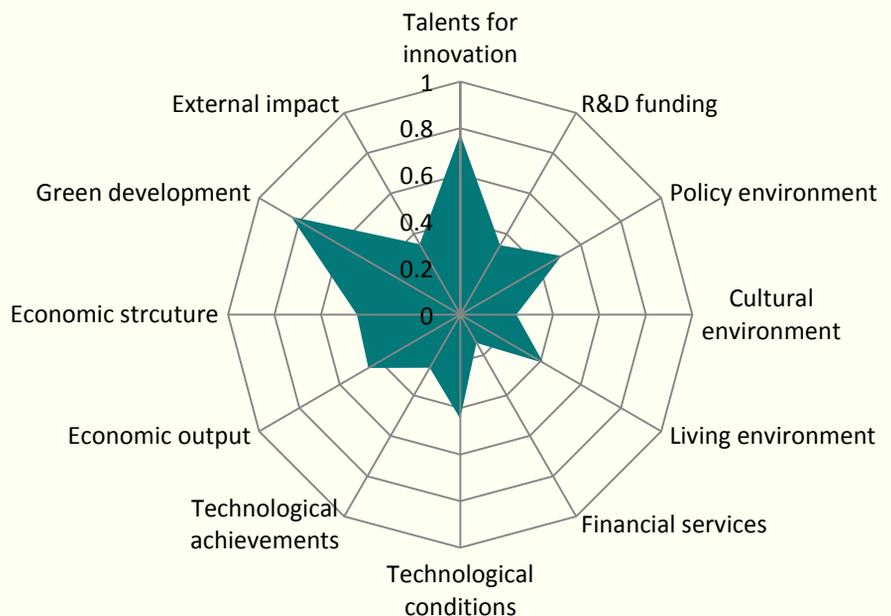


- As the financial center of China and business hub for technology enterprises, Shanghai was ranked second and third in **external impact** (0.685) and **financial services** (0.350) respectively
- However, its policy and funding support was considered weak, ranking middle to low in **policy environment** (0.266) and **R&D funding** (0.347)

No. 4 Guangzhou

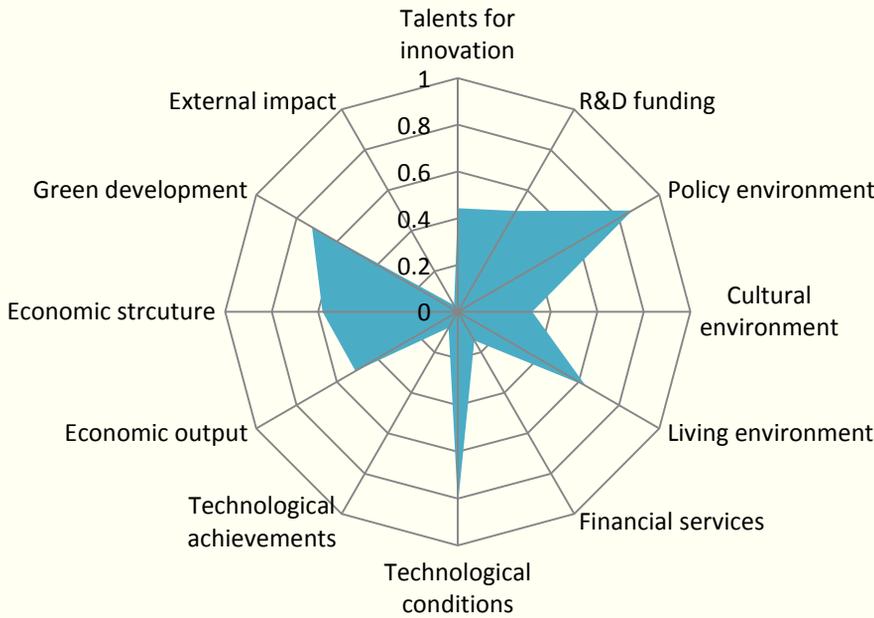
Overall index: 0.464

- Guangzhou performed relatively well in nurturing **talents for innovation** (0.775) and providing comfortable **living environment** (0.414)
- Although Guangzhou obtained 0.841 points in **green development**, other innovative cities also scored high points in this category
- Guangzhou fell in the middle rank in **financial services** (0.140, ranking 140th) and **R&D funding** (0.344, ranking 115th)



No. 5 Dongguan

Overall index: 0.452



- Dongguan was the highest ranking tier-two city in terms of overall index
- It provided desirable **policy environment** (0.866) and **technological conditions** (0.828) for innovative businesses
- However, the city has not made significant **external impact** (0.032) nor **technological achievements** (0.079). Its **financial services** (0.142, ranking 134th) also dragged down its overall performance

No. 6 Tianjin

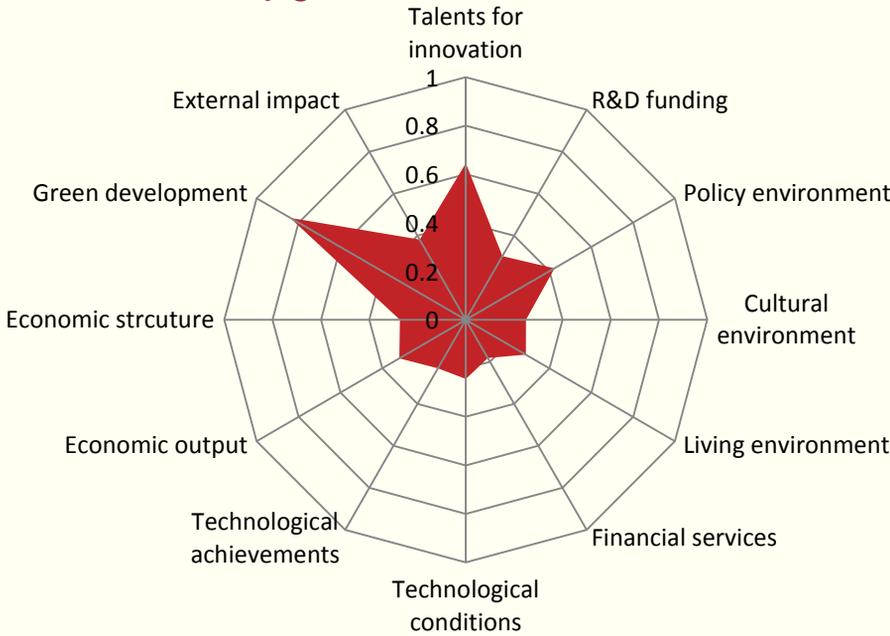
Overall index: 0.416

- Tianjin was ranked third in **external impact** (0.483), following Beijing and Shanghai. Its **policy environment** (0.525) also played a role in making it an innovative city
- With relatively few companies listed on the second-board and OTC markets and moderate financing opportunities, Tianjin only ranked in the 114th place in **financial services** (0.149)



No. 7 Wuhan

Overall index: 0.405

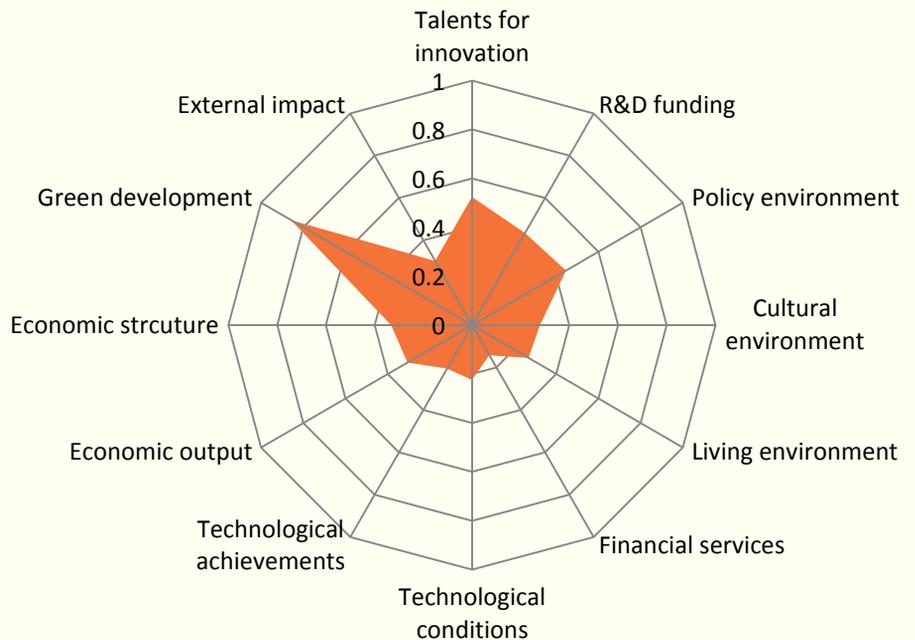


- Wuhan ranked top ten in **technological achievements** (0.231), **external impact** (0.382) and **talents for innovation** (0.508)
- However, its tertiary sector and export of high tech products shared a relatively low proportion in provincial GDP. Therefore it only scored 0.273 in **economic structure**
- Government expenditure of Wuhan on **R&D funding** (0.303) ranked in the 169th place

No. 8 Hangzhou

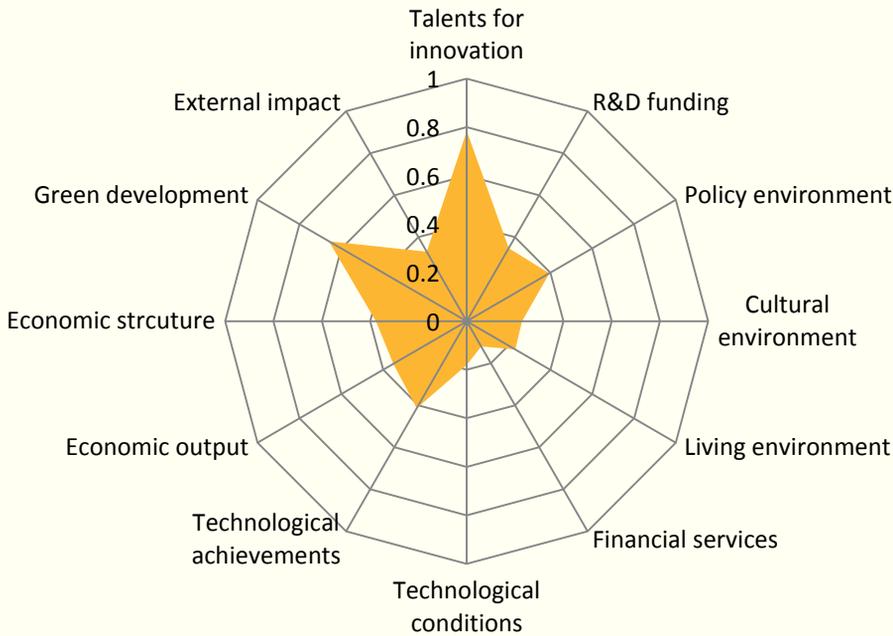
Overall index: 0.391

- As the headquarter of tech giant Alibaba, Hangzhou secured the 9th place in **technological achievements** (0.205). The city has been described as "China's Silicon Valley"
- Despite government effort in cultivating **talents for innovation** (0.524), Hangzhou needed to broaden its **financial services** (0.142) and financing opportunities for the industry



No. 9 Nanjing

Overall index: 0.390

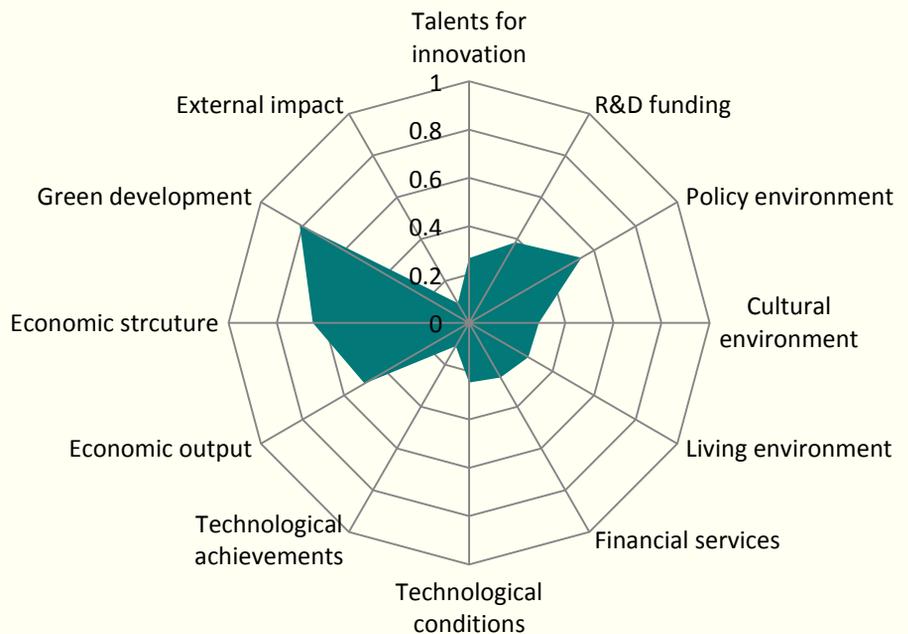


- Nanjing was ranked top in **talents for innovation**, scoring 0.784
- As the research base of some energy, electricity, bio-tech and intelligence machine companies, Nanjing was ranked third in **technological achievements** (0.414)
- Nanjing was ranked 270th in **green development** among all surveyed cities, despite scoring 0.659

No. 10 Suzhou

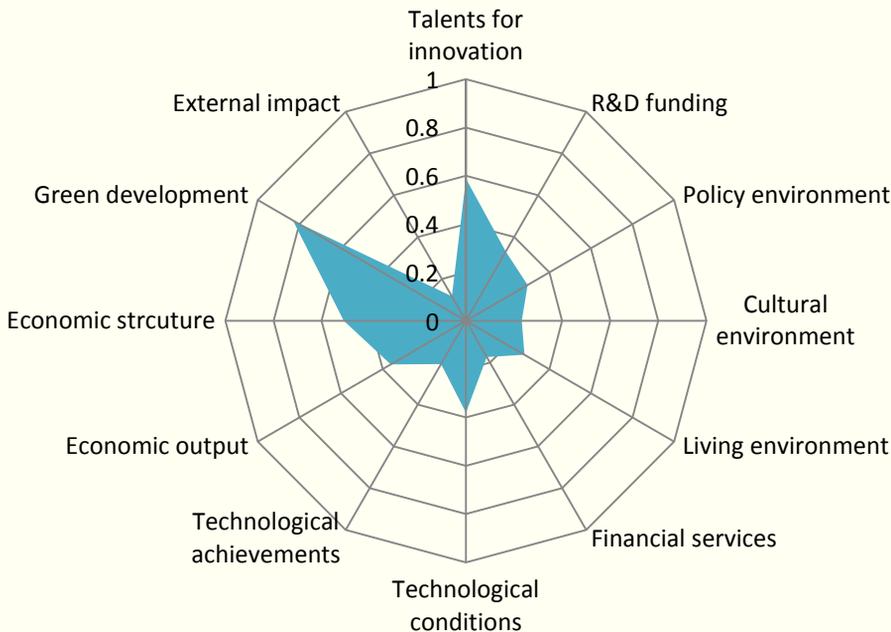
Overall index: 0.384

- The innovation and technology industry made important contribution to provincial GDP in Suzhou, pushing it to the second place in **economic structure** (0.650). The city also achieved high scores in **economic output** (0.502) and **policy environment** (0.539)
- The municipal government rolled out new policy in March 2017 to attract **talents for innovation** (0.268, ranking 55th), offering start-up funds, relocation subsidies and leasing subsidies



No. 11 Xiamen

Overall index: 0.378

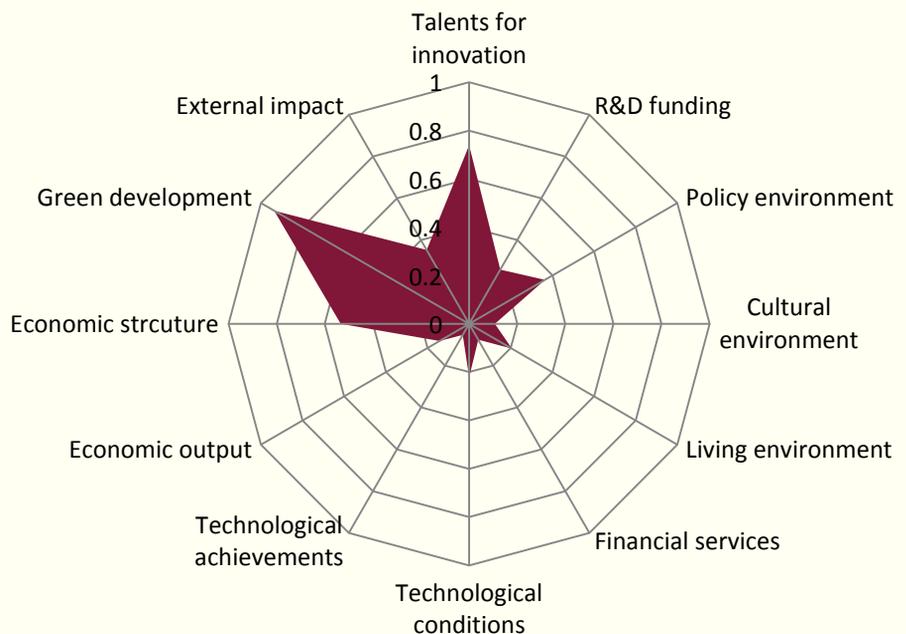


- Xiamen made it to the top ten in **economic structure** (0.508), **technological achievement** (0.207) and **technological conditions** (0.380)
- However, it was ranked 249th in **policy environment** (0.296). This may suggest that its tax policy was not very attractive to external investors

No. 12 Haikou

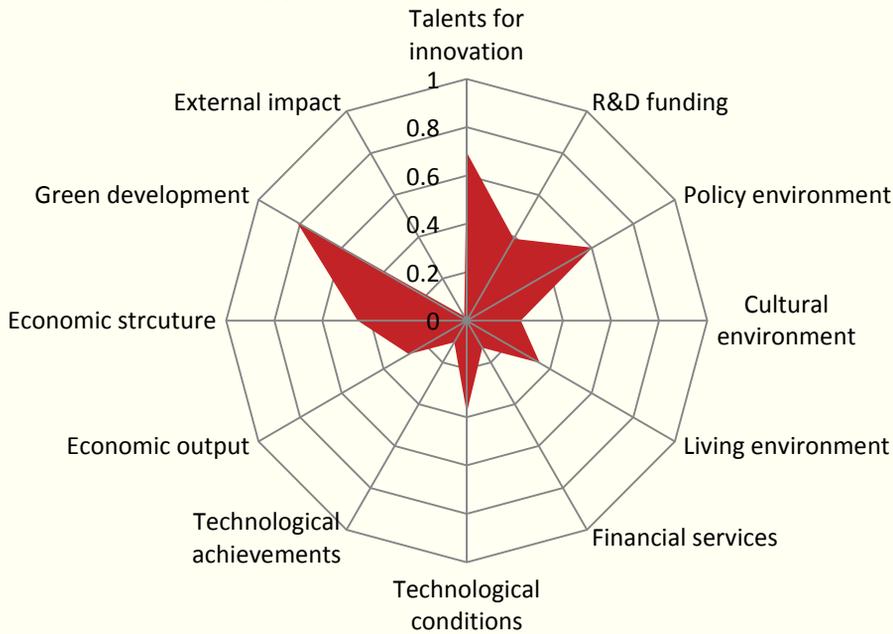
Overall index: 0.376

- As a tropical coastal city, Haikou topped the list in **green development**, scoring 0.936
- It was also strong in **talents for innovation** (0.739, ranking 3rd) and **economic structure** (0.534, ranking 6th)
- However, the government may not have committed a great deal of **R&D funding** (0.259, ranking 222nd) and created business-friendly **policy environment** (0.364, ranking 197th)



No. 13 Zhuhai

Overall index: 0.376

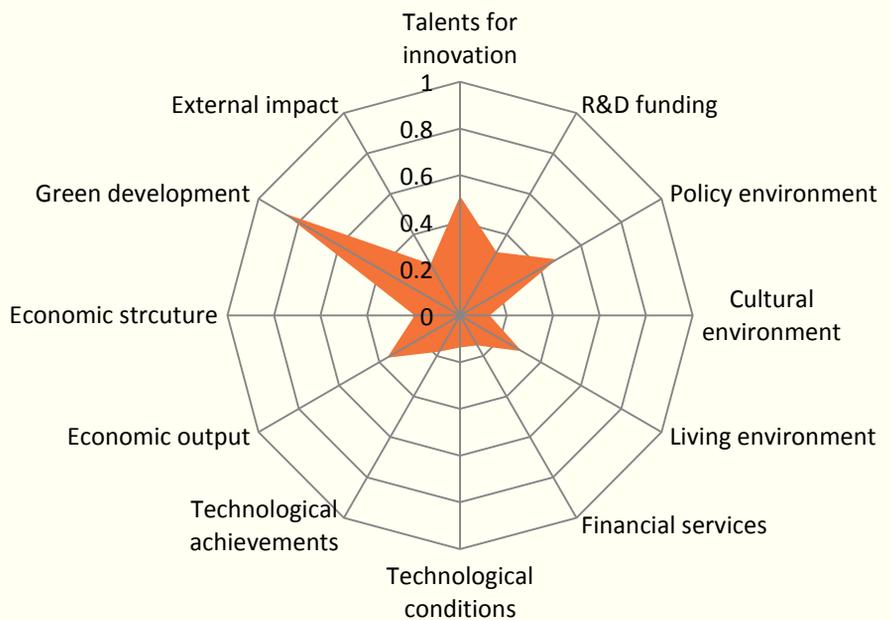


- Zhuhai was ranked third in **policy environment** (0.603). It also secured high ranking in **talents for innovation** (0.696) and **living environment** (0.351)
- However, its low score in **external impact** (0.021) suggested that the city has not made significant contribution to the national and regional development in innovation
- **Financial services** (0.130) was another weak area of Zhuhai, which was ranked 168th on the list

No. 14 Changsha

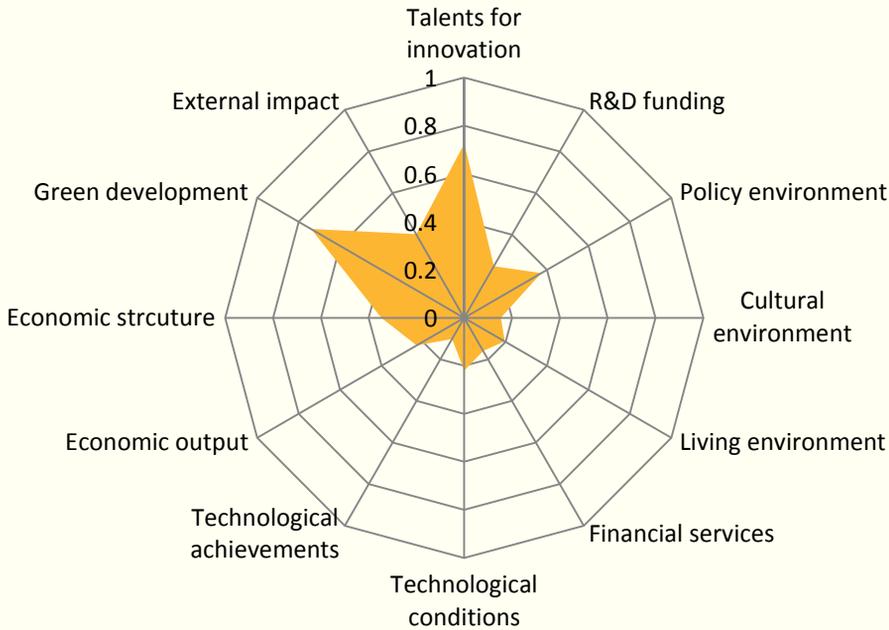
Overall index: 0.367

- As an inland city, Changsha achieved good scores in **green development** (0.875) and **living environment** (0.306)
- Although it only got 0.179 in **technological achievements**, it was ranked 11th among all surveyed cities
- However, with relatively low library inventory and teacher ratio, it was ranked 195th in **cultural environment** (0.127)



No. 15 Xi'an

Overall index: 0.364

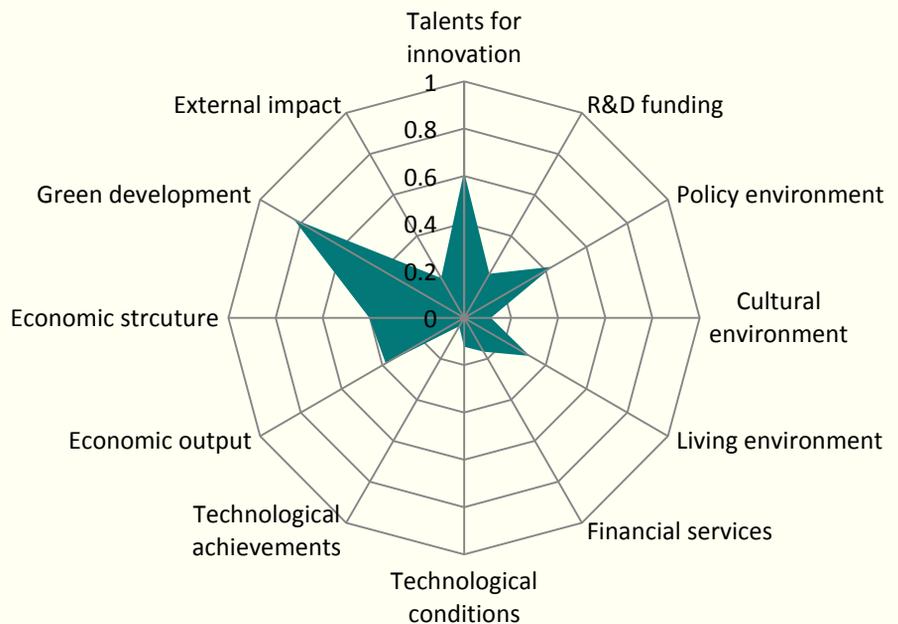


- Xi'an secured the fifth place in **talents for innovation** (0.725). In September 2017, it signed a memorandum of cooperation with the cloud computing services arm of Amazon to develop an innovation center in the city. The center was expected to draw more talents to the city.
- However, Xi'an had a lot to catch up in **R&D funding** (0.248, ranking 237th) and **green development** (0.740, ranking 213th)

No. 16 Hohhot

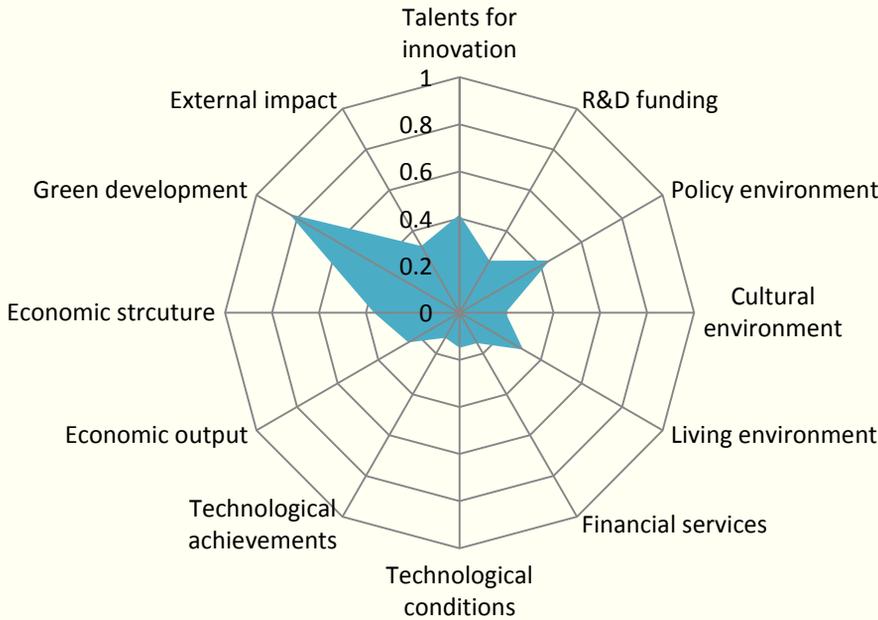
Overall index: 0.362

- Hohhot, or "the Green City" in Mongolian language, achieved 0.836 in **green development**
- The city made progress in modernizing its industrial structure and diversifying its economy. It was ranked 11th in **economic structure** (0.402)
- However, **R&D funding** (0.215, ranking 264th) only shared a relatively small proportion in its government expenditure



No. 17 Chengdu

Overall index: 0.358

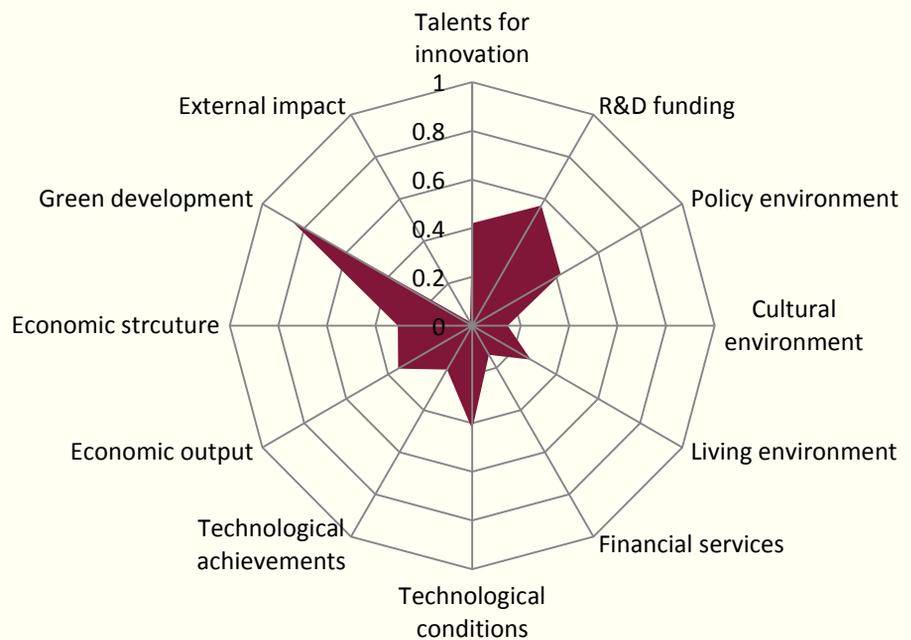


- Chengdu made remarkable **technological achievements** (0.123) in 2017 and was ranked the 14th place. The municipal government announced that there were increments in the number of high-tech enterprises, industry outputs and patent applications in the year
- Although Chengdu reportedly spent CNY 3.2 billion in technology-related R&D in 2017, it only ranked 229th in **R&D funding** (0.255)

No. 18 Zhongshan

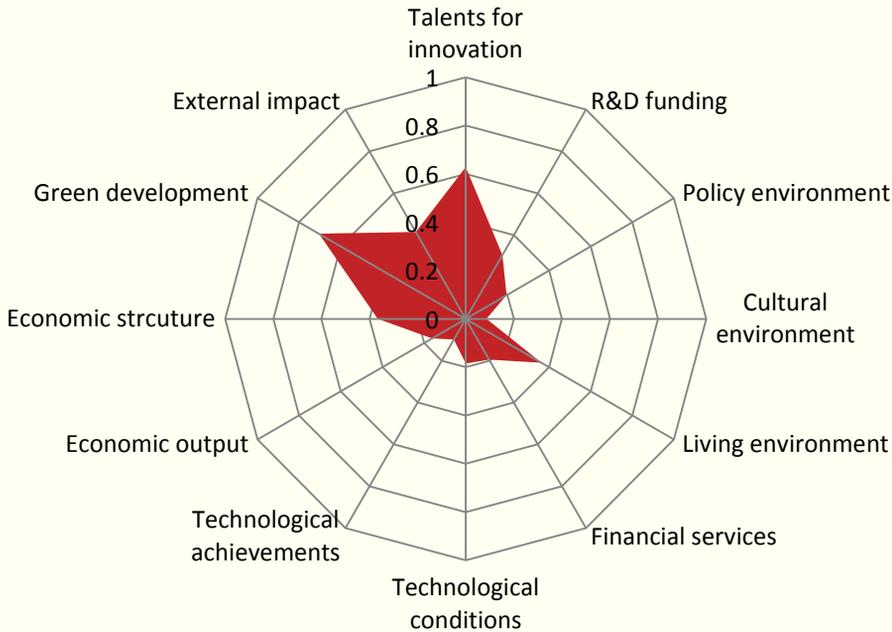
Overall index: 0.356

- Zhongshan won the top position in **R&D funding** with a score of 0.570
- It made good progress in **technological achievements** (0.208, ranking 7th) in 2017. For example, a technology achievement assessment company was set up in the city to serve high-tech companies in Guangdong province
- However, there was room for improvement in **cultural environment** (0.146, ranking 166th) and **financial services** (0.138, ranking 146th)



No. 19 Urumqi

Overall index: 0.351

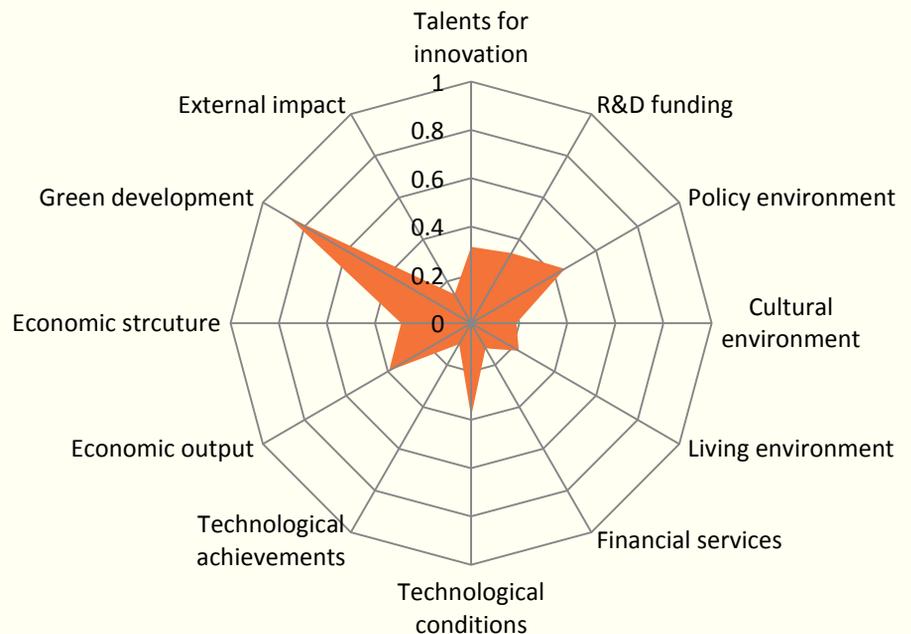


- Urumqi was ranked 5th in **external impact** (0.415). With its strategic role in the one-belt-one-road initiative, its development in innovation was expected to exert more influence on neighboring cities
- However, its **policy environment** (0.196, ranking 283rd) and **cultural environment** (0.086, ranking 254th) were not considered very favorable for innovative businesses

No. 20 Qingdao

Overall index: 0.347

- With favorable **technological conditions** (0.386, ranking 8th) and other advantages, Qingdao brought in Amazon and Hewlett-Packard to set up an innovation center and 3D printing center respectively in 2017
- However, the government may need to step up in **financial services** (0.120, ranking 189th) and **R&D funding** (0.335, ranking 125th)



Data source: China Cities Technology and Innovation Development Report 2017

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