

October 2021

## Mastercard Caixin BBD China New Economy Index

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### Overview

In October 2021, the Mastercard Caixin BBD New Economy Index (NEI) reading came in at 28.9, indicating that the New Economy accounted for 28.9% of overall economic input activities that month, up 0.7 ppts from September 2021 (Chart 1). After the outbreak of COVID-19 in early 2020, NEI kept going up for several consecutive months. However, with the post pandemic economic recovery triggered in the second quarter last year, the old economy showed stronger growth, suppressing the new economy.

Chart 1: China Monthly New Economy Index

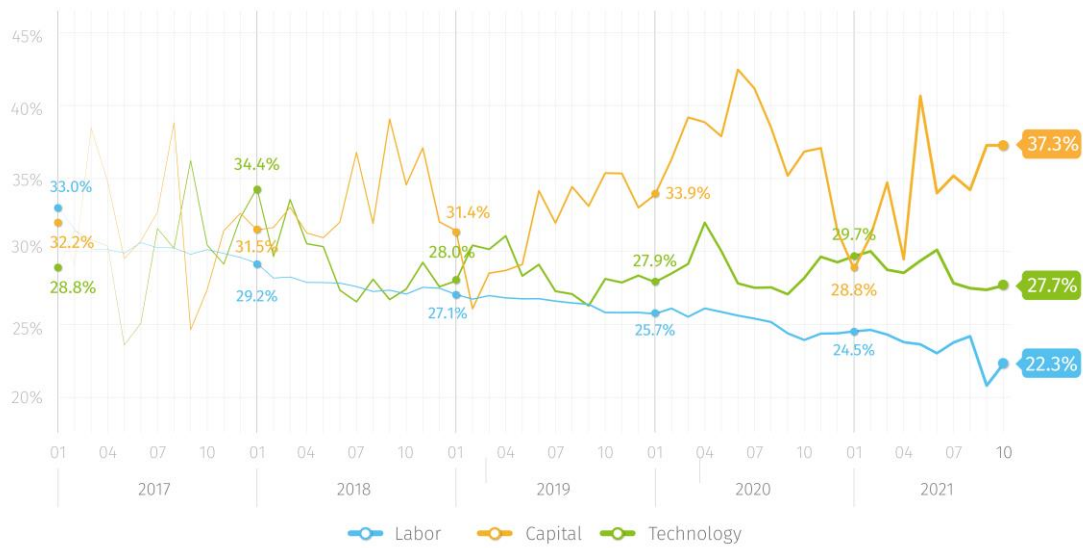


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The NEI includes labor, capital and technology inputs that account for 40%, 35% and 25% of the total weights of the index, respectively. The increasing NEI was attributed to the increase in labor inputs. Labor input index increased to 22.3 this month, with 1.5 MoM increase. Capital input remained 37.3 this month. Technology input index came in at 27.7 this month, with 0.3 MoM increase (Chart 2). Taking the weights into account, percentage changes in labor, capital and technology inputs were 0.6, 0.0, and 0.1 ppts, respectively. The net NEI change was 0.7 ppts in total.

Chart 2: NEI Primary Input Index



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The labor input index is composites of two sub-indicators: the ratio of income of employees and the ratio of post in new economy industries. This month, the ratio of salary and ratio of employment of enterprises in new economy industries increased significantly, which accounted for most increase in NEI in October.

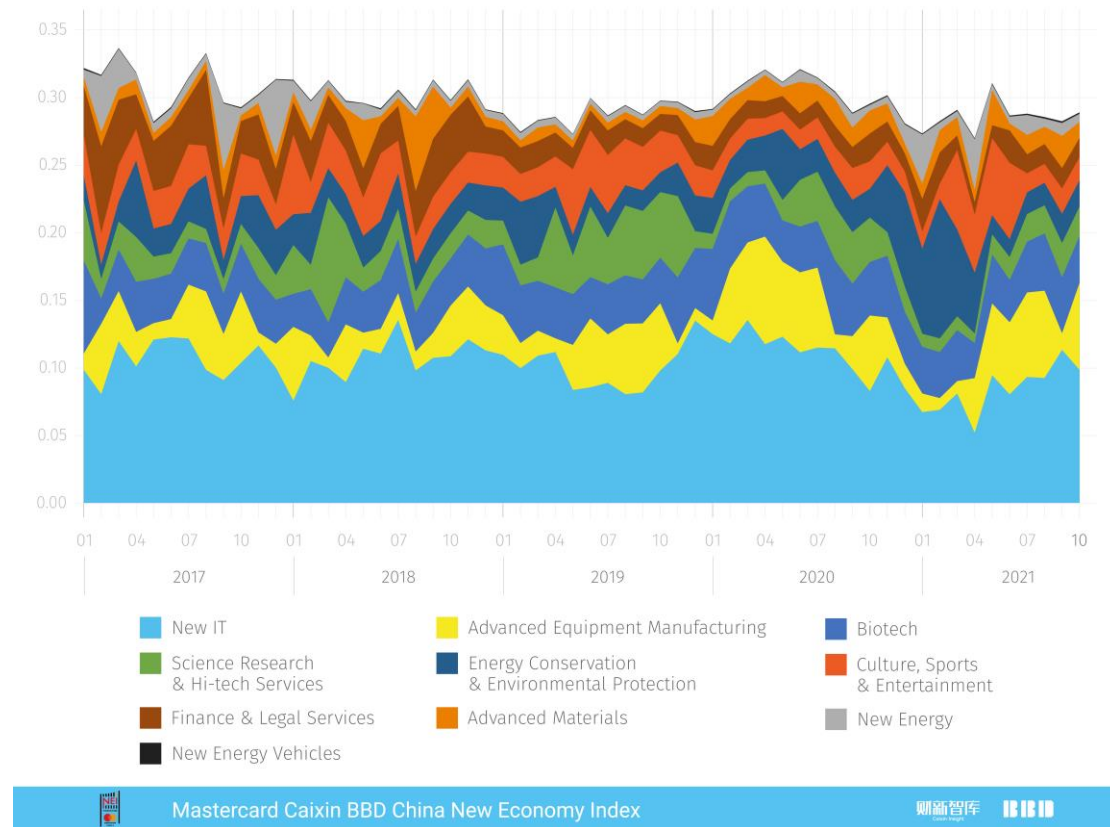
## New Economy Sector

New economy is defined as following: 1) human capital intensive, technology intensive and capital light, 2) sustainable rapid growth, and 3) in line with the strategic new industries defined by the government. New economy covers 10 categories (Energy Conservation & Environmental Protection, New IT, Biotech, Advanced Equipment Manufacturing, New Energy, Advanced Materials, New Energy Vehicles, Science Research and Hi-tech Services, Finance & Legal Services, Culture, Sports & Entertainment) and 145 sub-industries. Please refer to our previous reports (March 2016 and March 2017) for the list of NEI sectors.

As for sectors, the New IT industry contributed 9.8 ppts to New Economy Index, slightly lower than that in September, the share of Advanced Materials decreased as well (Chart 3). However, the share of Advanced Equipment Manufacturing increased significantly, up 5.2 ppts from

September. Detailed data indicated that, the increase in Advanced Equipment Manufacturing ratio was due to higher invitation to tender of enterprises.

Chart 3: New Economy Sector Contribution Breakdown



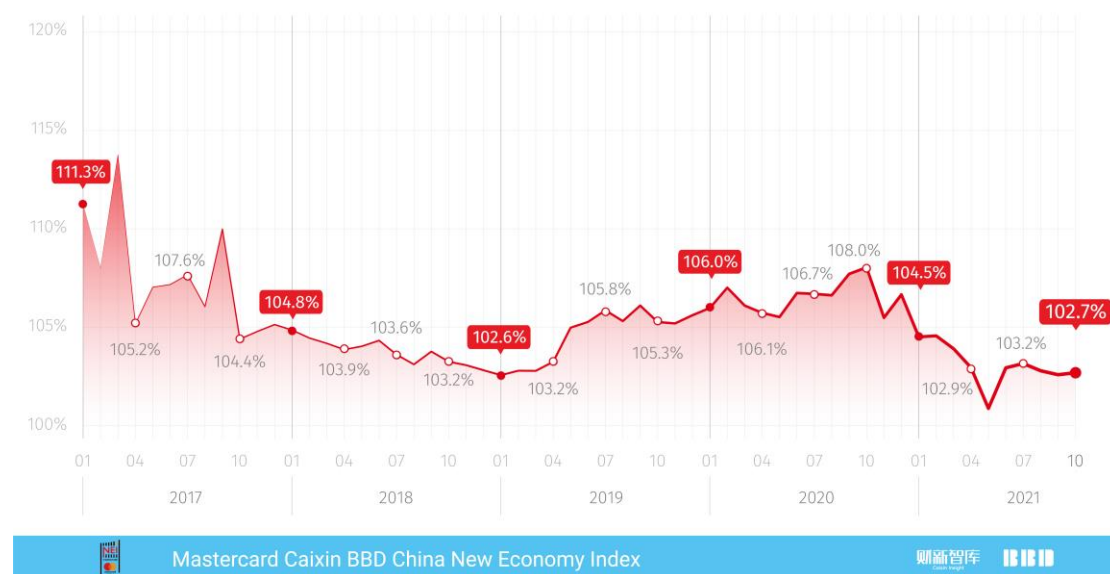
## New Economy Employment

In October 2021, the average monthly entry-level salary of the New Economy was RMB 13,100, increasing from last month's level of RMB 12,905 (Chart 4). And the entry-level salary premium of the New Economy which is the ratio of average entry salary level of New Economy to that of the whole economy, increased to 2.7%, compared to 2.6% in September 2021 (Chart 5). The wages are compiled from online websites of career platforms and recruitment services including 51job and Zhaopin, as well as other sites that list job openings.

Chart 4: New Economy Avg. Monthly Entry-Level Salaries



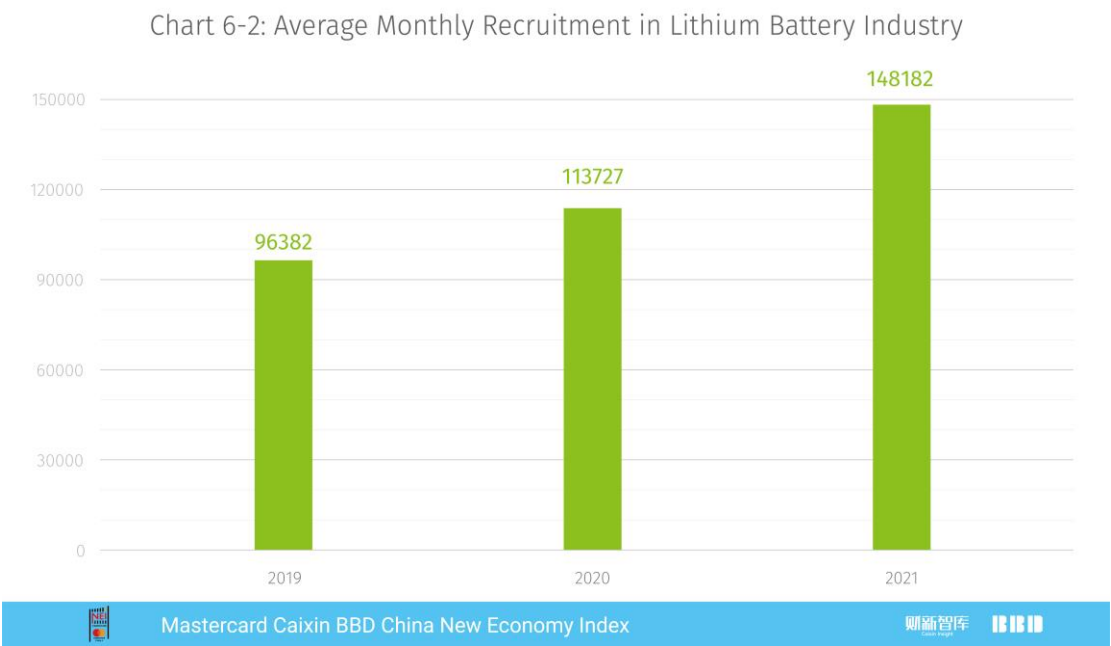
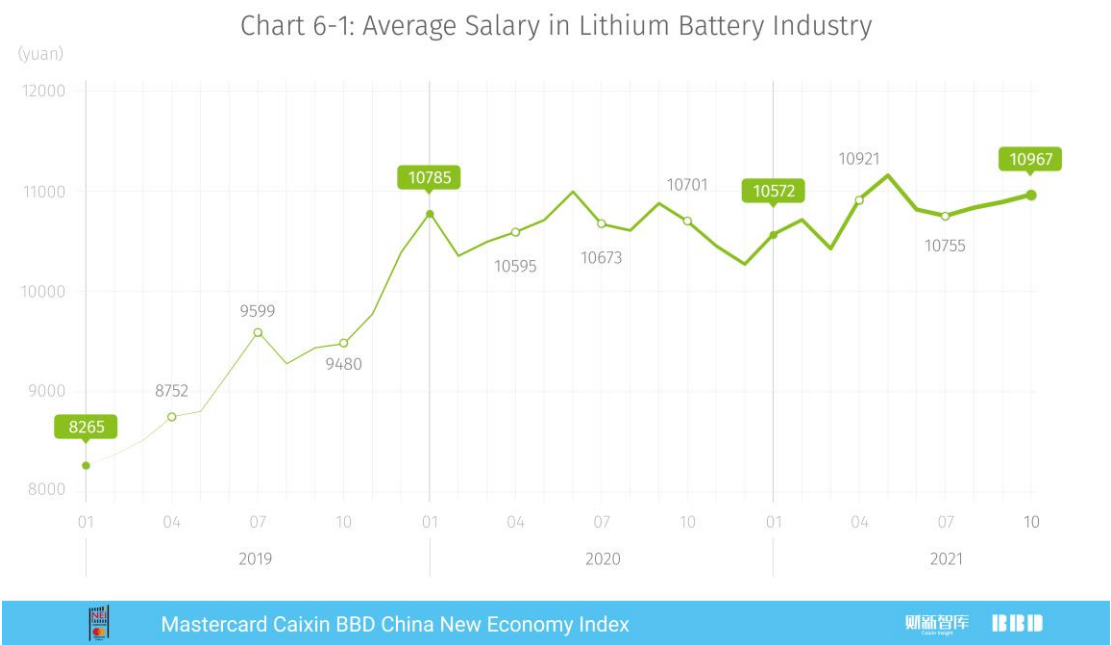
Chart 5: New Economy Entry-Level Salary Premium over Economy-wide Entry Level Salaries



## Economic Trend Based on Employment Data

At the time when the State Council released an action plan to peak carbon dioxide emissions before 2030, we explored the industries related to carbon peak and neutrality goals, such as hydrogen energy, energy conservation, energy storage, and power battery. Taking the lithium battery industry as an example, the average salary in the lithium battery industry showed an upward trend since 2019, rising from 8,265 yuan in January 2019 to 10,967 yuan in October 2021,

with more than 30% increase in contrast to 24% increase in economy wide average (Chart 6-1). In 2021, the average monthly recruitment in lithium battery industry reached 148,000, increased by 53.7% compared to 2019 (Chart 6-2).



In recent years, remarkable independent innovations were made in the lithium battery industry (Chart 7-1, Chart 7-2). In 2021, the average monthly inventors in lithium battery industry reached 13,077, nearly double the 2019 number. In the same period, 96.1% of all patents applications (design patents, invention patents and utility model patents) were non-design ones which

increased 4.1% compared to 2019. There were 3,180 non-design patents applications on average each month in 2021, 10% higher than 2019.

Chart 7-1: Average Monthly Inventors in Lithium Battery Industry

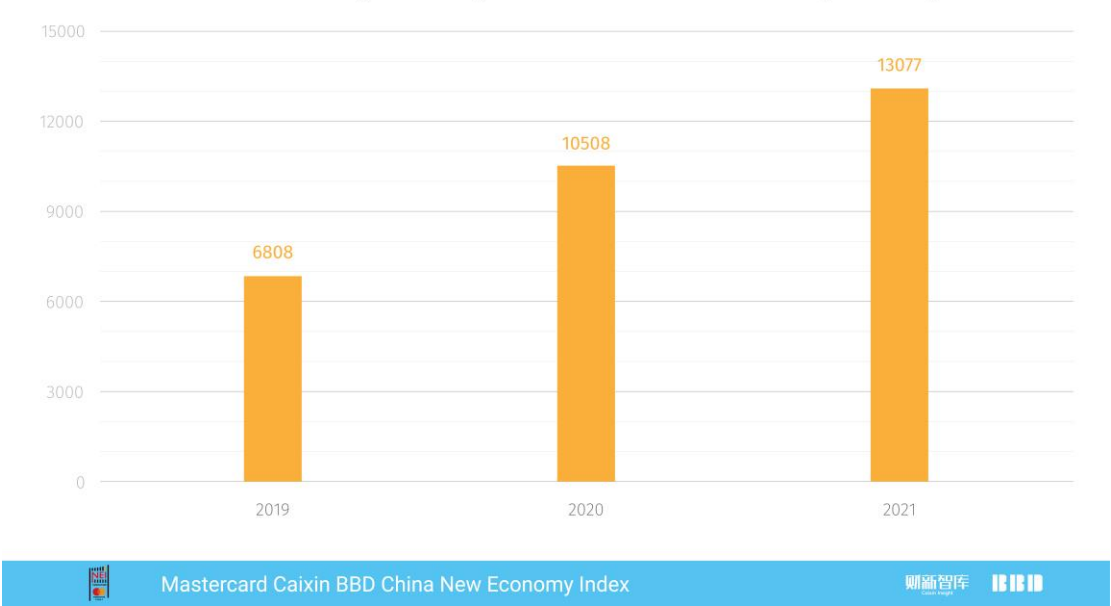
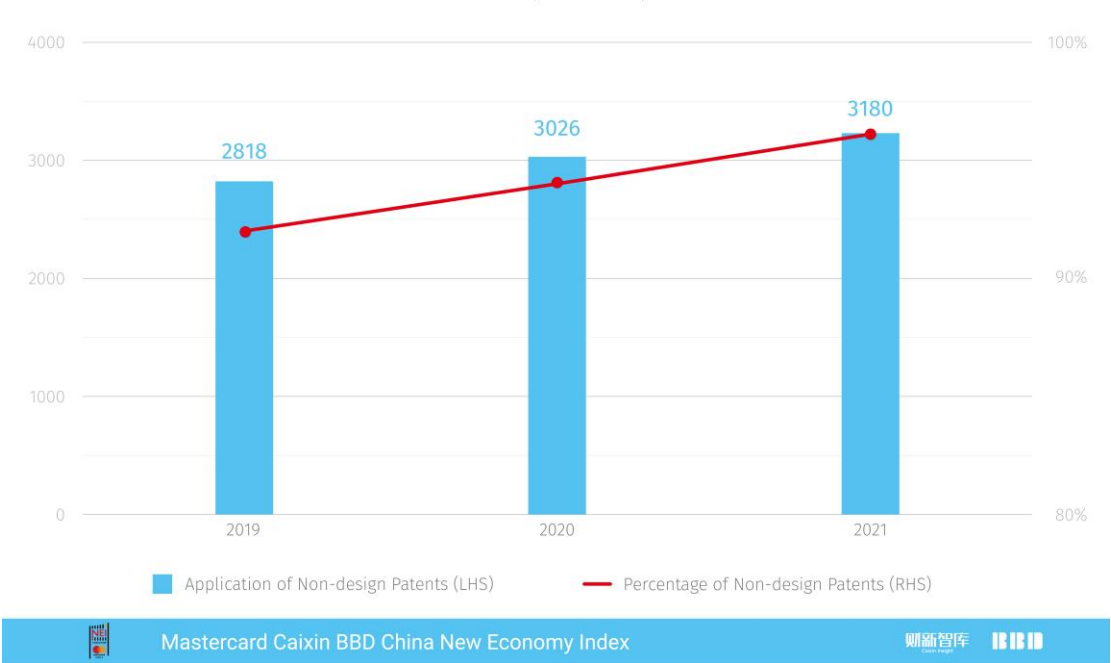


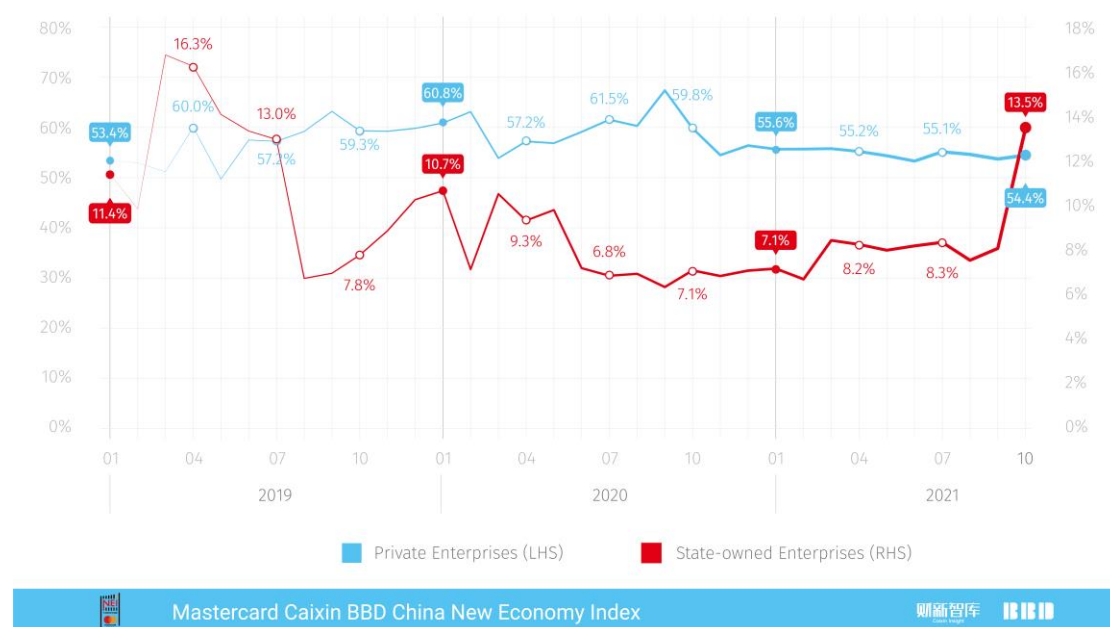
Chart 7-2: Average Monthly Application and Proportion of Non-design Patent in Lithium Battery Industry



Employment of state-owned and private enterprises was informative to our economy in past years. The employment proportion of private enterprises remained stable at around 55% since 2021, while the employment proportion of state-owned ones increased sharply to 13.5% in

October 2021 (Chart 8). In the past five years, the rises in the proportion of recruitment by state-owned enterprises usually lead to economic downturns, which was an indicator of higher downward pressure on China's economy in 2021Q4.

Chart 8: The Employment Proportion of State-owned and Private Enterprises



## City Rankings of the New Economy

Overall New Economy Rankings are based on a weighted average of the percentile ranks of indicators for the city in the past six months. The top twenty cities were shown in Chart 9. In October, the top five cities were Beijing, Shanghai, Hangzhou, Guangzhou and Shenzhen.



Chart 9: China's Top 20 Cities Ranked by New Economy Sector Output

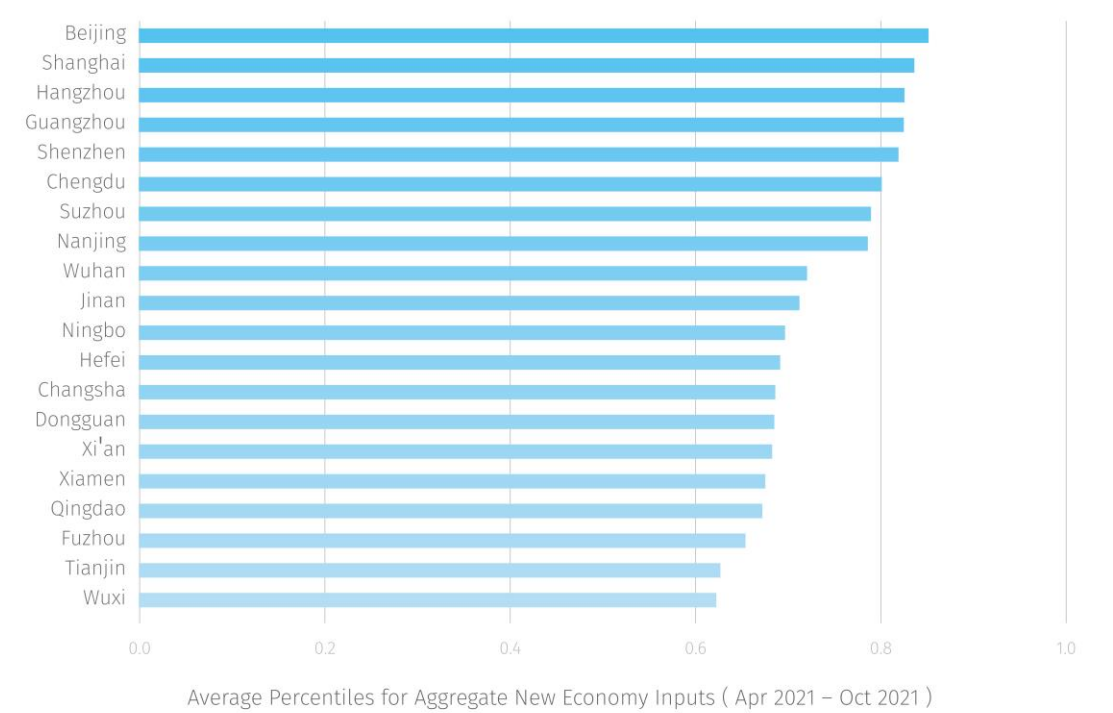
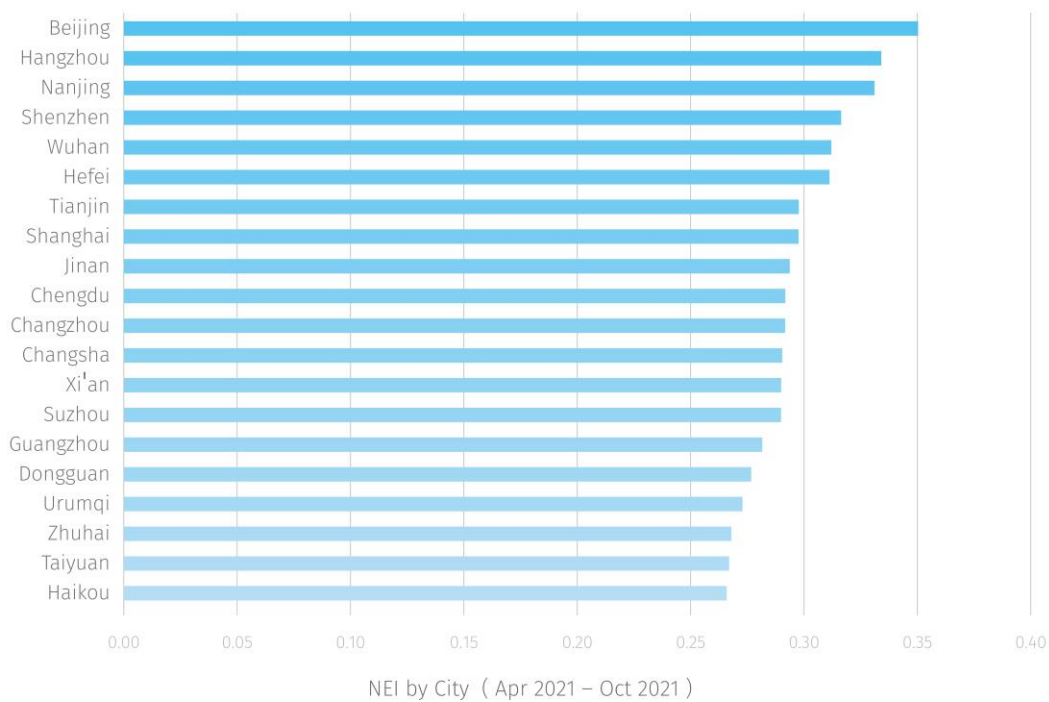


Chart 10 showed the average NEI city rankings between April 2021 and October 2021. The top five cities were Beijing, Hangzhou, Nanjing, Shenzhen and Wuhan.

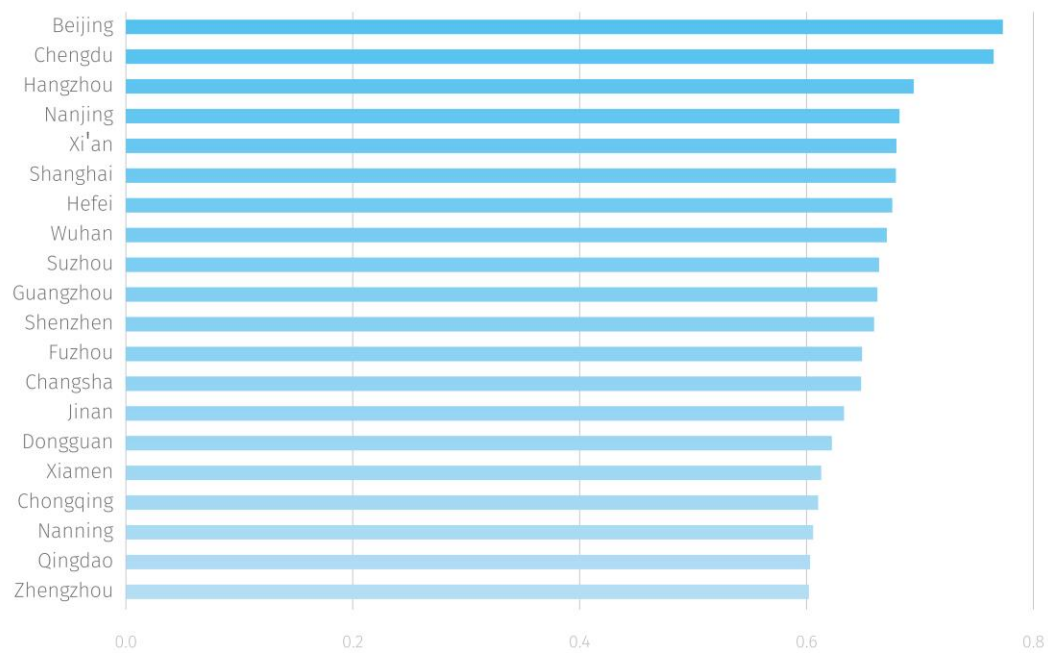


Chart 10: China's Top 20 Cities Ranked by Average NEI



In addition, we showed the city rankings adjusted by living cost by taking housing price, minimum wage and disposable income per capita into account (Chart 11). After the adjustment, the top five cities were Beijing, Chengdu, Hangzhou, Nanjing and Xi'an, following by Shanghai and Hefei.

Chart 11: China's Top 20 Cities Ranked by New Economy Sector Output Adjusted by Living Cost



Average Percentiles for Aggregate New Economy Inputs Adjusted by Living Cost ( Apr 2021 – Oct 2021 )

Data Visualization Design by Wu Yi



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The Mastercard Caixin BBD China New Economy Index is the fruit of a research partnership between Caixin Insight Group and BBD, in collaboration with the National Development School, Peking University. The subject of a year of research, the NEI was first publically released on March 2, 2016 and will be issued the 2nd of every month at 10:00am China Standard Time.

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