

December 2020

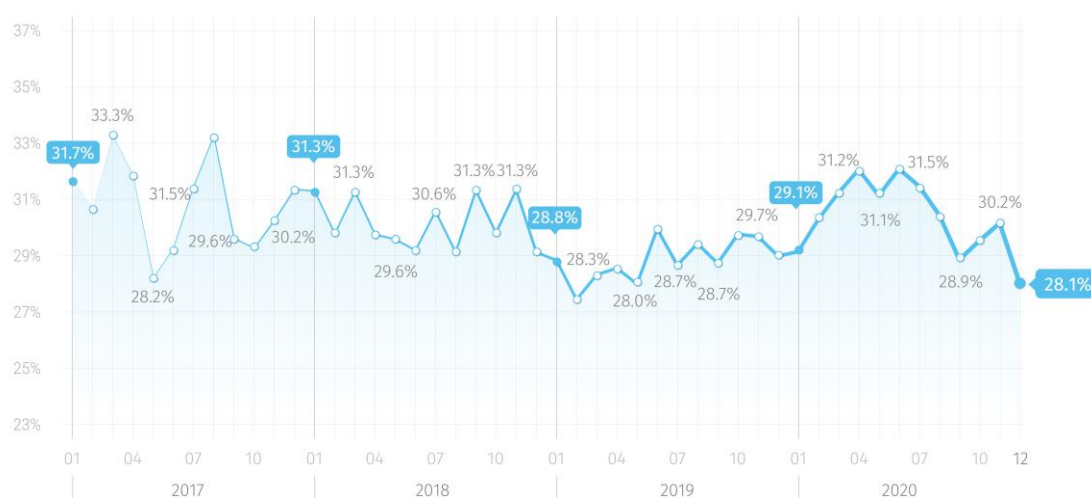
## Mastercard Caixin BBD China New Economy Index

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### Overview

In December 2020, the Mastercard Caixin BBD New Economy Index (NEI) reading came in at 28.1, indicating that the New Economy accounted for 28.1% of overall economic input activities that month, down 2.1 ppts from November (Chart 1). The declining NEI was attributed to the decrease in capital inputs. 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. Please refer to our previous reports (March 2016 and March 2017) for the list of NEI sectors.

Chart 1: China Monthly New Economy Index



### Primary Inputs

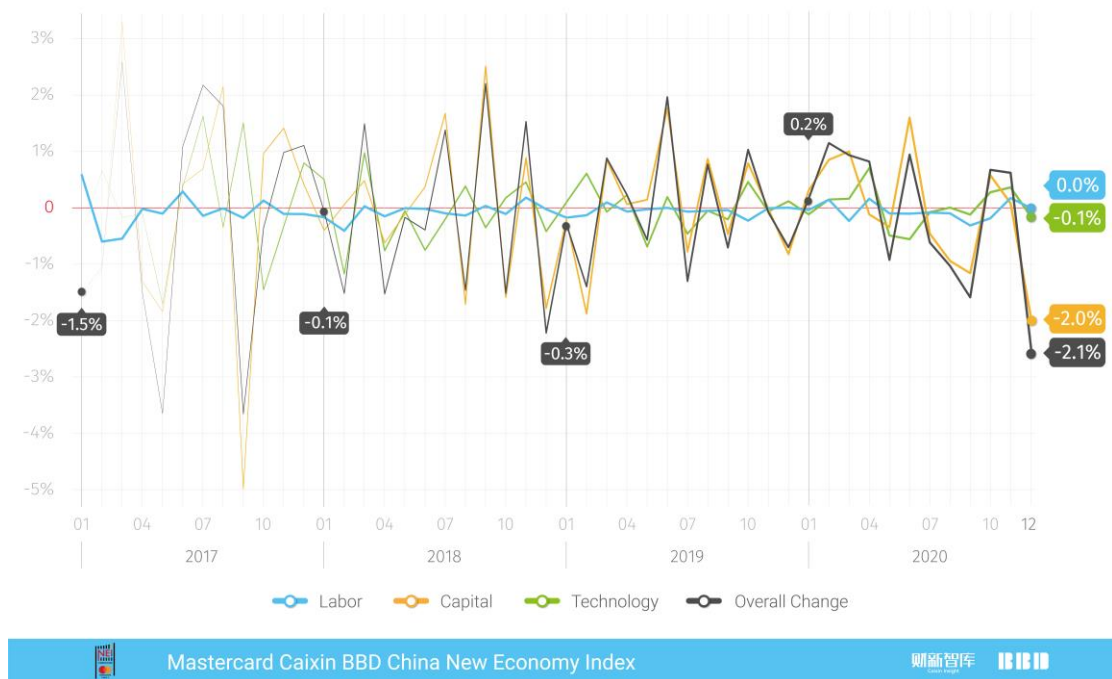
The NEI includes labor, capital and technology inputs that account for 40%, 35% and 25% of the total weights of the index, respectively. The declining NEI was attributed to the decrease in capital inputs (Chart 2). Capital input fluctuated widely in recent year, decreasing to 31.4 this month, with 5.7 MoM decrease. Technology input index was on a downtrend since April 2020, coming in at 29.3 this month, with 0.4 MoM decrease. Labor input index declined moderately in recent two years, remaining to 24.4 this month.

Chart 2: NEI Primary Input Index



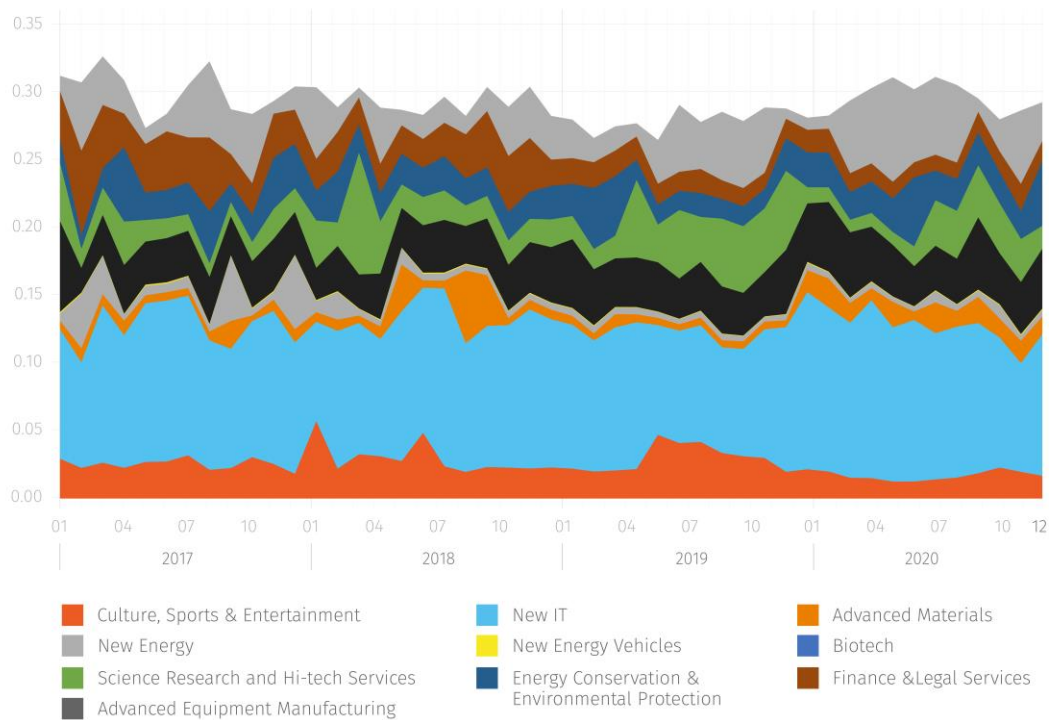
Taking the weights into account, percentage changes in labor, capital and technology inputs were 0.0, -2.0, and -0.1 ppts, respectively. The net NEI change was -2.1 ppts in total (Chart 3).

Chart 3: Primary Input Contribution to NEI



As for sectors, the New IT industry formed the largest proportion of the New Economy Index, contributing 8.5 ppts to NEI. New Energy was the industry with fastest growth in December, contributing 1.4 ppts and ranking the seventh. (Chart 4).

Chart 4: New Economy Sector Contribution Breakdown



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## New Economy Employment

In December 2020, the average monthly entry-level salary of the New Economy was RMB 12,524, increasing from last month's level of RMB 12,431 (Chart 5), 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 6.6%, compared to 5.5% in November (Chart 6). 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 5: New Economy Avg. Monthly Entry-Level Salaries

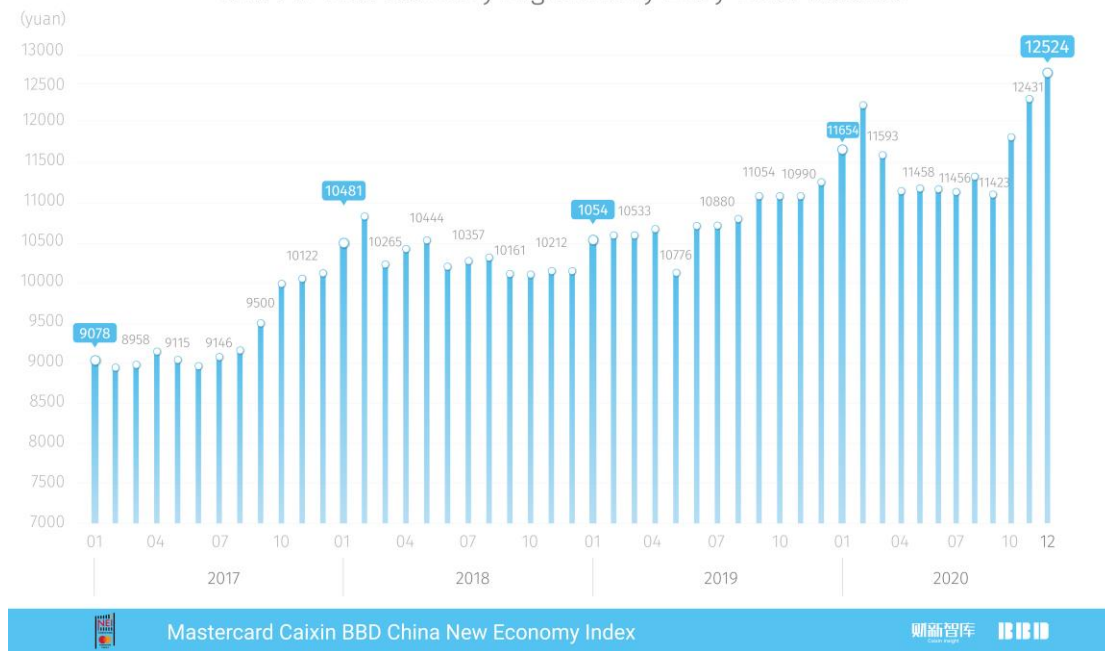
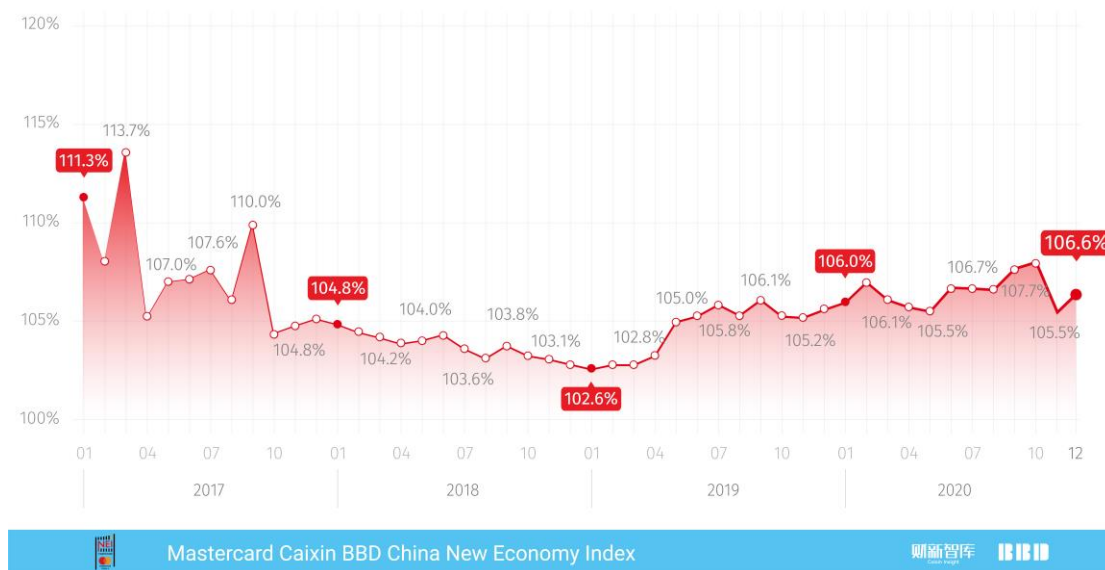


Chart 6: New Economy Entry-Level Salary Premium over Economy-wide Entry Level Salaries

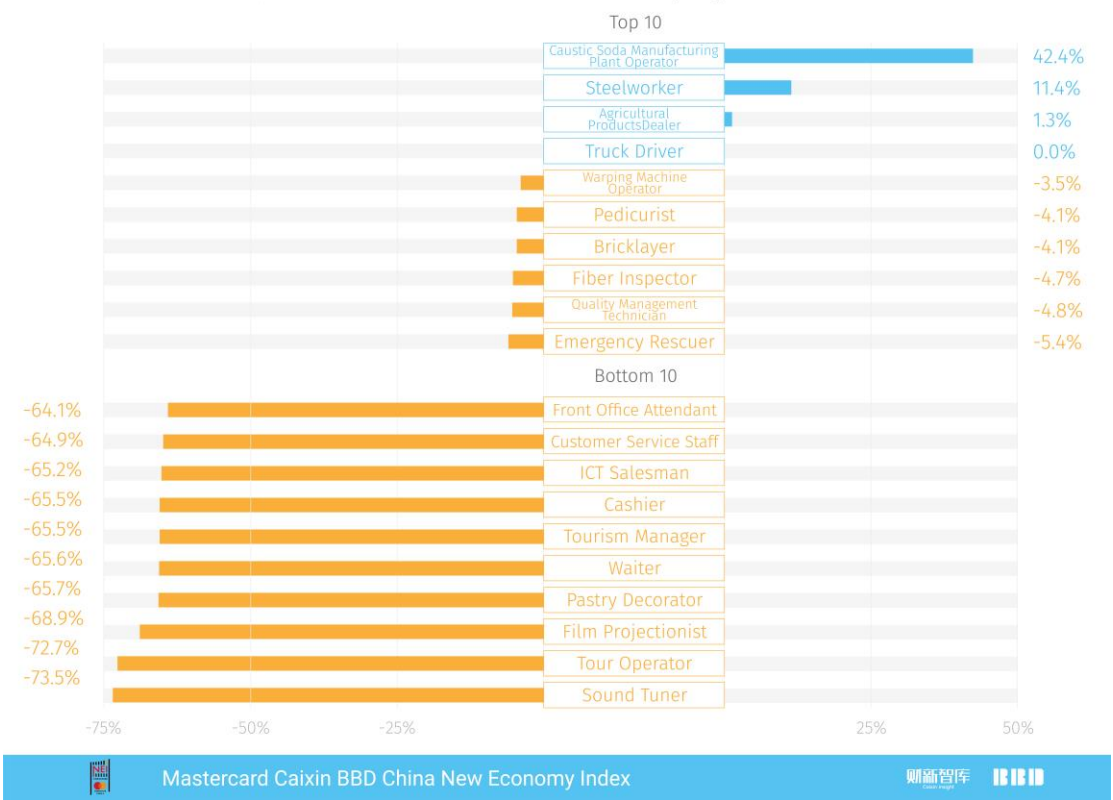


## Economic Trend Based on Employment Data

NEI experienced a downward trend since July in sharp contrast with economic recovery in past three quarters. This showed a similar pattern as that at the end of 2018, and the growth rate of China economy in the first half of 2019 slowed down significantly. Accordingly, the economy might face risk of lower growth early next year.

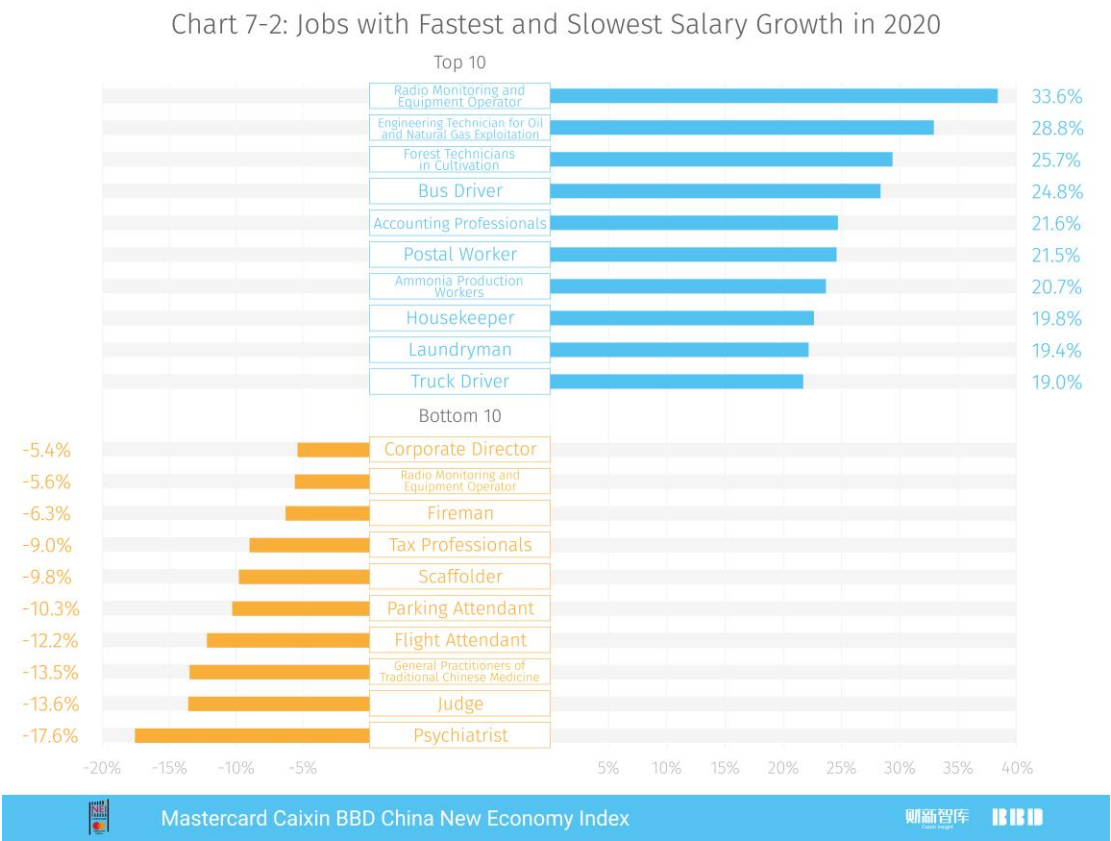
We analyzed the changes of recruitment and salary for featured jobs. In line with Chinese Standard Classification of Occupations released by Ministry of Human Resources and Social Security, we listed the jobs with fastest and slowest employment growth in 2020 (Chart 7-1). Due to the epidemic, we observed less employment in most positions compared to that in 2019, but there were still some fast growing positions, such as caustic soda manufacturing plant operators and steelworkers, which were related to production and supply of raw materials and infrastructure construction. The positions with the biggest drop in employment were sound tuners, waiters, cashiers, film projectionists, and tourism jobs, which declined by about 70%.

Chart 7-1: Jobs with Fastest and Slowest Employment Growth in 2020



In terms of wages (Chart 7-2), the salary of employees in infrastructure construction and raw material manufacturing rose rapidly, and that of truck drivers and bus drivers increased by

about 20%. However, corporate directors, flight attendants, general practitioners and psychiatrists were paid much lower. It was worth noting that the salary of assemblers and testers of semiconductor discrete device and integrated circuit dropped significantly as well due to the current situation of chip production in China.



The growth rates of salary by industry in 2019 and 2020 were shown in Chart 8. Data implied that the growth rates by industry in 2020 and those in 2019 were positively correlated. Among them, salary of banking, manufacture of textile, manufacture of raw chemical materials and chemical products, and printing increased significantly in two consecutive years. However, the salary of manufacture of paper, manufacture of beverage, manufacture of foods, telecommunication and other information transmission service grew slowly and some of them even experienced negative growth. In general, most industries were below the 45° line, indicating that the growth

rates of salary by industry in 2020 were lower than that in 2019.

Chart 8-1: Growth Rate of Salary by Industry (2019-2020)





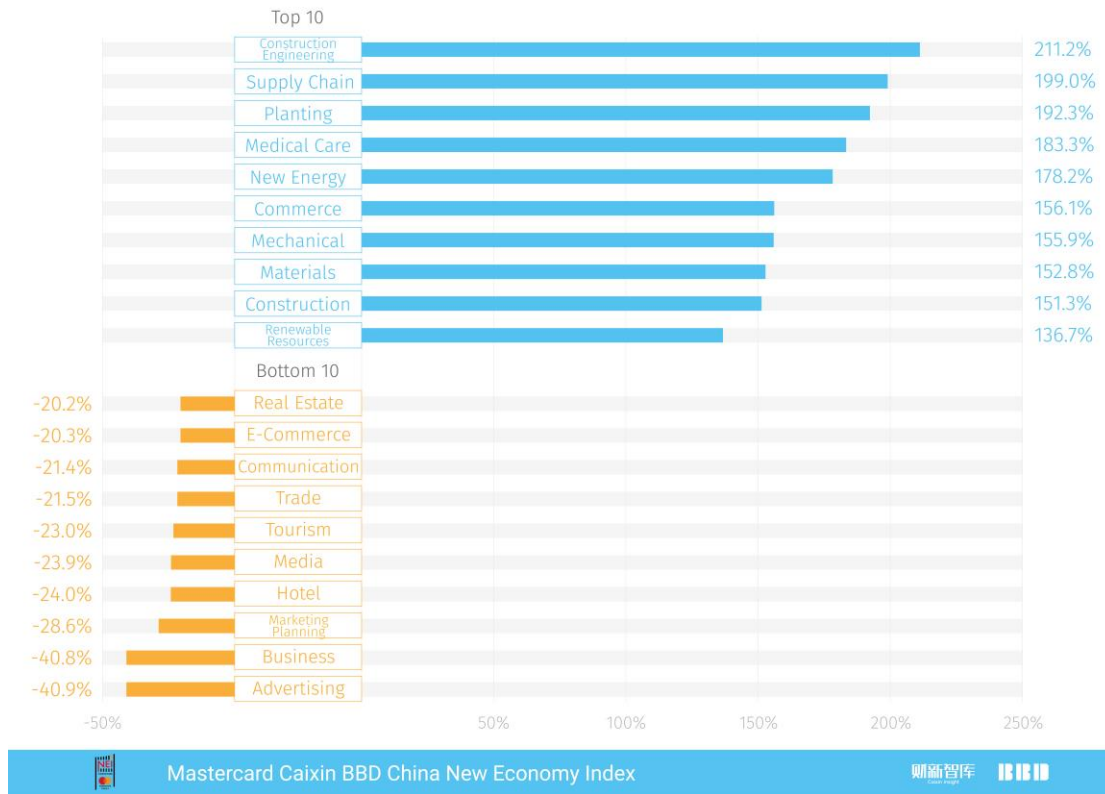
Chart 8-2: Industry Code

1 Processing of Food from Agricultural Products	25 Construction of Buildings and Civil Engineering
2 Manufacture of Foods	26 Building Installation
3 Manufacture of Beverage	27 Building Decoration
4 Manufacture of Textile	28 Other Construction
5 Manufacture of Textile Wearing Apparel, Footwear and Caps	29 Road Transport
6 Manufacture of Leather, Fur, Feather and Its Products	30 Loading, Unloading and Other Transportation Service
7 Manufacture of Furniture	31 Telecommunication and Other Information Transmission Service
8 Manufacture of Paper and Paper Products	32 Computer Service
9 Printing, Reproduction of Recording Media	33 Software
10 Manufacture of Articles for Culture, Education and Sport Activities	34 Wholesale Trade
11 Manufacture of Raw Chemical Materials and Chemical Products	35 Retail trade
12 Manufacture of Medicines	36 Catering Services
13 Manufacture of Rubber	37 Banking
14 Manufacture of Plastics	38 Insurance
15 Manufacture of Non-metallic Mineral Products	39 Real Estate
16 Smelting and Pressing of Non-ferrous Metals	40 Business Services
17 Manufacture of Metal Products	41 Research and Experimental Development
18 Manufacture of General Purpose Machinery	42 Professional Technical Services
19 Manufacture of Special Purpose Machinery	43 Technology Communication and Popularization Services
20 Manufacture of Transport Equipments	44 Other Services
21 Manufacture of Electrical Machinery and Equipment	45 Education
22 Manufacture of Communication Equipment, Computers and Other Electronic Equipment	46 Health
23 Manufacture of Measuring Instruments, Culture and Office Machinery	
24 Manufacture of Crafts and Others	

Chart 9 showed the keywords for enterprise establishment with significant changes. The keywords with the fastest growth were construction engineering, supply chain, planting and medical care. New energy, mechanical, materials and renewable resources also experienced rapid growth. Nevertheless, keywords of industries weighed on by epidemic, including tourism and hotel, declined significantly. In addition, communication, advertising, media, marketing planning, and other keywords of business service dropped sharply as well.



Chart 9: Change in Keywords for Enterprise Establishment



## 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 10. In December, the top five cities were Beijing, Shanghai, Guangzhou, Hangzhou and Shenzhen.

Chart 10: China's Top 20 Cities Ranked by New Economy Sector Output

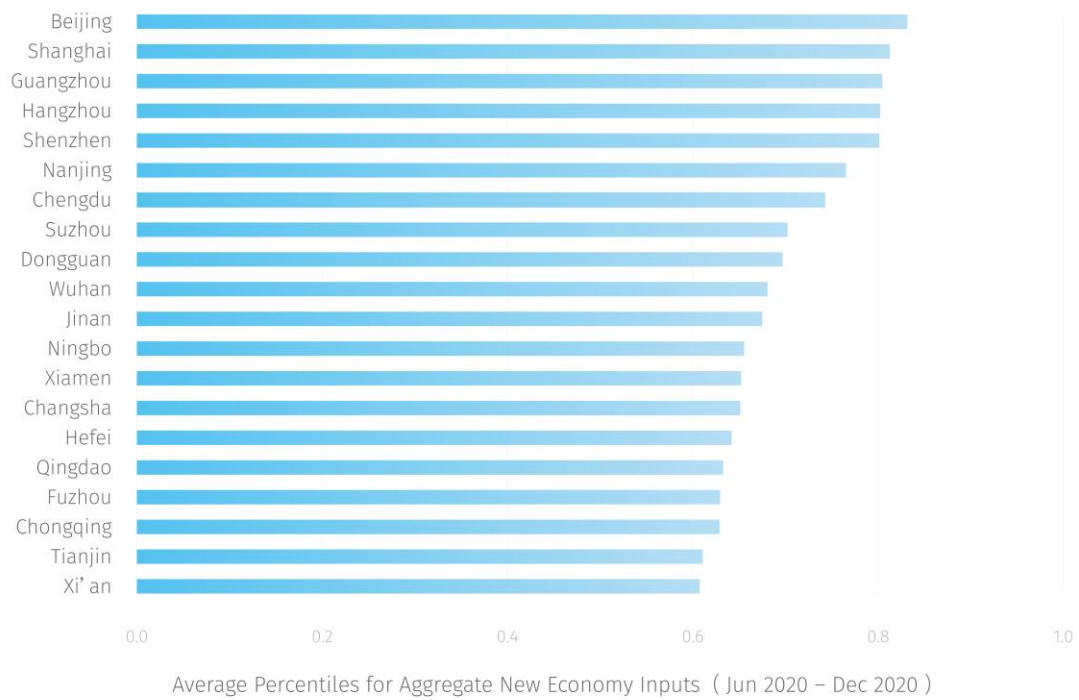
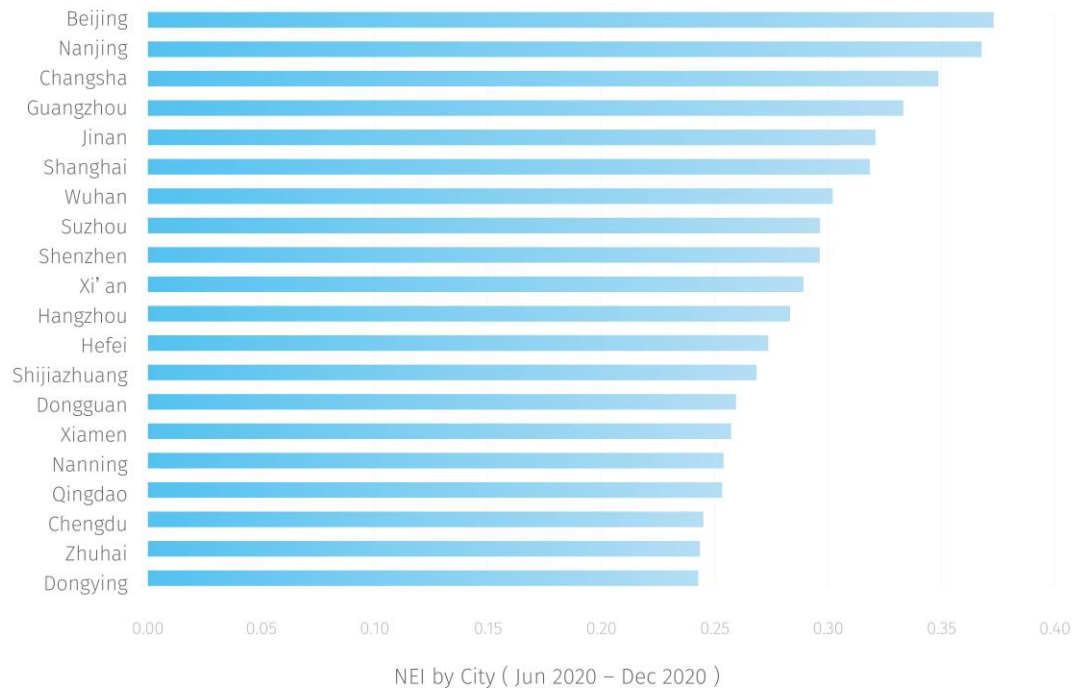


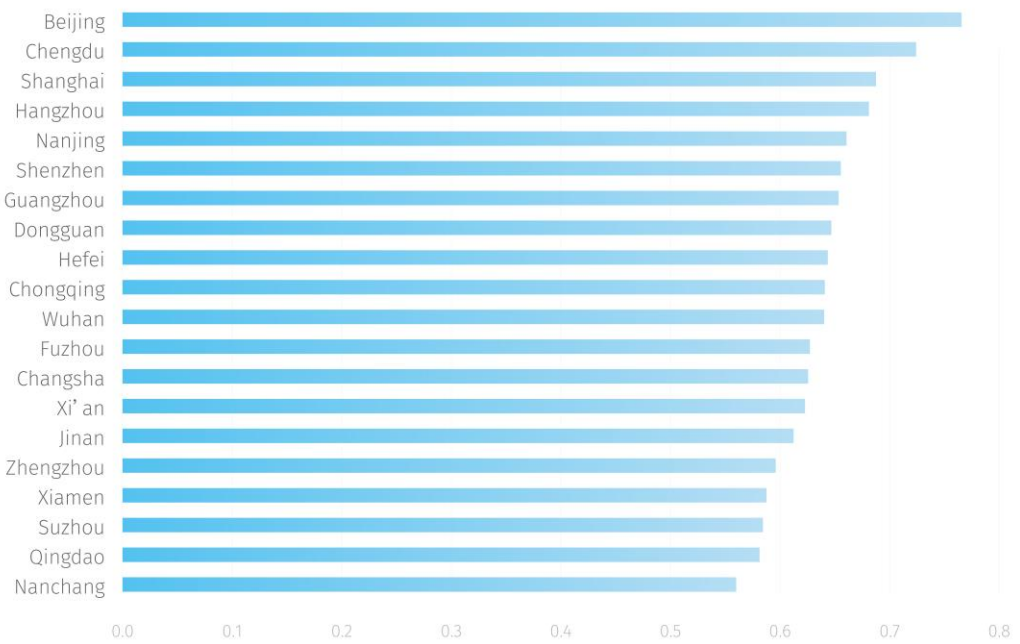
Chart 11 showed the average NEI city rankings between June 2020 and December 2020. The top five cities were Beijing, Nanjing, Changsha, Guangzhou and Jinan.

Chart 11: 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 12). After the adjustment, the top five cities were Beijing, Chengdu, Shanghai, Hangzhou and Nanjing, following by Shenzhen and Guangzhou.

Chart 12: 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 ( Jun 2020 – Dec 2020 )

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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