In an effort to increase transparency on the structural changes underway in China's economy, the MasterCard CaixinBBD China New Economy Index (NEI) was established. The subject of a year of research, the NEI was first publicly released on March 2, 2016 and will be issued the 2nd of every month at 10:00am China Standard Time.

Overview

In December 2016, the MasterCard Caixin-BBD New Economy Index (NEI) reading came in at 32.5, indicating that the New Economy inputs accounted for 32.5% of overall economic input activities that month. This reading recorded a 210 basis point increase from November, reachinga new high since the release of the NEI (Chart 1).


Chart 1: MasterCard Caixin BBD China New Economy Index
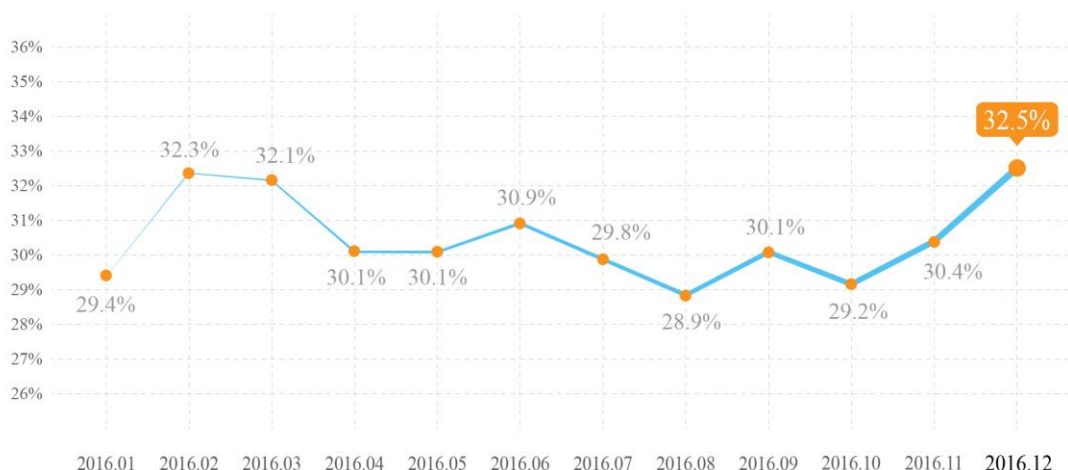
Primary Inputs

The NEI includes labor, capital and technology inputs that account for 40%, 35% and 25% of the total weight of the index, respectively. Among the primary inputs, the increase in the December NEI reading came primarily from a rise in capital investment. In 2H16, capital investment has fluctuated greatly, with a substantial increase to 38.8 in December after a 31.9 reading in November, a high on the year (Chart 2). The labor input index fell to 26.0, down from 27.8 last month, continuing a declining trend since March and marks the lowest reading since the NEI has been

released. The technology input reading increased to 34.1.

Chart 2: NEI Primary Input Ratios
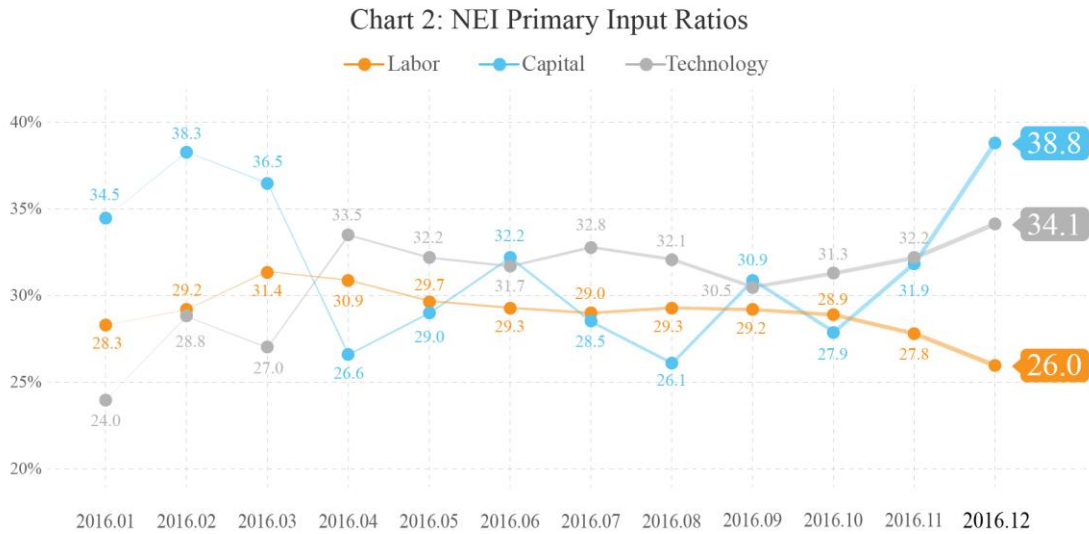
Percentage changes in labor, capital and technology inputs were -0.9, 2.4 and 0.5 percentage points, respectively. After accounting for the sum of their weightings, the net result for the NEI was a 2.1 pp increase in December from Novemberfigures (Chart 3).

Chart 3: Influence of Each Primary Input on NEI (Bps)
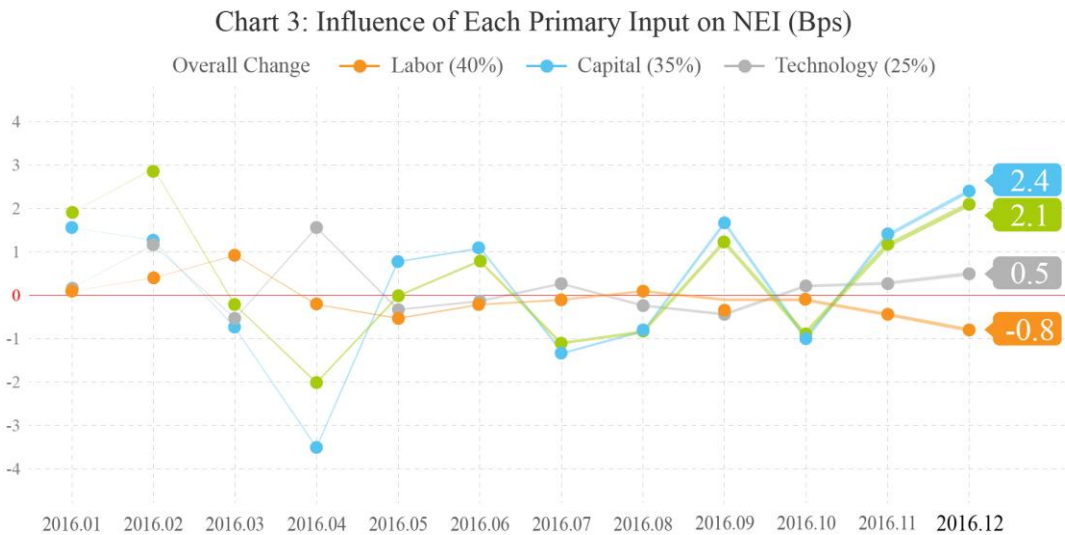
Looking at the sub-sectors, the New IT industry formed the largest proportion of the New Economy Index, contributing 13.5 pp to NEI, a slight drop from November figures. Advanced Equipment Manufacturing moved into second, contributing 5.0 pp. The third largest contributor was Biotech with 3.8 pp (Chart 4).

Chart 4: New Economy Sector Contribution Breakdown

Legend:
- New IT
- Advanced Materials
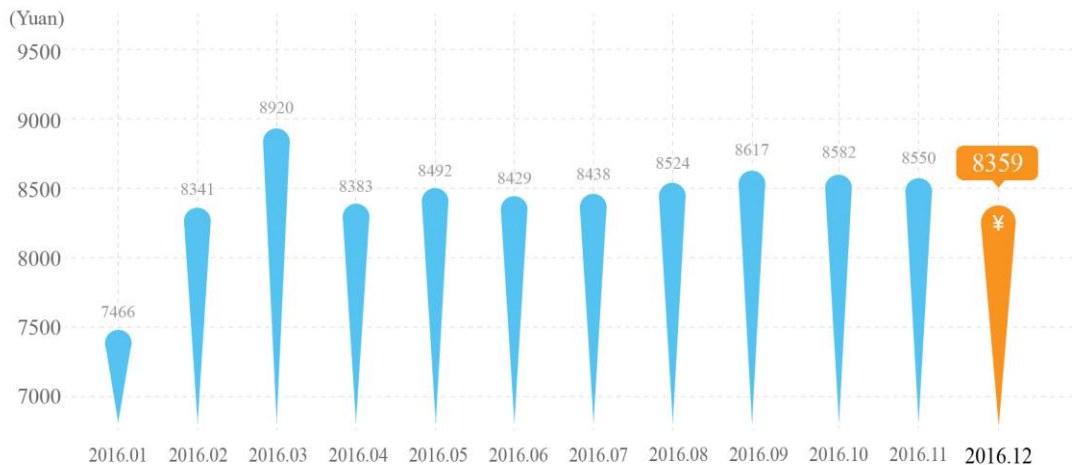- New Energy
- New Energy Vehicles
- Biotech
- Science Research and Hi-tech Services
- Energy Conservation & Environmental Protection
- Finance &Legal Services
- Advanced Equipment Manufacturing
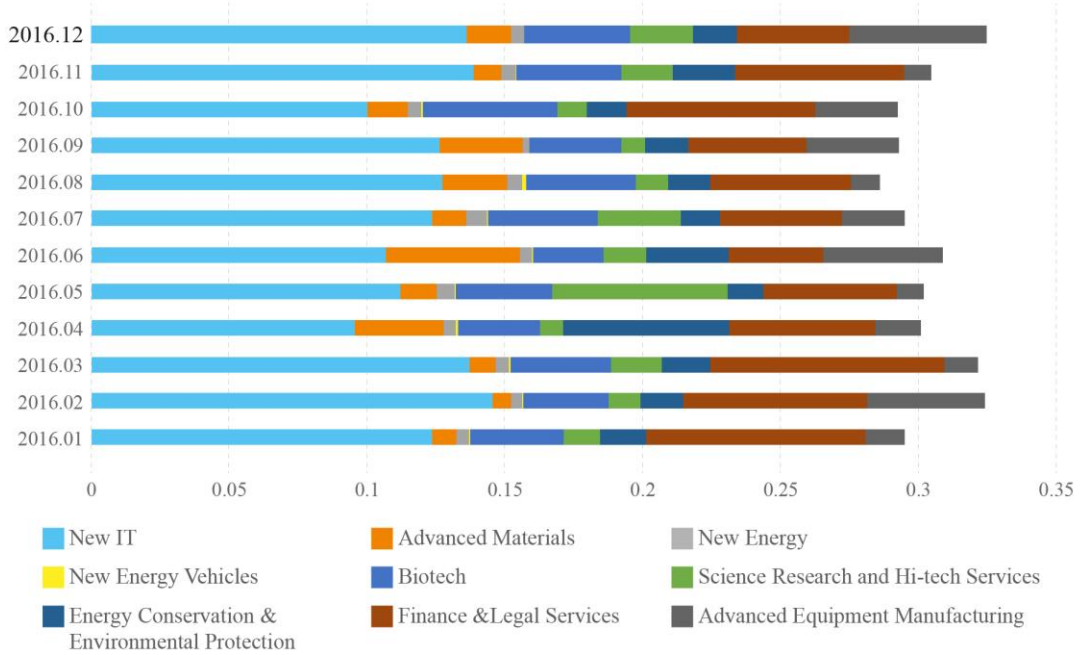
New Economy Employment

In December 2016, the average monthly entry level salary of the New Economy was RMB 8,360 per month, a drop from November figures (Chart 5). New Economy wage information is compiled from online websites of career platforms and recruitment services including 51job and Zhaopin, as well as other sites that list job demands.

Chart 5: New Economy Avg. Monthly Entry-Level Salaries

(Yuan)

2016.01	2016.02	2016.03	2016.04	2016.05	2016.06	2016.07	2016.08	2016.09	2016.10	2016.11	2016.12
7466	8341	8920	8383	8492	8429	8438	8524	8617	8582	8550	8359

Hiring in the New Economy sectors accounted for 24.9% of total hiring in December, continuing the decline from previous months. The compensation share of New Economy sectors declinedagain, from 29.1% to 27.0%. The entry level salary premium of the New Economy was 8.2% as compared to economy-wide counterparts (Chart 6).
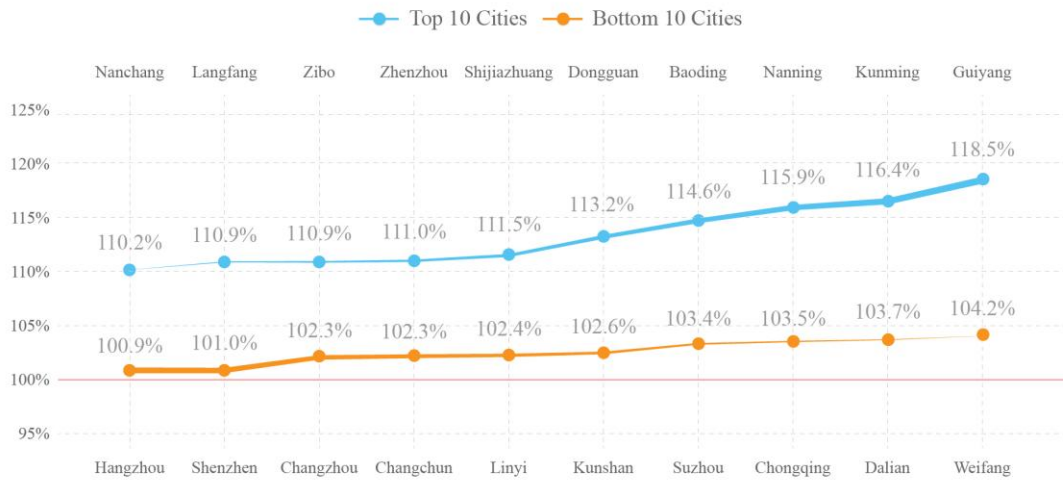
Chart 6: New Economy Entry Level Salary Premium Over Economy-wide Entry Level Salaries
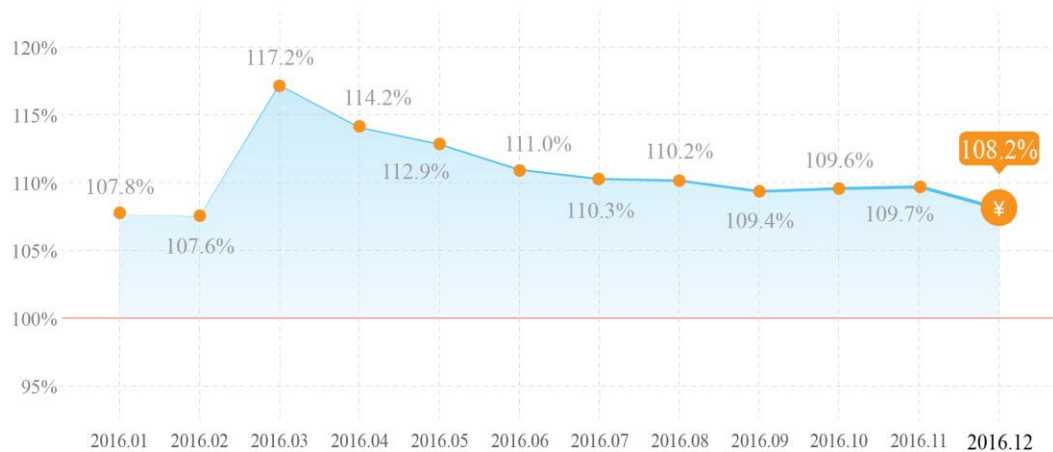
Labor Demand

From September onwards, we have used new data sources to examine several leading indicators in labor demand.This month, we have provided a series of summaries regarding labor demand in 2016. Chart 7 indicates the average annual growth rate for wages of new recruits in medium to large sized cities. We applied 4Q16 average figures divided by 4Q15 average to provide the growth rate. The conclusion is that central and western regions occupied 6 of the top 10 cities with the largest growth rates among salaries for new recruits. Meanwhile, the bottom 10 cities with the slowest salary increases are all concentrated in coastal and northeastern cities. This is consistent with a trend of industry and production moving to central and western regions in 2016.

Chart 7: 2016 New Worker Salary Growth By City

● Top 10 Cities ● Bottom 10 Cities

	Nanchang	Langfang	Zibo	Zhenzhou	Shijiazhuang	Dongguan	Baoding	Nanning	Kunming	Guiyang

Top 10 Cities: 110.2%, 110.9%, 110.9%, 111.0%, 111.5%, 113.2%, 114.6%, 115.9%, 116.4%, 118.5%

Bottom 10 Cities: 100.9%, 101.0%, 102.3%, 102.3%, 102.4%, 102.6%, 103.4%, 103.5%, 103.7%, 104.2%

Hangzhou	Shenzhen	Changzhou	Changchun	Linyi	Kunshan	Suzhou	Chongqing	Dalian	Weifang

In Chart 8, we show the salary increases for new recruits in specific industries. We select the 30 largest industries on the basis of highest new recruits and listed the top 10 industries with the fastest wage growth and the top 10 industries with the slowest wage growth. The Internet & IT Service industries, booming since around 2010, have observed the highest wage drop in 2016, and even the level of salaries has declined. Meanwhile, e-commerce related logistics also experienced wage stagnation. At the same time, wage levels have increased rapidly in the retail, consumer durable goods, and medical industry. It is noteworthy that wage growth rates have varied significantly in central &western cities as compared to eastern cities. In central &western cities, IT services and logistics services have seen particularly large wage growth rates while eastern cities have seen wages decline in those same industries.

Chart 8: 2016 New Worker Salary Growth By Industry

● First 10 Industries ● Last 10 Industries

	Electronic Tech	Sales	Real Estate	Medicine	Durable Consumer Goods	Medical Equip.	Commerce	Communications	Transport	Hospitality

First 10 Industries: 107.9%, 108.1%, 108.4%, 108.9%, 109.1%, 110.4%, 112.1%, 117.2%, 121.1%, 157.1%

Last 10 Industries: 100.9%, 101.0%, 102.3%, 102.3%, 102.4%, 102.6%, 103.4%, 103.5%, 103.7%, 104.2%

Prof. Services	Internet	IT	Logistics	Fast-Moving Consumer Goods	Agriculture	Education	Large-scale Equip.	Furniture	Fund Mgt.

We highlight the education level of new hires to show the extent of entry-level salary changes (Chart 9). To observe salary changes of new hires based on education level, we analyzed the minimum academic requirement in job advertisements. Pay scale of the four education categories - high school education and below, junior college education, college education and postgraduate education. With high school education as a base, junior college was 1.1, college graduate was 1.6, and postgraduate was 2.0.

In terms of 2016new hire wage growth, those with postgraduate education have seen the largest salary growthat 6.8% Y/Y. High School and below saw growth of 5.2% while jobs requiring college and undergraduate education have seen increases of 1.0% and 4.6%, respectively. From this, we can see that with low-skilled labor supply shrinking and high-skilled labor demand increasing, high-skilled and low-skilled wage increases havesurpassed those mid-skill labor forces.
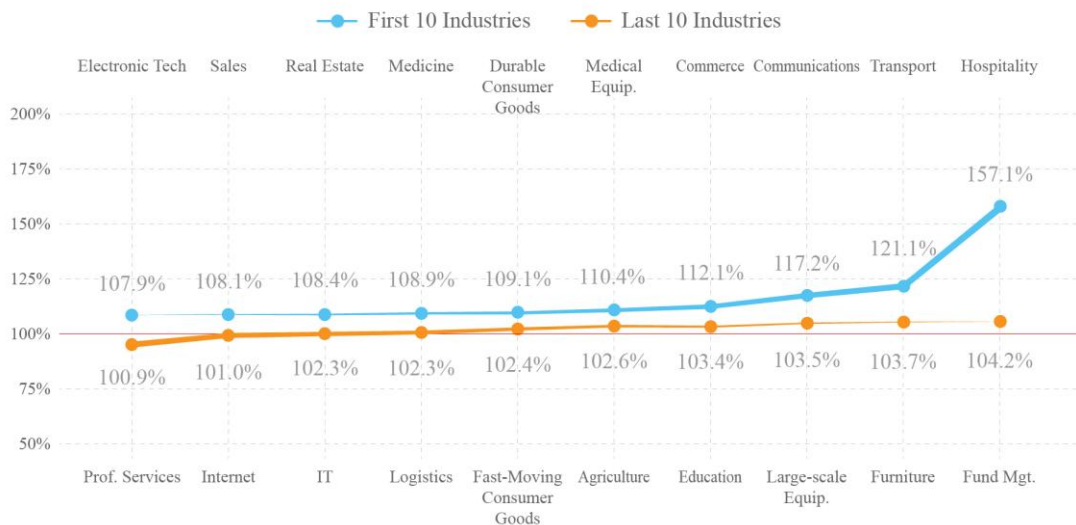

Chart 8: 2016 New Worker Salary Growth By Industry
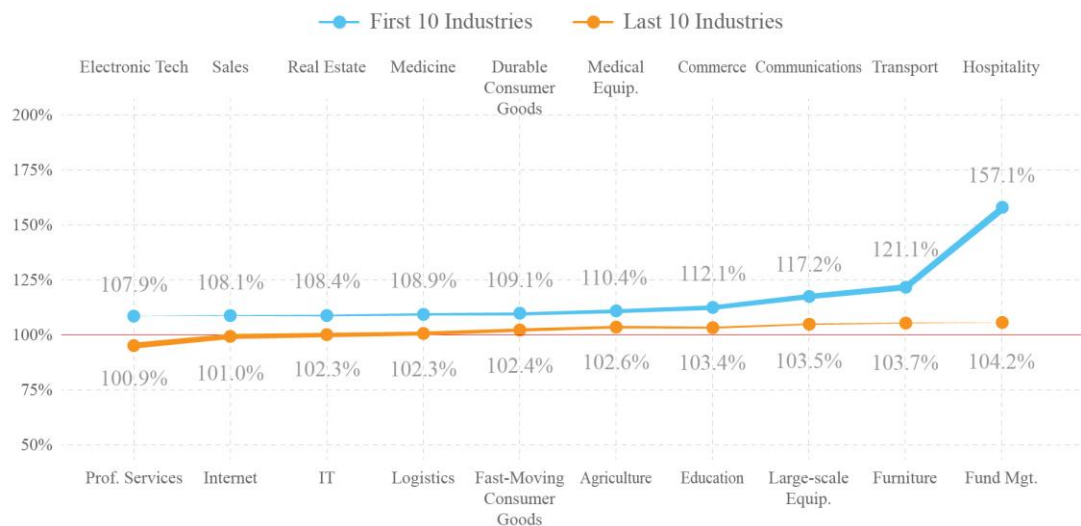
City Rankings of the New Economy

Based on overall New Economy rankings, the top twenty cities are shown in Chart 10. The top five cities are Shanghai, Beijing, Shenzhen, Chongqing and Guangzhou. The rankings are based on a moving average of the percentile rank of indicators for the city in the past 6 months.
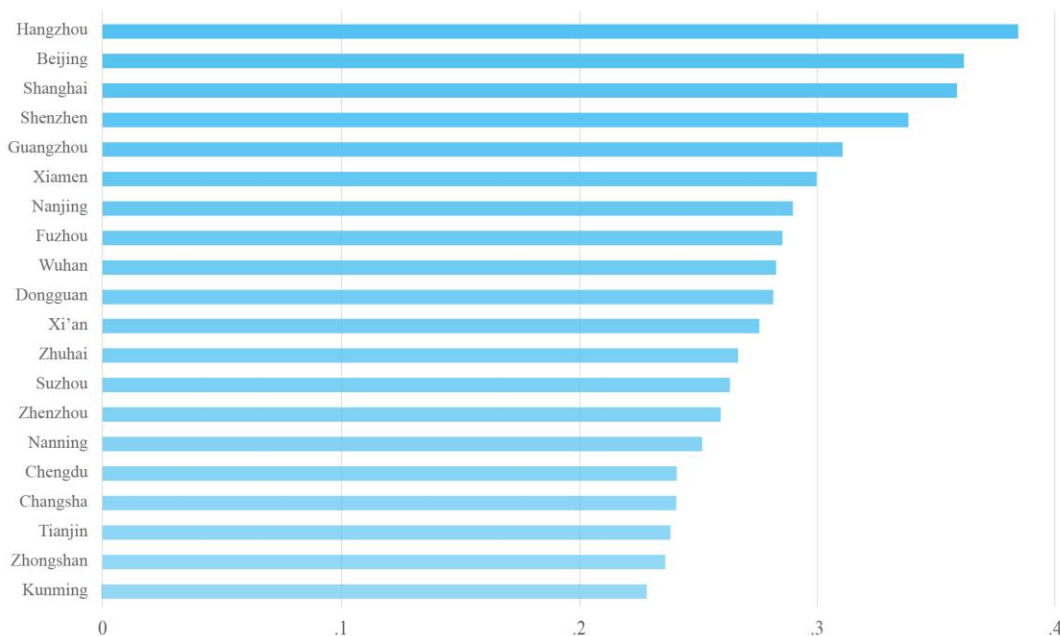
Chart 8: 2016 New Worker Salary Growth By Industry

—●— First 10 Industries **—●— Last 10 Industries**

Electronic Tech	Sales	Real Estate	Medicine	Durable Consumer Goods	Medical Equip.	Commerce	Communications	Transport	Hospitality

First 10 Industries: 107.9% | 108.1% | 108.4% | 108.9% | 109.1% | 110.4% | 112.1% | 117.2% | 121.1% | 157.1%

Last 10 Industries: 100.9% | 101.0% | 102.3% | 102.3% | 102.4% | 102.6% | 103.4% | 103.5% | 103.7% | 104.2%

Prof. Services	Internet	IT	Logistics	Fast-Moving Consumer Goods	Agriculture	Education	Large-scale Equip.	Furniture	Fund Mgt.

When looking at the city NEI rankings based on average NEI from June to December of 2016, the top five are Hangzhou, Beijing, Shanghai, Shenzhen, and Guangzhou (Chart 11).

Chart 11: China's Top 20 City Rankings by Average NEI

Ranked by Avg. NEI Values (Jun2016 – Dec2016)

Hangzhou, Beijing, Shanghai, Shenzhen, Guangzhou, Xiamen, Nanjing, Fuzhou, Wuhan, Dongguan, Xi'an, Zhuhai, Suzhou, Zhenzhou, Nanning, Chengdu, Changsha, Tianjin, Zhongshan, Kunming

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The MasterCard CaixinBBD 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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