**A case study of Hefei’s government guidance fund:**

**The driving force of Hefei’s economic miracle**

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# Abstract

Government Guidance Fund, the public-private investment fund that aims to both produce financial returns and achieve the government’s industrial policy goals (Arnold, 2021) has become one of the key tools for the Chinese government to stimulate strategic sectors’ development. As of 2021, China has established 1,988 government-guidance funds with a target size of RMB 12.45 trillion yet there is increasing awareness of the operational and investment problems of these funds (Zero2IPO Group, 2022). Against such a backdrop, Hefei’s government fund success in driving local economic growth, also known as the “Hefei Model”, has become worth studying more than ever.

This paper summarizes three drivers of the Hefei model’s success. First, Hefei’s guidance fund makes clear prioritization of strategic sectors based on their existing industrial development and set the foundation for such strategic sectors through direct investment in key companies that are under-invested by the market due to their capital-heavy or R&D-heavy nature. For these core companies, instead of leaving the capital for the market and letting the third-party asset managers like its peer funds, Hefei engaged deeply to deal sourcing, due diligence, post-investment, and exit design through cultivating government officials’ professionality in investment and business operations. Then, it anchors its core investment to build industry clusters through utilizing sub-funds to attract financial institutions and private capital to jointly develop industry clusters. Finally, in the post-investment phases, the Hefei government devotes itself to industrial resource matching and establishes a professional risk and exit mechanism.

**Keywords:** Government Guidance Fund, Hefei Model, China

# Chapter 1. Introduction

This chapter first presents an overview of the Chinese Government Guidance Fund and Hefei’s government fund and the tremendous economic development that Hefei has accomplished. Then, the research purpose and significance were stated.

## **1.1 Government guidance fund**

Government Guidance Fund refers to those public-private investment funds that aim to both produce financial returns and achieve the government’s industrial policy goals (Arnold, 2021). It is not a new financial vehicle — countries all around the world use government guidance funds to stimulate and accelerate the growth of strategic industries. Famous cases include the Small Business Investment Company (SBIC) and Small Business Innovation Research (SBIR) in the U.S., the Yozma program in Israel, the Labor Sponsored Venture Capital Corporation (LSVCC), and Ontario Venture Capital Fund in Canada. China is not an exception. Since the inception of the first government guidance fund Venture Capital Guiding Fund of Zhongguancun in 2002 (Tu, 2023), government guidance funds [政府引导基金],the “public-private investment funds that aim to both produce financial returns and further, the government’s industrial policy goals” (Arnold, 2021) has become an increasingly important vehicle for the Chinese government to invest financially and politically.

## **1.2 Chinese government guidance fund**

## **1.2.1 Overview of Chinese government guidance fund**

According to Qingke Venture (1945. HK), as of 2021, China has established 1,988 government-guided funds with a target size of RMB 12.45 trillion (Zero2IPO Group, 2022). Currently, most of the funds adopt the Fund of Fund structure and attract the participation of “social capital”, in which the governmental sponsor creates the fund, sets a fundraising target, allocates capital to part of that target directly from budget outlays, and tries to raise the rest from other investors, whose contributions are called “social capital” [社会资本] (Arnold, 2021). “Social Capital” includes financial institutions such as banks, insurance, trusts, and other private capital including listed companies and individuals (Guan, 2017). These funds were set with the goal to leverage fiscal budget’s impact to attract social capitals toward strategic industries’ and small and medium business (SMB). Meanwhile, these funds are strictly prohibited from speculating for returns in the financial markets —they shall not invest in secondary market stocks, futures, real estate, securities investment funds, insurance plans and other financial derivatives.

In the case of China, the set of government guidance funds was also seen as a “shift in Chinese capitalism over recent years” (Hancock. 2023). The PE structure that was designed with an exit is clearly different from the previous state-holding cases where the government seldom exits. It is an improved structure of government holding as the exit and reinvest would form a “close loop” circle that always support companies most in need of capital.

## **1.2.2 The history of Chinese government guidance fund**

The establishment of government guidance funds has changed dramatically over the past 10 years. While 2015-2017 saw a drastic increase in the newly established funds, the number has been decreasing sharply thereafter.



The 2015-2017 increase was mainly led by the central government's strong determination and appeal in encouraging the setting up of government guidance funds. Against the slowing down GDP growth backdrop, the government has identified guidance funds as the key pathway to fully utilize the fiscal budget to fuel economic growth. In 2014, the government for the first time clearly stated its encouragement for setting guidance funds to support strategic sectors such as advanced manufacturing, environmental protection, infrastructure, etc., and announced that it will double the central government budget that supports strategic sectors through guidance funds. Meanwhile, the central government also set a role model to realize this ambition. In January 2015, it set up a 40bn CNY-sized National Emerging Industry Venture Capital Fund. And in September 2015, the central government further explored a more ideal fund structure that realizes its aim of utilizing the government fund’s guiding effect in attracting social capital.

However, although the size of government guidance funds increased, more and more government guidance funds seek for operational improvements. Government guidance funds face increasingly severe problems such as difficulties in raising capital, idle funds that are not actively invested because of the increasing conflicts between governments’ conservative risk appetite and their goal, and difficulty in exiting government capital due less than expected business growth for lack of post-investment management (Tu, 2023). Despite the industry is generally riddled with problems, Hefei’s government fund drew high attention from the public as Hefei’s government guidance fund played the key role in fueling the 0 to 1 step in Hefei’s strategic industries’ establishment, including the display panel industry, IC chip industry, and electronic vehicle industry, now turning these three industries into key pillars of Hefei’s industrial production. As of 2022, Hefei’s strategic sectors counts 56.2% of Hefei’s total industrial production value add of companies with annual revenue of over 20mn RMB (Huang, 2023). And Hefei government’s guidance funds have cumulatively invested 40 companies that later listed or have already been proved to be listed as of May 19th 2021 (Yu, 2021). Hefei government success is recently referred to “Hefei Model” and even Shenzhen mark it as a role model for their development of Scientific Innovation Hub (Guangming Government, 2020).

## **1.2.3 The development of Hefei**

Despite not having a good economic development foundation and resources (talent, location, etc), Hefei achieved great economic development by establishing new industry sectors with the help of guidance funds. Per the Chinese Bureau of Statistics, the 15-year CAGR (compounded annual growth rate) of Hefei’s GDP over the 2016 to 2021 period was 17.1%, ranking first in the 36 major cities defined by the Bureau of Statistics which is 5.4 percent ahead of the national CAGR of 11.7% during the same period. During the 15-year period, Hefei has attracted 2846 projects that are over 100mn CNY, with accumulated capital of 1.5 trillion CNY. Within which 1322 projects are strategic sector projects with a total size of 800bn CNY, driving its strategic sector to grow with a CAGR of 20% and increasing its industrial value add as the percentage of total GDP from 23% to 57%. (Luo, 2021) During Hefei’s development course, its government guidance fund played a key driving force to attract key companies into Hefei by providing capital as a private equity investor. These companies later became the key pillars of Hefei’s three most important industries— the display panel industry, the semiconductor chips industry, and the electronic vehicle industry.

## **1.3 Research purpose and significance**

This paper aims to summarize Hefei’s best practices following the four investment steps in a typical private equity investment cycle, i.e. deal sourcing, investment, management, and exit.

Not only would Hefei’s practice meaningful for domestic peers that seek for improvement, but its practice would also help other developing countries that want to stimulate strategic sectors through guidance funds. Even for developed countries like the U.S., Hefei’s great practices may be valuable. Chinese guidance funds’ experience offers U.S. insights to “fix its own market failures plaguing the financing of advanced hardware industries and the lack of patient capital” (Adler,2022)

# Chapter 2. Literature Review

## **2.1 Government Guidance Fund**

Scholars have studied the theoretical base for government guidance funds. Wang pointed out that the government guidance fund is an effective government intervention to help close the gap of market failure where small firms encounter difficulties in raising sufficient capital from the market (2022). Such fundraising difficulties are understood as market failure (Mason 2009, Yu 2023) and hence government intervention is needed per the public finance theory as one of the government's key responsibilities is to provide public service and public products to market failures. Zhao further pinned down that the market failure was mainly due to high information asymmetry in the start-up companies (Zhao, 2022). As such, around one-fourth of the venture capital is funded by the government globally (Wang, 2023). In China, the guidance fund counts one-third of the total venture capital fund and the government guidance fund even counts 90% of the capital in Chinese under-developed regions. (Zhao, 2022).

Empirical research at home and abroad has widely proven that government guidance fund indeed has a positive impact. Domestically, Cong used zero2IPO data during the 1998-2018 period and introduced government guidance fund investment as the exogenous factor, applying the DID model to study the government investment impact. Cong’s study has proved that the government guidance fund can increase the size of the venture capital industry, and increase investment toward high-tech enterprises (2019). Globally, Sojin Lim et al. (2014), Lerner (1996), and Brander et al (2008). found that government guidance funds in Korea, America, and Canada can also lead venture capitalists to invest more in younger companies.

## **2.2 The characteristics of Chinese government guidance fund**

## **2.2.1 Types and mandate of Chinese government guidance fund**

According to The Provisional Management of Government Investment Funds issued by the Ministry of Finance, there are three types of government guidance funds, namely Venture Capital fund, industrial development fund, and infrastructure fund. With capital sourced mainly from the government’s fiscal budget (Shen, 2022), Government guidance funds, as a policy instrument, should guide social capital toward innovation in strategic sectors, especially focusing on deals that are less preferred by social capital (Cheng, 2015).

## **2.2.2 Investment characteristics of Chinese government guidance fund**

Government guidance fund falls into the range of Institutional Private Equity investor (Sun, 2022). Most of the funds adopt the Fund of Fund structure and attract the participation of “social capital” but there are also funds that directly invest in equity. Although the government guidance fund itself doesn’t need to raise capital as the capital source is directly from the fiscal budget, for the fund of fund case, the government does need to attract other capital sources to jointly form the funds to meet its initial fund size target. The government creates the fund, sets a fundraising target, allocates capital to part of that target directly from budget outlays, and tries to raise the rest from other investors, whose contributions are called “social capital” [社会资本] (CSET, 2021). And following the guideline from the central government that encourages government guidance fund to fully adopt a market-operation model, most fund of fund uses third-party general partners (GP) who is regarded as more professional in investment management. The survey has shown that government funds hardly take any active role in the investment committee under the fund of fund structure — only 21.05% of government LP seek a presence in the investment committee. Meanwhile, the government does set requirements for GP for their investment. Because the local governments all want their budget to be invested into local businesses so that they will have more tax revenue when these invested businesses grow, they will set investment geographical mandates for GP. For example, for the government guidance fund that are newly established in 2022, 40% of the fund asked GP to invest at least 2 times the amount that the government has injected into the fund while the requirement has been loosening ever since the peak of 2.6 times in 2017 (CVSource, 2015).

The typical life span of the government guidance fund is 5~10 years (Shen). The typical exit for government guidance funds is an IPO, acquisition by a listed company, and corporate repurchase. For government guidance funds, as required by law, all state-owned property should be appraised by a professional appraisal institution and follow the price of appraisal (Shen, 2022).

## **2.2.3 Operational difficulties of Chinese government guidance fund**

While capital raising problem doesn’t exist in the format of direct investment as all the funds needed is the local government budget, capital-raising difficulties generally exist for the fund of fund structure as the government has miscellaneous types of investment requirements for the sub-fund (such as investment geographical mandate, target company size, etc) (Shen, 2022). Li further pointed out that some governments, in order to meet their target size, even will push wholly state-owned enterprises (SOE) to inject capital, yet such methods fail to meet guidance fund targets in involving more social capital, as essentially these SOEs are also owned by the governments. In terms of investment, in the study of 616 guidance funds, 36.2% of the guidance fund has a government capital share of 90-100%, implying that government capital is rather focused and may have a huge influence on investment decisions (Li, 2021) and may not fully realize its potential in attracting social capital in comparison to a more dispersive way. Li further pointed out that guidance fund generally lacks a risk management framework and lacks dedication to post-investment management. Finally, the government guidance fund, as a state-owned asset, is subject to the rule that all transactions need a professional appraisal, and hence exit or transaction involving state-owned capital generally can not be closed in a timely manner (Shen, 2022).

## **2.3 Hefei Government guidance fund**

Hefei’s guidance investments are mainly held by three private equity platforms, namely Hefei Jiantou [合肥建投], Hefei Chantou [合肥产投], and Hefei Xingtai[合肥兴泰] with Jiantou focuses on EV, hospitality and transportation, Chantou focuses on industrial upgrade and Xingtai being a general financial holding company (Meng, 2022). As of November 2022, Hefei had cumulatively invested 1 trillion RMB as a guidance fund and attracted nearly 4 trillion social capitals. To date, as Hefei Model attracts national attention, there is rising awareness from scholars of Hefei’s government fund. However, these studies either lack completeness or touch upon too broadly on the feature without detailed analysis. For example, both Shuai (2022) and Su (2022) focused on Hefei Jiantou’s analysis, but their studies focus too much on how Jiantou is internally organized and didn’t answer what is Hefei’s investment strategy. Meanwhile, although Meng studied generally key successful factors of Hefei, the analysis wasn’t supported by further analysis. For example, while Meng pointed out that Hefei’s government’s direct investment percentage to the whole investment holdings is high, Meng didn’t point out why that matters. As such, the information provided isn’t insightful enough for other regions’ guidance funds to reference.

# Chapter 3. Analysis

This chapter analyzes Hefei’s government fund as a special private equity investor and summarizes its investment strategy following the four key investment steps in a typical private equity investment cycle, i.e. capital sourcing, investment, post-investment management, and exit of capital.

## **3.1 Capital sourcing**

Hefei government’s made great efforts in delivering industrial insights for potential investors on its strategic sectors. Hefei’s two practices stood out among Cities with the top 20 GDP’s designation of strategic investment sectors (see Appendix 1). First, Hefei clearly defined its 18 sectors as its strategic sectors with 8 sectors as its top priorities. In comparison, cities like Shanghai, and Beijing didn’t list their strategic focus and generally welcomed all sectors. Chengdu listed 20 sectors and Shenzhen listed 28 sectors and neither pointed to any near-term development priorities. More defined and narrowed strategic sectors may help a better capital match to accelerate the process of building industry clusters.

Secondly, the Hefei investment promotion service center has devoted distinctive efforts to elaborating industrial insights on its strategic sectors both in-depth and timeliness. On the content depth, for every 18 sub-sectors that the Hefei government defines as “strategic sector”, Hefei has prepared an industrial research report of around 2,000 words including sector trend, policy, upstream & downstream mapping, and platform for further investment contact. However, other cities like Chengdu, and Shenzhen only introduce their strategic sectors with 200-300 words on average on the industry definition level. Moreover, as of 1Q23, while Chengdu and Shenzhen’s industrial introductions were updated in 2022 and contained data from as early as 2020, Hefei’s research page was updated in 2023 with industrial numbers of 2022.

## **3.2 Investment**

One of the key investment methodologies that are under-examined is the role of conducting direct investment through guidance funds into key companies to make the 0 to 1 step for new sectors. Such direct investment was the key to correcting market failure that under-invests in capital and R&D-heavy companies. Hefei’s key three pillar industries —display panels, memory chips, and electric vehicles — all came into being through the Hefei government’s direct investment into core companies BOE, Nextchip, and NIO:

**The timeline of key investments**

|  |  |  |
| --- | --- | --- |
| BOE | Sep 2008 | Hefei government jointly made 17.5 bn CNY for China’s first Gen-6 LCD panel production line |
| Apr 2009  | The launch of BOE’s Gen-6 LCD production line marks the end of China’s reliance on LCD panel imports |
| 2017 | Hefei’s cumulative investment in BOE exceeded 100bn CNY |
| Nextchip | 2013 | Hefei announced to make integrated circuit as its strategic sector |
| Oct 2017 | Established a JV, Nextchip, with Powerchip Semiconductor Manufacturing Corp. (Taiwan company) |
| 2020 | 20% of global smartphones, 14% of global TVs, and 7% of global laptops are powered by Nextchip's driver IC |
| Nio | 2019 | Nio made 11.4 bn CNY loss in FY19 and was near bankruptcy |
| Apr 2020 | Hefei Jiantou jointly invested 7 bn CNY with other government funds. In return, Hefei asked Nio to relocate its headquarter to Hefei to introduce EV industry to Hefei |
| Mar 2021 | With 51:49 capital injection ratio, Jianghuai (Hefei local traditional car maker) and Nio jointly established Jianglai Advanced Manufacturing Technology (Anhui) Co., Ltd. |

*Source: Su, 2022; QCC (National Enterprise Credit System certified 3-rd party data base)*

Hefei’s investments are never random bets. Usually, Hefei follows the Buckets effect to invest in the pinpoint of its existing industry. In 2008, Hefei decided to invest in LCD panels because Hefei saw LCD panels accounted for 70% of the local TV makers’ cost and these makers have no bargaining power because at the time Japan and Taiwan makers dominated the industry with China counting almost no market share (Lan, 2022; Zheng, 2009). To make local TV maker improve their competitiveness, the Hefei government injected its first capital into BOE in Sep 2008.

Government investment was decisive to build up the industry as LCD companies need large capital which was almost impossible for private capital to invest at a time when China is still in its early stage of development. In 2008, the Hefei government promised to inject 6bn CNY out of its 30.1 bn CNY total government budget and funded the BOE Gen-6 production line (Lan, 2022). After the continuous investment and launch of the domestic production line, China was able to decrease its import of LCD panels over the years since 2008 despite the panel use increases over time. In 2021, Hefei was ranked first in the "2021 China Top 10 Display Industry Development Cities White Paper" (CCID Group, 2021). Besides localizing the panel, BOE also brought “thousands of jobs to Hefei and anchored the display industry manufacturing cluster that is worth more than 100 bn CNY annually, including for foreign companies such as Corning Inc” (Hancock, 2022).



Later, to meet BOE’s needs for LCD driver IC, the Hefei government jointly established an IC driver foundry Nextchip with Powerchip Semiconductor Manufacturing Corp (a Taiwan company), entering the foundry business well-known for its capital intensive nature due to expensive equipment. Nextchip later became China’s third and world 9th largest foundry by revenue.

In 2019, in hopes to transform its traditional vehicle manufacturing industry to electronic vehicles production, the Hefei government invested NIO when NIO was near to its bankruptcy. In return to Hefei's government-led investment of 7 bn CNY, the government required NIO to introduce its headquarters in Hefei. — Without Hefei government capital injection, it can be hardly imagined that NIO would ever move its headquarter to a place 300 miles inland compared to Shanghai. However, such an exchange of investment was very helpful for Hefei to accelerate its EV-related supply chain build-up. After introducing NIO to Hefei, Hefei’s achieved a 175% YOY in EV shipment in 2021. In Feb 2021, Hefei further promised that all its profit proceeds from NIO investment will be used to develop local electrical vehicle supply chains, such as attracting more talent and companies to locate to Hefei and constructing electrical vehicle industrial parks (Wang, 2021). By the end of 2022, Hefei gathered 300+ companies with annual revenue of over 20mn RMB in the auto supply chain (CVSource, 2023).



Source: Hefei bureau of statistics

All aforementioned cases show how Hefei's government investment effectively saw the market failures and corrected through direct investment.

Hefei has local officials that well understand local industrial foundations and well-equipped with financial knowledge and usually involve heavily in these direct investments. Per the Asset Management Association of China disclosed data, all key managers in the three major investment platforms are qualified fund investors. These professionals participate in all four steps to close the deal — company analysis, industry analysis, third-party financial and legal due diligence, and business plan discussion with the company, just as professional market-based PE investors(Zhou, 2022). Hefei’s heavy involvement in the due diligence and investment decisions into the direct investment of key companies set distinct contrast to most other guidance funds as only 21.05% of government LP actively seek for presence in the investment committee (CVSource, 2015). Hefei’s government official’s professionalism that enables in-house investment management is crucial. Especially because there is a rising number of 3rd parties turned reluctant to take delegation from guidance fund as their goal in fostering local strategic sectors’ development conflicts with 3rd party PE/VC managers’ aim for lucrative returns and as rising private capitals start to reject to cooperate with guidance funds (Zhuo, 2022).

After Hefei established key companies in those strategic sectors, it utilizes its sub-funds to attract social capital in accelerating the process of building the upstream and downstream supply chains for the key companies. But such funds take the form of the fund of fund and are managed through third parties and the government involves less in their establishments. Through collaborating with social capital, the Hefei government accomplishes its acceleration in extending its downstream and upstream exposure to its strategic sectors. For example, Hefei set the 30bn RMB guidance Xinping [芯屏] fund that focuses on semi-chips and display panels upstream and downstream and.

## **3.3 Post-investment management**

Hefei cultivates its people to provide better post-investment services. From top leaders to business development junior level officers, all Hefei officials study national industrial financing policies, industrial development to better communicate with other government departments, VCs, financial institutions (Meng, 2022). Besides, Hefei also helps to match the needs. For example, the Hefei government organizes technology matching conferences between companies and research institutions including labs in universities. Through the conference, the government will give corporates opportunities to present key technology difficulties they are encountering. One of the participants of the conference, Hefei Yuwei Semiconductor told the Journal of the Party College of CPC Hefei Municipal that the after his roadshow at the conference, there were several contacts to him that were able to work together to conquer the technological projects. The conference enables them to accelerate the new product progress as it connects with experienced research groups to collaborate, so they don’t need to work from scratch. Hefei government also sends government officials to research institutions and universities to spot potential technological breakthroughs that may meet the lates market needs (Meng, 2022).

Besides connecting resources, Hefei was also devoted to risk management, which is also a field pointed out as one of the areas that lack attention for guidance funds. In an interview by Da Wan Journal, the deputy of Hefei state-owned assets supervision and administration commission, Ming Gao said Hefei has accumulatively 40 measures for investment, capital raising, guarantee, property transaction, etc to standardize corporate operations in the post-investment phase and they dynamically tracks these corporates financial healthiness, asset quality, earning structure, and potential risks (Xiang, 2021).

## **3.4 Exit of capital**

Hefei requires all project initiation to have a safe plan for government capital to exit (Xiang, 2021). Taking the aforementioned main sectors as examples, the government capital has exited gradually through the sale of a stake in the public market, firm repurchase of shares, and trade sales for other investors as means of exit.

One of Hefei’s keys to exit and profit-making is to be patient and wait for the upcycle of the capital market, its thorough due diligence may be at the core to support Hefei to be comfortable in doing so. For example, the Hefei government invested 47.8 bn RMB in BOE in total and realized 24.4 bn RMB original capital with a realized profit of 23.1 bn RMB through selling gradually its share in the stock market (Zhou, 2022). For Visionox, the government is undergoing the process of share re-purchase with Visionox and intends to exit its first ~7% of shares out of its total investment of 27%. The Nextchip has just been approved to be listed on May 5th, 2023 which set a foundation for the guidance fund to exit. For the NIO case, the government cashed out most of its stake within 1 year as the share rallied for its turn-around — making a return up to 5.5 times of its investment (Hancock, 2023).

Meanwhile, it is worth noticing that currently, the secondary market listed almost remains the only place where outsiders to gauge the return of the guidance fund’s return. Most Chinese government hardly disclose their deal exit and return (Zhao, 2022) and the Hefei government also didn’t officially announce its fund return, leaving people to speculate that most fund’s return is poor. Despite that government guidance funds should make their performance more transparent, it is also crucial for scholars and taxpayers to understand that not merely project IRR or fund return measures the fund performance as the mandate for government guidance funds is not to prioritize economic return, but to correct market failure in under-investment in R&D or capital heavy project that may not have such high ROE but are crucial for local industrial transformation, employment, the spillover effect of R&D for the long-term development of the region. Further research on a comprehensive evaluation mechanism taking all these factors into account could potentially foster the better development of the guidance fund industry.

# Chapter 4. Conclusion

Hefei’s government guidance funds played a key role in Hefei’s establishment in its strategic sectors, which were the key driver of Hefei’s economic miracle. The guidance funds built the display panel, IC chip industry and EV industry from zero to one and built them into Hefei’s pillar industry, turning Hefei from a relative backwater to China’s Top 16 cities.

The three key drivers for the “Hefei model” are: First, Hefei's guidance fund clearly prioritizes strategic industries based on their level of industrial development and lays the groundwork for such industries through direct investments in important businesses that the market underinvests in because of their capital-intensive or R&D-intensive nature. Hefei engaged heavily in deal sourcing, due diligence, post-investment, and exit design for these core companies instead of leaving the capital to the market and letting third-party asset managers like its peer funds handle it, by cultivating government officials' professionalism in investment and business operations. Then, it uses sub-funds to draw financial institutions and private capital to jointly establish industry clusters, anchoring its main investment to do so. Finally, the Hefei government also dedicates itself to industrial resource matching and creates a professional risk and exit mechanism during the post-investment stages.

The most important point for “the Hefei Model” to succeed is how Hefei first identifies the “right priority” based on their industrial development and makes the direct investment to core companies to set the investment foundation. Such a process is unlikely to be replaced by a third-party investor as quantified performance measurements will likely stick with projects that earn a lucrative return in a shorter time frame and avoid projects with longer payback horizons but are important for the local economy.

# Appendix

1. Cities with top 20 GDP’s designation of strategic sectors for investment

|  |  |  |  |
| --- | --- | --- | --- |
| **Ranking of GDP** | **Designation** | **Information provided on strategic sectors** | **Website** |
| 1 | Shanghai | No definition of strategic sectors | - | https://invest.sheitc.sh.gov.cn/ |
| 2 | Beijing | No definition of strategic sectors | - | http://invest.beijing.gov.cn/sy/201912/t20191209\_969443.html |
| 3 | Shenzhen | Defined 28 strategic sectors | Provides 200-300 words definition level introduction to strategic sectors | http://commerce.sz.gov.cn/tzly/zdcy/zlxxxcy/index.html |
| 4 | Guangzhou | Defined 5 strategic sectors | Provide no elaboration on designated strategic sectors | https://www.investgz.org.cn/ |
| 5 | Chongqing | No definition of strategic sectors | - | http://zsj.cq.gov.cn/ |
| 6 | Chengdu | Defined 20 strategic sectors | Provided definition level introduction to the strategic sectors but lacks of local industry's development status and prospects | http://cdtc.chengdu.gov.cn/ |
| 7 | Hangzhou | No definition of strategic sectors | - | http://cdtc.chengdu.gov.cn/CDSTZCJWYH/c152616/2022\_list.shtml |
| 8 | Wuhan | No definition of strategic sectors | - | http://sw.wuhan.gov.cn/index/ |
| 9 | Nanjing | Defined 20 strategic sectors | Provided key research hub and service platform for investment but lack of detailed analysis of development status and prospects | https://map.invest.nanjing.gov.cn/industry/index.html |
| 10 | Tianjin | No local investment promotion website | - | - |
| 11 | Ningbo | No local investment promotion website | - | - |
| 12 | Qingdao | No definition of strategic sectors | - | http://commerce.shandong.gov.cn/col/col16897/index.html |
| 13 | Changsha | No definition of strategic sectors | - | https://swt.hunan.gov.cn/swt/hnswt/zt/zszn/index.html |
| 14 | Zhengzhou | No local investment promotion website | - | - |
| 15 | Jinan | Defined 10 strategic sectors | Provides definition level introduction ~100 words to each sector | http://jntzcjj.jinan.gov.cn/col/col88384/index.html |
| 16 | Hefei | Defined 18 strategic sectors with **8 prioritized sectors** | prepared an industrial research report of around 2,000 words including sector trend, policy, upstream & downstream mapping | https://tzcjj.hefei.gov.cn/tzzy/zdcy/zdgy/xxpbxscy/index.html |
| 17 | Fuzhou | Defined 16 strategic sectors | Introduces local resources ~ 400 words but information lacks update | https://tzfz.fznews.com.cn/node/19879/ |
| 18 | Xian | No local investment promotion website | - | - |
| 19 | Dalian | Defined 2 strategic sectors | The listed strategic sector is broad and the government didn't provide further descriptions for sub-sectors' development opportunities, only listing existing companies in operation | http://www.ccxq.gov.cn/zdcy/yyjk/ |
| 20 | Shenyang | No definition of strategic sectors | Provides investment-related policy updates | http://swj.shenyang.gov.cn/zwgk/fdzdgknr/jgjj/ |

GDP Ranking referred to National Bureau of Statistics, 2021 data

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