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The Evolution of Chinese Industrial Policy Debates (1979-2022)

Rethinking the State-Market Relationship Amidst
Property Regime Transformations

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The Evolution of Chinese Industrial Policy Debates (1979-2022) – Rethinking the State-Market Relationship Amidst Property Regime Transformations

Lucas Erlbacher

Abstract

The rise of industrial policy represents a key aspect of the metamorphosis of the People's Republic of China's (PRC) political economy. Importantly, this reform has been conditioned by the country's transforming property regime – its economy's ownership structure and regulation. This working paper contributes to a better understanding of China's past economic reforms by examining how China's domestic industrial policy debates have evolved during the reform-era (1978 – 2022) amidst the country's transforming property regime. Overall, four different periods are identified spanning from i) the bourgeoning of industrial policy discussions in the 1980s on the background of structural readjustment policies and the integration of markets into economic governance; ii) to debates on the simultaneous expansion and refocusing of industrial policies amidst the PRC's entry into the global economy and accelerating market reforms of the 1990s and early 2000s; iii) to the intensification of industrial policy discussions amidst the reevaluation of the country's position within the global economy and the launch of its Global Financial Crisis (GFC) stimulus package; iv) as well as finally in the early 2010s a wide-ranging reassessment of the country's policy approach and growing call for horizontal industrial policies. These discussions have unfolded against the backdrop of the country's swiftly transforming property regime away from the previous unitary state-centered regime towards a mixed economy. In this context, industrial policy has been regarded as crucial not only for the developmental mobilization of novel non-state actors, but also for the revitalization of the state sector. At the core of these debates lies the restructuring of state intervention and market allocation. Crucially, Chinese economists largely concur that these reforms of the state and market are intrinsically synergistic and mutually dependent.

Keywords: Chinese industrial policy, Property regime, Reform-era Chinese History of Economic Thought, Market-state relationship

I. Introduction

Industrial policies represent a major aspect of the People's Republic of China's (PRC) political economy transformation. Since China's entry into the WTO in the mid 2000s China has undergone a rapid expansion of its industrial policy toolkit. With that industrial policy has not only moved to the center of the PRC's economic governance but also becomes the main focal point of economic discussions in China. Parallel to this, the last decade has witnessed the 'return' or 'rebirth' of industrial policy within developed countries amidst several profound challenges to their international political economy. These include a reflection on the process of de-industrialization and on the impact of globalization, the climate crisis, the digital industrial transition, the return of systemic geopolitical rivalries, as well as a reappraisal of China's rise and its statist development model (Aiginger & Rodrik, 2020; Eder & Schneider, 2020; Gräf & Topuria, 2023). As such, research on Chinese industrial policies is not only central for understanding the transformation of the PRC's political economy throughout the reform-era, but also for reflecting on the renewed global relevance of industrial policy.

Given that, Chinese industrial policies have attracted growing scholarly attention. Heilmann and Shih (2013) and later on Naughton (2021) retrace the expansion of industrial policies in the 2000s and 2010s (Heilmann & Shih, 2013; Naughton, 2021). Major industrial policy strategies, such as Made in China 2025, have also been extensively studied (Wübbecke et al., 2016; Zenglein & Holzmann, 2019). However, in contrast to that, the domestic discussions among Chinese economists have only been marginally addressed within the literature on Chinese industrial policies or more broadly on reform-era Chinese Economic Thought (Brødsgaard & Rutten, 2017; Cohn, 2017; Gohli, 2022, pp. 182–194; Heilmann & Shih, 2013). This working paper aims, thus, to address this gap by *retracing and explaining the evolution of Chinese industrial policy debates since the end of the 1970s*.

Industrial policy has, throughout the last century, been the focus of many economic debates. As of now, there is no consensus on the specific definition of industrial policy, its rationale or theoretical basis (Chang, 2011). This further underlines the importance of examining the ideational basis of China's industrial policy debates in detail. In that, this working paper will seek to organically identify the definition(s) and economic rationale(s) associated with industrial policies within the country's domestic debates. Still, these have been shaped by established theoretical concepts of industrial policy. This includes, markedly, the

differentiation between selective or vertical and functional or horizontal industrial policies (Warwick, 2013). Whereas the former designates a (selective) support for a specific sector, industry, or company usually through direct market intervention using instruments, such as subsidies, tax benefits or credit allocation. The latter seeks to increase the competitiveness of an economy by setting the “[...] framework conditions in which entrepreneurs and business can take initiatives [...]” (European Commission, 2002, p. 3). More recently, the last decade has witnessed the emergence of new theoretical industrial policy approaches – ‘New Economics of Industrial Policy’ (Juhász et al., 2024). Among these, Philippe Aghion’s competition- and innovation-friendly sectoral (e.g. selective) industrial policy, which is aimed at more competitive sectors and less concentrated in its scope (Aghion et al., 2011), has been especially influential within Chinese discussions on the reform of domestic industrial policies.

In addition, Chinese industrial policy debates are also contextualized within the transformation of the country’s property regime as well as contrasted with domestic property debates. This is, especially, needed as the transformation of the PRC’s property regime is closely intertwined with changes in its industrial policy approach. Fundamentally, with industrial policy being concerned with the allocation of resources through both state intervention and market mechanisms, this is conditioned by the country’s economic ownership structure and its regulation. More broadly, with the property system bridging the realm of market, economy and society (Jing et al., 2020) – being the organizational structure of both the economy and modern society (Rosa, 2023) – it provides a wide institutional framework in which industrial policy is embedded in.

With both topics – property and industrial policy – being closely linked, I aim to *outline the ‘property’ aspect within Chinese industrial policy discussions as well as to contextualize the evolution of industrial policy discussions within the context of the country’s changing property regime*. In this context, I follow Piketty’s definition of property regime as “[...] the set of rules describing the different possible forms of ownership as well as the legal and practical procedures for regulating property relations between different social groups” (Piketty, 2020, p. 4). In many ways this is similar to the Chinese Marxist term ‘suǒyǒuzhì 所有制’ – usually translated as ‘Ownership system’ – which denotes the institutional arrangements, notably ownership rights, structuring the relationship between workers and productions means (L. Cao, 2004; Xiao & Quan, 2018a, pp. 114–116). Given this working paper’s emphasis on industrial policy, I concentrate on the evolution of ownership structures within the

Chinese industrial sector, specifically the restructuring of the state's industrial sector and rise of private industrial actors, as well as the regulation thereof.

The main research focus is put on economic literature published in Chinese academic journals. Chinese industrial policy debates have been predominantly held among academic and policy circles.¹ Especially during the first thirty years of the reform-era, policy economists working within state institutions or internal think-tanks have regularly published in academic journals. These academic publications provide insights into the ideational conflicts over industrial policy and help to overcome the limited access to internal policy reports. In all, academic journals provide a reliable and systematic primary literature source throughout the whole period of the PRC's reform-era with a wide spectrum of economists from a large set of academic institutions, policy-oriented think-tanks or government institutions.

To answer the research aims a three-step textual analysis was applied: First, a systematic overview of Chinese industrial policy literature was carried out based on a representative sample of 269 articles on industrial policy published in major Chinese economic journals between 1986 and 2022. The sample was gathered by searching a bibliometric database of fourteen top-ranked economics journals from the PRC using the keyword 'Industrial policy' by both abstract and title.² These articles' abstracts were reviewed with regard to their definition of industrial policy, their core finding/argument regarding industrial policy and the implications for China's IP-economic governance drawn by the author(s).³ Through this an initial representative picture of the debate's evolution and its structure was gained. Second, this initial outlook was then substantiated through an in-depth textual analysis of the sample's articles. Particular attention was paid to texts by renowned economists as well as scholars affiliated to influential academic institutions. In this context, additional economic primary literature was also collected, so as to fill gaps in the article sample including articles published before 1986 and after 2022, along with journal articles by influential economists,

¹ An exception to that is the Lin-Zhang controversy in 2016. To study this, additional articles by Chinese economists published on major domestic economic media platforms have been consulted.

² This bibliometric database has been established in the context of the author's PhD research at the Freie Universität Berlin. It includes following publications: Journal of International Trade 国际贸易问题, Economic Perspectives 经济学动态, Economic Research Journal 经济研究, The Journal of World Economy 世界经济, Journal of Financial Research 金融研究, Journal of Finance and Economics 财经研究, Finance & Trade Economics 财贸经济, Social Sciences in China 中国社会科学, China Industrial Economics 中国工业经济, Journal of Management World 管理世界, Reform 改革, Journal of Quantitative & Technological Economics 数量经济技术经济研究, Economist 经济学家 and China Economic Quarterly 经济学(季刊).

³ In the case that the article's abstract was missing or unclear, the paper's entire text was consulted.

as well as supplementary industrial policy literature with a property focus.⁴ Third, the findings of the previous two steps were contrasted with a wide-ranging literature review on the PRC's economic governance, including industrial policies, economic history and reform-era Chinese Economic Thought.

The results of this textual analysis are presented as follows. In the second section, the evolution of Chinese industrial policy debates from 1979 until now is laid out as well as contrasted with the transformation of and debates on the country's property regime. The literature is divided into distinct four phases:⁵ first, from 1979 until 1992 marking *the burgeoning of industrial policy debates*; a second phase between 1993 and 2004 centering on the *Socialist Market Economy and globalization*; from 2005 and 2012, on *Global Value Chains and Global Financial Crisis Stimulus*; while, since 2013 on the *reform of China's industrial policy approach*. In conclusion, I argue that industrial policy has throughout the reform-era contributed to rethinking and shaping the relationship between state intervention and market allocation. Importantly, this market-state relationship has by a large majority of economists been regarded as intrinsically synergistic rather than antithetical. In that, this working paper contributes to a growing strand of scholarship, which views China's economic reforms as a process of simultaneous and mutually dependent transformation of the state and market role (Herrmann-Pillath & Zhao, 2023; L. Zhou, 2023).

⁴ For that the bibliometric database CNKI 知网 was searched for journal articles containing 'industrial policy' and other keywords associated to property debates, such as 'ownership system' 所有制, 'SOE Reform' 国企改革, 'Private Enterprises' 民营企业 or 'Competitive neutrality' 竞争中性.

⁵ These four phases have been identified organically through the initial abstract review and subsequent in-depth literature analysis, as well as in a second step compared to the literature on China's industrial policy (F. Jiang & Li, 2018a; Naughton, 2021).

II. The evolution of Chinese industrial policy debates: 1979-2023

i. 1979 –1992 – The bourgeoning of industrial policy debates

Industrial policy's role in driving structural readjustment

Within Chinese academic circles, discussions on industrial policy emerged with the beginning of the Reform-and-Opening-up era in the late 1970s. These early debates on industrial policy in the late 1970s and first half of 1980s participated in a broader reflection of the Maoist-era economic policies, as well as of the government's structural readjustment policy, which sought to deal with the sectoral imbalances in China's economic system, such as the "[...] overaccumulation in heavy industry [...] overemphasis within heavy industry on metallurgical and machine-building industries [...] the neglect of critical [infrastructure] bottlenecks" (Brødsgaard, 1983, p. 260). Ma Hong 马洪 – the founder of the Institute of Industrial Economics at CASS – notably argued that the underdevelopment of the country's agriculture and consumer goods producing light industry, were to a significant degree caused by the PRC's previous over-emphasis on heavy industry (H. Ma, 1979a, 1979b). To address these structural imbalances, economists called for a shift towards light- and labor-intensive industries, while technologically modernizing the country's heavy industry sector (H. Ma & Wu, 1982; S. Zhang, 1981). In that context, industrial policy was widely regarded as the primary policy instrument for achieving structural economic change (Y. Dai, 1987; Z. Yang, 1987b). At the same time, disagreements within both economic policymaking and academic circles on the concrete direction of the country's structural transformation remained. On the one side, the necessity to accelerate the development of heavy industries, in particular selected 'leading industries' 主导产业 like machinery and steel, so as to drive the modernization of the country's industrial complex was emphasized (L. Zhou et al., 1987). In particular, the swift development of agriculture and light industry at the detriment of heavy industry following the initial readjustment policies of the late 1970s led to growing concerns among economist regarding the slowdown in heavy industry development (Brødsgaard & Rutten, 2017, pp. 68–69). On the other side, the agricultural sector was regarded as too fragile to sustain an expansion of the country's industrial sector (Z. Yang, 1987a). However, across these disagreements, the need to redirect industrial policy towards tackling energy, transport and communication infrastructure bottlenecks was widely recognized (H. Ma & Wu, 1982; Sheng, 1988; Z. Yang, 1987a, 1987b).

This close association between industrial policy and structural economic policy was subsequently reflected in the first incorporation of the concept of industrial policy within a major policy document: the 7th Five-Year-Plan (1986–1990). The plan's second section entitled 'Industrial structure and Industrial policy' (transl. by author) lists several 'Directions and Principles for Industrial Readjustment' (transl. by author) including the development of agriculture, the coordinated expansion of energy and raw material industries as well as processing industry, the support for transport infrastructure development, the growth of the tertiary service sector, as well as the technological upgrade of traditional heavy industry (PRC State Council, 1986, pp. 314–315). Later on, with the emergence of high-inflation during the last two years of the 1980s and structural imbalances worsening, in particular a weak agricultural sector as well as raw materials- and basic industries (Zhu, 1990), the role of industrial policy as an instrument for the central government to push for structural readjustment was reinforced. Conservative policymakers, which regarded "[...] inflation but a symptom of more fundamental structural imbalances, [and] sought to further increase its [central government's] control over economic activity" (Brødsgaard & Rutten, 2017, p. 85), gained power within the central leadership in the wake of the Tiananmen protests amidst the conservative turn or interlude from 1989 to 1992. A few months prior to that, the 'Decision of the State Council on the main points of the current industrial policy' (PRC State Council, 1989, transl. by author) markedly listed industries, which were to be 'supported', 'restricted' or 'discontinued'. Such a strengthening of structural industrial policies was notably welcomed by economists, who considered early market reforms, such as the expansion of enterprise autonomy and decentralization of economic authority to local governments, as being at the origin of the 1980s structural imbalances (J. Yang, 1989a, 1989b; Z. Yang, 1989). The conservative policies did, however, not obtain unanimity. Indeed, Jin Bei 金碚, while not directly opposing the conservative leadership's measures, contended that the strengthening of industrial policy represented a passive reaction to structural imbalances, which had their origin in incomplete market reforms, most notably the unfinished price reform. In that sense, although in the short-term increased central government intervention was needed to address distorted prices, i.e inflation, in the long-term a deepening of market reforms was imperative (Jin, 1989).

Integrating the market into economic governance

Besides structural readjustment, early reform-era debates on industrial policy centered on the role of industrial policy in integrating market allocation mechanisms within the PRC's economic governance. Markedly, industrial policy was understood as a macroeconomic instrument through which governments are able to perform targeted interventions based on market mechanisms (L. Zhou et al., 1987). Going even further, Sheng Hong 盛洪 – subsequently a founding member of the market-liberal think-tank Unirule – contended that “industrial policy is not simply a recognition of the market system’s status-quo, but also about promoting the development and improvement of the market system” (Sheng, 1988, p. 36, transl. by author). Industrial policy was seen at the outset by Chinese economists as an intricate part of the PRC's reform agenda, specifically with regard to the gradual transition away from the Maoist-era planned economic system towards a more market-based economy. In this context of system transition, it was not only regarded as an avenue for combining economic planning and markets, but also for changing the nature of government intervention. Indeed, economists, such as Wang Huixiong from the Development Research Center of the State Council, argue that industrial policy marks a shift from “planning through command” towards “planning through guidance” (H. Wang et al., 1990, p. 29, transl. by author). Specifically, this entailed a transition from microeconomic governance, in which the government directly intervenes into the decision-making of enterprises, towards macroeconomic steering.

This understanding of industrial policy as a synthesis of economic planning and market allocation quickly emerged as a widely shared consensus throughout policymaking and academic circles in the second half of the 1980s. Indeed, the 1989 state council's decision stated that industrial policy is “organic integration of planning and market”, as well as “basis for macro[economic] regulation” (PRC State Council, 1989, p. 1). As Jiang Xiaojuan 江小涓 argues, industrial policy represented an acceptable form of government intervention for both supporters of planned economy and advocates of market economy (Jiang Xiaojuan in H. Chen, 1997). However, the scope of markets' role remained the topic of extensive discussion during the last years of the 1980s and first years of the 1990s. In regard to industrial policy, two views on the relationship between markets and government intervention can be distinguished: first, industrial policy compensating for the underdevelopment of China's market system; second, improving the country's market system as precondition for efficient industrial policies.

On one side, the underdeveloped state of markets in China was thought to render the usage of industrial policy necessary, so as to compensate the distortions caused by the former. Tellingly, Dai Yuanchen writes: “industrial policy is necessary precisely because of market imperfections” (Y. Dai, 1991, p. 80, transl. by author). Moreover, stronger state intervention in the form of industrial policy was called for to manage the conflicting co-existence between the ‘old’ state-owned planned economy and the ‘new’ market economy (L. Zheng, 1989), as well as to direct economic development through long-term strategies (Z. Zhou & Yu, 1989). This view is closely linked to the debate on industrial policy’s role in structural readjustment. In fact, structural imbalances were judged to be partially caused by market distortions and thus as necessitating an industrial policy response (J. Yang, 1989a; Z. Yang, 1989).

In contrast, other economists contended that in order for industrial policy to function a substantial strengthening of market mechanisms was required. Specifically, the gaps in the price reform and associated distortion of price signals were seen as the cause for industrial policy’s failures (Z. Yang, 1987b). Importantly, the usage of industrial policy as a mean for state intervention was generally not opposed. Rather the necessity of first establishing functioning markets for achieving a transition towards macroeconomic governance was emphasized. For instance, according to Jiang Xiaojuan, “[...] in the case of defective markets [...] it is not possible to respect market choices. Only price reform can resolve [the contradictions between] government and market [...]” (X. Jiang, 1991, p. 15, transl. by author). Correspondingly, in opposition to scholars, who viewed industrial policy as an answer to structural imbalances caused by market distortions, market reforms were seen as the primary solution to structural imbalances (Sheng, 1988). In addition, while the first group of economists, which emphasized the role of industrial policy in compensating for market deficiencies, tended to see industrial policy as a (partial) substitute for dysfunctional markets, this group argued for market to become the primary channel of resource allocation and economic governance.

Arguably, these two views are not completely antagonistic. First, economists, such as Yang Zhi and Dai Yuanchen, have at different times emphasized the need either for deepened market reforms to address industrial policy failures (Y. Dai, 1987; Z. Yang, 1987b) or for strengthened industrial policy to counter balance market distortions (Y. Dai, 1991; Z. Yang, 1989). Arguably, this is indicative of a changing economic environment⁶, as well as a

⁶ See Oppers, S. E. (1997). Macroeconomic Cycles in China (WP/97/135; IMF Working Paper).

pendulum swing in the political climate during the conservative turn after June 1989. Second, for other scholars both aspects should be pursued simultaneously. In particular, government economists contended that the strengthening of market mechanism should be combined with the modernization of economic planning. As such industrial policy is “[...] aimed at development, [but] guaranteed by reform [...]” (Industrial Policy Research Group – Development Research Center of the State Council, 1988, p. 5).

Controversies over Japan’s industrial policy experience Following wide-ranging interruptions during the Cultural Revolution (1966–1976), the first decades of the reform-era saw intensive exchange between Chinese economists and international experts. In the context of industrial policy, Japanese economists and policymakers played a major role. Notable examples include an academic delegation led by the economist Hisao Kanamori in 1980 (X. Zhou, 1980), an academic exchange conference including the influential economist Ryutaro Komiya in 1983 (Ding, 1984), or a visit of the director of Economic Research at Kyoto University, Hisao Onoue, and the director of the economic research institute of Japan’s economic planning agency, Masao Baba, in 1984 (Ge, 1985).

These international exchanges spurred a lively debate on the Japan’s industrial policy experience and its implication for China. On the one hand, Japan’s industrial policy was seen as having been largely successful in accelerating Japan’s development by enabling the country to expand the size of its enterprises as well as to rapidly upgrade the technology of its industry (H. Chen, 1990). On the other hand, the effectiveness of Japan’s industrial policies was attributed to their less market intrusive approach (W. Zhang & Cheng, 1988) and a competition spurring effect (Xin, 1990). Correspondingly, scholars argued that the role of government intervention should be confined to protecting property rights and ensuring fair competition, providing information on the macroeconomic environment, as well as fostering public-private collaborations through policy consultation processes.⁷ As with the debate on the role of markets, the discussion on Japan’s industrial policy also saw the emergence of a middle ground. For Yang Mu 杨沐 – (co-)author of two impactful books on industrial policy at the end of the 1980s – Japan’s industrial policy was characterized by both an active developmental effort to reshape the country’s industrial structural change, as well as an

⁷ This view was notably disseminated within China by the Japanese economist Ryutaro Komiya (in Chinese 小宫隆太郎), who established contacts with major Chinese economic scholars in the beginning of the 1980s (Ding, 1984; F. Jiang & Li, 2018c, pp. 75–76).

overall enhancing of market mechanisms (M. Yang, 1987). China's industrial policy should, hence, both actively accelerate the country's industrial development through the support of specific industries, as well as more generally foster the vitality and autonomy of enterprises through deepened market reforms.

Property regime – Transforming state intervention amid SOE reforms and emergence of private economy

Early Chinese industrial policy debates on the relationship between industrial policy and market reforms were held on the background of a fundamental transformation of China's property regime, which swiftly transitioned away from the Maoist monolithic state-owned economic structure. In fact, the first decade of the reform-era saw the simultaneous absolute expansion of state capital, as well as the beginning of its relative decline within industrial sectors and especially commodity sectors. While the industrial output by state-owned assets more than tripled between 1978 and 1991, its share within China's total industrial output decreased during the same time frame from 77.3% to 52.9% (National Bureau of Statistics of China in Naughton, 1995, p. 331). At the same time, collectively-owned enterprises, in particular Township and Village Enterprises (TVEs), accounted for an increasing share of industrial output – from 22.7% to 35.7%. In addition, private enterprises, in particular rural ones, began to appear: their share of industrial output rose from 0% to 5.7%. This number is, however, greatly underestimated as many de-facto privately-run enterprises registered as collective enterprises in order to both circumvent restrictions imposed on the private sector and to benefit from the state (Z. Guo et al., 1992). Overall, the first decade of the reform-era, thus, saw a diversification of the PRC's industrial property structure, markedly through the burgeoning of a private industrial sector, as well as the relative decline of the state sector. This was also reflected in the country's reform of its regulatory property regime. In fact, early reforms between 1978 and 1982 aimed at overcoming the unitary state-owned property regime by establishing non-state-owned actors as a complement to the state sector. This was further strengthened in the second half of the 1980s with different property types being regarded as 'co-existing' and 'co-developing'. At the same time, the state sector underwent initial reforms aimed at spurring economic growth: first, reforms on enterprise autonomy and on profit retention intended to revitalize state-owned assets, second, economic power was decentralized to lower government levels (Xiao & Quan, 2018a, 2018b).

Significantly, these drastic changes in China's property regime were regarded as demanding a transformation of the country's government intervention approach. The reform of the state sector, notably the increase in operational autonomy for state-owned enterprises as well as decentralization of economic power to local governments, was thought to further accentuate the need for a shift away from microeconomic steering towards macro-economic control (L. Zhou et al., 1987). Tellingly, Yang Jianmin asserts that the decrease in fixed-asset investments directly controlled by the central government has led to the weakening of the state's direct economic controls and thus necessitates the strengthening of industrial policy instruments (J. Yang, 1989a). Moreover, the emergence of non-state-owned enterprises, notably private enterprises and de-facto privately managed TVEs, highlighted the need for novel intervention channels. In that context, industrial policy was seen as an instrument to enable the state to guide investments of non-state actors (Z. Guo et al., 1992). As will be shown later on (see section II. ii), this understanding of industrial policy as facilitating the integration of private economic actors into the state's economic governance will be greatly amplified following the rise of the private sector in the late 1990s and early 2000s.

ii. 1993-2004 – Socialist Market Economy and Globalization

While the political fallout following the Tiananmen protest in 1989 shifted the political balance of power towards the party-state's conservative factions,⁸ Deng Xiaoping's Southern Tour in the early months of 1992 initiated a swift return of political momentum in favor of market reformers. This had substantial effect on the debates surrounding industrial policy. Significantly, with the establishment of 'Socialist Market Economy' as China's core paradigmatic concept at the party's 14th congress in October 1992, the fundamental role of markets as a resource allocation channel was consolidated (Xiao & Quan, 2018d, p. 310). At the same time, the state's role was limited to macroeconomic regulation as opposed to previous microeconomic interventions (Xiao & Quan, 2018c, p. 589). Rather than marking the demise of economic planning, this signaled a reorientation of state intervention towards "plan[ning] with and for markets" (Heilmann & Melton, 2013, p. 584). In all, the return of market reformers, amplified previously existing ideational strands within the industrial policy debate: from now on, market allocation was regarded as the mechanism underlying industrial policy, while the state was seen as a macroeconomic regulator.

⁸ The early-reform decades saw the emergence of two policy-making factions: conservative- and market-reformers. Crucially, while the former did not fully oppose market reforms, these were regarded to only play a "supplementary role" within the economy (Brødsgaard & Rutten, 2017, pp. 94–95).

Gradual market-orientation and transformation of the industrial policy approach

In line with the reinvigorated reform momentum in the wake of the CCP's 14th party congress, economists sought to reflect on the PRC's industrial policy approach of the 1980s. This manifested itself into a general reevaluation of the state's role within industrial policies and a call for a gradual reduction of overly sprawling structural industrial policies.

First, the reevaluation of the government's role was primarily driven by the swift deepening of market reforms. Despite the country's market scope having expanded continuously and having partially departed from microeconomic command, economic planning still remained intrusive. China's state intervention approach of the 1980s, thus, seemed inadequate and ineffective to many economists. In this context, Jiang Xiaojuan 江小涓 – a prominent government economist working at CASS' Institute of Industrial Economics and later between 2004 and 2018 at the State Council – played a major role. In an influential article published in 1993, she notably used Public Choice Theory to analyze the reasons behind the difficulties in the formulation and implementation of industrial policies, including the former interest divergences between different government agencies and the latter inconsistencies within and across different policies and the lack of adequate implementation means (X. Jiang, 1993b). Importantly, according to Jiang, the central barrier hindering the implementation of industrial policy was the state's inability to correctly incentivize economic actors, including both government and market actors. At the articles core, Jiang sought to bring about a fundamental shift in the understanding of the role of state intervention within an economy where markets would serve as the primary resource allocation channel. As she later reflected upon, her aim at the time was to change the widely shared consensus on state intervention, which stipulated that a policy failure was not due to the government's incorrect decision but to individual economic actors pursuing their own interest. In her words: at that time most people thought that „ [...] only the government is right. If a government decision's final result isn't good, then it's the fault of others not having listened to the government“ (Jiang in X. Zhang, 2020, Section 0:48–0:53, transl. by author). On the contrary, within a market economy, economic actors should be expected to pursue their economic interest. Hence, industrial policies and more broadly government intervention should, she argued, factor in and seek to shape the incentive structure of individual market actors, rather than simply opposing it.

Within industrial policy debates, the call for fundamental market reforms were greatly amplified in the years following the 14th party congress in 1992. Revealingly, Lü Zheng 吕政 argued that “[...] the focus should be put on the establishment of economic [market] mechanisms that can ensure the realization of industrial policy” (Lü in Lü et al., 1993, p. 43, transl. by author). Yet, advancing beyond the debates of the 1980s, the discussion’s center increasingly shifted towards the importance of fair market competition and the government’s role in ensuring it. According to Jiang Xiaojuan, establishing fair market rules had become the state’s new responsibility (X. Jiang, 1993a). This did not imply completely abandoning industrial policies. On the contrary, establishing fair competition was deemed to be the necessary precondition for industrial policy (K. Li, 1993). However, economists also widely agreed upon the fact that this would necessitate a gradual transformation of China’s industrial policies, both in scope and nature. First, the restriction of *selective* industrial policies, which entail a selective support of either specific goods, technologies, or companies, to certain sectors was seen as necessary, so as to allow for the deepening of market reforms within the rest of the economy. This was all the more necessary as previous structural industrial policies tended to be too expansive (X. Jiang, 1996). Second, the need for a gradual shift towards *horizontal* industrial policies aimed at improving the competitiveness of all enterprises across all industries and more generally for increased government investment into public goods was pointed out (K. Li, 1993).

Emergence of a strategic turn: pillar industries and large-scale enterprises

Aside from the support for systemic market reforms, the push for a redirection of industrial policy efforts into specific industries with strategic significance for China’s long-term development grew among Industrial Economics scholars. Markedly, Hu Changshun 胡长顺 maintained that, with light consumer goods industries having rapidly expanded during the 1980s and key heavy industries lagging behind, key strategic industries should be selectively supported and protected so as to create national pillar industries 国民经济的支柱产业 (Hu, 1996). For this, he contended, a strengthening of China’s industrial policy effort was necessary. Later on, a strategic prioritization of digital infrastructure and high-tech industries, such as IT and biotech, was called upon (B. Wang, 2001). This ‘strategic turn’ in the directionality of industrial policy was also reflected in the country’s policies. Indeed, the State Council’s ‘Outline of the National Industrial Policy for the 1990s’ published in April 1994 lists the promotion of pillar industries, which include mechatronics, petrochemical, automobile

and construction industry, as a policy priority (PRC State Council, 1994). In addition, one month prior to that, the State Council had already published an ‘Industrial policy for the automobile industry’ (S. Li, 2000). The scope of encouraged sectors were subsequently further enlarged, as well as specified in detail in a circular of the State Council in 1997, which lists 440 products and technologies within 29 different priority sub-industries (PRC State Council, 1997).

In many ways this ‘strategic turn’ echoes the previous support for developing leading industries in the context of industrial structural change (see Section II. i). Yet, in contrast to the 1980s, the debate’s focus in the 1990s shifted from changing the sectoral structure of the economy (primary-agricultural, secondary-industrial, tertiary-service sector and light or heavy industry) towards transforming the organizational structure within specific industries to increase its competitiveness.⁹ Specifically, large-scale enterprises should be fostered in order to benefit from economies of scale effects (W. Sun & Wu, 1994). Indeed, China’s pillar industries were seen as too dispersed and lacking enough large actors. The rationale behind the establishment of such large-scale enterprises was two-fold: they were seen as essential, on the one hand, for modernizing the country’s old industrial base as well as developing new pillar industries, and, on the other hand, for withstanding global competitive pressure as well as eventually to compete internationally (Hu, 1996; Q. Wu & Li, 1994). In that context, Jiang Xiaojuan suggested that industrial policy should seek to facilitate consolidations within pillar industries through mergers and acquisitions, as well as actively upgrading the technological level of these new ‘core enterprises’ 骨干企业 (X. Jiang, 1996).

Entering the global economy: attack as the best defense

The other key challenge shaping discussions on industrial policy was the Chinese economy’s integration into the global economy during the 1990s, which accelerated amid the country’s World Trade Organization (WTO) entry in 2001. In particular, the increased competitive pressure of foreign enterprises on the country’s industrial base was cause for concern. This contributed to the call for industrial consolidations to create large-scale enterprises able to compete internationally (X. Jiang, 1996; S. Li, 2000; Yong, 1996). More generally, economists

⁹ It should be noted that the necessity to increase the industrial concentration and scale of enterprises within key heavy industries, such as machinery industry, was already emphasized by several economists in previous years (Y. Dai, 1991; L. Zhou et al., 1987, p. 198). This line of argumentation was subsequently amplified during the 1990s and redirected towards pillar industries.

stressed the urgency of accelerating the technological upgrade and development of innovation capabilities throughout the economy (Fan & Fang, 2003; X. Jiang, 1996; S. Li, 2000; B. Wang, 2001).

In this context, the role of industrial policy was seen as both defensive and offensive. On the one hand, targeted trade protection policies should shield ‘infant’ and strategic pillar industries or important uncompetitive sectors, such as the agriculture and the service sector, from global competition (X. Jiang, 1996; S. Li, 2000). Similarly, the consolidation of large-scale enterprises was essentially intended as “[...] a means of mitigating the attendant risks of China’s linking up with the global economy” (Eaton, 2015, pp. 36–37). On the other hand, an active promotion of key industrial sectors and large-scale industrial groups within them was increasingly deemed essential. Decisively, Wang Bin wrote: “[...] The era of economic globalization is an era of attack. An enterprise of industry that cannot dynamically expand its international market share will not be able to dominate the domestic market – the principle of ‘attack as a means of defense’ is the principle of this era [...]” (Y. Wang, 2002, p. 74, transl. by author). In that, industrial policy support should enable enterprises to compete internationally as well as to gradually rise within global value chains and on the technological ladder.

In all, rather than solely being a mitigating strategy, industrial policy was widely regarded as a channel to actively shape China’s integration into the global economy and to gradually improve its position within the reconfiguring global value chains. Arguably, this consensus on industrial policy’s role in actively shaping the country’s international integration evolved parallel with a reassessment of the risks associated with globalization during the latter half of the 1990s. In particular, the 1997 Asian Financial Crisis (AFC) revealed the “[...] threats that global economic forces posed to national economic security crises [...] as well as the “[...] severe imbalances and inequities continued to persist in the international system.” (Y. Deng & Moore, 2004, p. 37). As will be discussed in the next section, this reassessment of globalization has gained a novel impetus in the years following China’s entry into the WTO, as well as the 2007/8 Global Financial Crisis.

Asian Financial Crisis: between structural crisis and industrial policy failures

Within industrial policy debates, the topic of the Asian Financial Crisis was not so much linked to a reassessment of globalization but rather to the role of industrial policy in either providing

a possible solution or having been the root cause of the crisis. On the one hand, the AFC was deemed to having been caused by structural growth obstacles. Less-developed countries, such as Thailand, Indonesia or Malaysia, were seeking to forcefully shift away from low value towards higher value industries, which led to serious imbalances in their economic structure; at the same time, their traditional investment-led growth model was losing in momentum (Du, 1998). As such the crisis was triggered by uncompleted structural transitions. For others, failures in government intervention, including ill-planned industrial policies, overreliance on scale effects and disregard of competition, were at the origin of the crisis (Y. Zhang, 1998). Importantly, both of these argument strands drew direct parallels to China's situation. The former saw China in the midst of a difficult structural transition, in response to which the government should enact industrial policies to accelerate industrial reorganizations, facilitate technological upgrading and increase innovation capabilities (Du, 1998, 2000). The later, in contrast, contended that China's government interventions were also largely ineffective and should thus shift towards 'soft', 'non-discriminatory' industrial policies. Moreover, limiting the usage of selective industrial policies was regarded as needed (Lin et al., 1999; Y. Zhang, 1998).

In that, above discussions on the role of industrial policies in the AFC mirror the broader industrial policy debate throughout the 1990s and early 2000s: while, on the one hand, the role of government intervention was reassessed in the light of deepening market reforms, on the other hand, a consensus on the need to refocus and strengthen its policy effort onto key strategic sectors to accelerate China's structural transition emerged. Importantly, the simultaneous reform of the country's industrial policy approach – materialized notably by the emphasis on fair competition – and intensification of policy efforts into key pillar industries was often not seen as antagonistic. Indeed, advocates of industrial policy reforms, such as Jiang Xiaojuan, agreed on the necessity to foster the development of key pillar industries through selective industrial policies. As such, the redirection of industrial policies efforts into these industries was seen as compatible with the call for reducing industrial policy's scope. At the same time, the need for deepened market reforms was consensual among proponents of 'strategic' industrial policies. However, following the swift expansion of industrial policies within strategic sectors in the subsequent two decades, especially following the 2007/8 Global Financial Crisis, and lagging reforms in the country's industrial policy approach these debates became more controversial.

Property Regime – Leveraging the private economy and adapting the state sector to the market economy

The end of the conservative interlude also marked the acceleration of China's property regime reforms. On the one hand, the position of private enterprises as regular market actors was further strengthened. In particular, the 'Decision on several issues concerning the establishment of a Socialist Market Economic System' published at the CCP's third plenary session of the 14th central committee in 1993 announced the leadership's intention to enable "all-kinds of property" – thus also private enterprises – to participate in market competition on an equal footing (CCP Central Committee in Xiao & Quan, 2018a, p. 133). Correspondingly, the following decade saw the swift expansion of the private enterprises within industrial sectors. Tellingly, in 2003 the gross industrial output value of private enterprises surpassed those of state-owned enterprises (National Bureau of Statistics of China, 2004). In that context, the debates on the role of industrial policy discussions within an industrial system with different property types was amplified. Especially, its importance for regulating and guiding private enterprises within an increasingly market oriented economy was underlined. Pan Yue (1996), markedly, argued that given the decrease in industrial state capital, especially for those enterprises directly controlled by the central state, a shift in the state investment approach was essential. Specifically, rather than relying solely on investments by SOEs, 'social investment' 社会投资, i.e. assets not directly controlled by the state, should be mobilized (Pan, 1996). In that context, industrial policy was thus increasingly seen as an instrument to channel the growing non-state industrial capabilities for the development of China's economy.

On the other hand, SOE reforms became the center of economic policy-making. In 1994, the reform of the Modern Enterprise System 现代企业制度 aimed at "adapting [SOEs] to a market economy" by further delimitating property rights, clarifying different types of corporate systems and separating corporate decision making from direct state intervention was introduced (CCP Central Committee, 1993). This also found an echo in industrial policy debates: while for some economists these reforms were necessary for the development of markets (Bao Qubing in Lü et al., 1993), others argued that the marketization of SOEs was essential for improving their competitiveness and innovative capabilities (S. Li, 2000) or for increasing the efficiency of macro-economic governance instruments, notably industrial policy (K. Li, 1993).

Later on, during the late 1990s, a campaign to consolidated SOEs into larger industrial groups while divesting smaller, unprofitable SOEs was launched, known as the strategy of ‘grasping the large, letting the small go’ 抓大放小. This reorganization was aimed at both addressing the mounting debt-problem within the state sector, as well as establishing large-scale industrial actors in important pillar industries able to compete domestically as well as internationally. In that, the SOE reforms mirror the ‘strategic turn’ in industrial policy discussions, markedly the focus on promoting pillar industries and large-scale enterprises, as well as the related call for a reduction in China’s selective industrial policy scope. Eventually, the consolidation campaigns during the second half of the 1990s resulted in a significant reduction of the state importance within China’s industrial structure. Between 1998 and 2005 the state sector’s share of the gross value of industrial output continued to decrease from 49.6% to 32.5% and its share in the total industrial assets declined from 68.8% to 48.1%. At the same time, however, the solvency of state sector improved slightly: its share in the total industrial profits rose from 36% in 1998 to 44% in 2005, while the ratio of debts to assets decreased from 62% in 1999 to 56.7% (National Bureau of Statistics of China, 2013). Interestingly, these developments spurred two overlapping debates on the relationship between the state- and private sector: first, during the second half of the 1990s discussion on the liquidation and privatization of state assets – so-called ‘state retreats, private economy advances’ 国退民进. This culminated in a fierce controversy between New Left scholars opposing the weakening of the state sector and (Neo)liberal economists in favor of widespread privatization (see Qian Zhao, upcoming SFB Working Paper). On the other hand, the consolidation of SOEs in key industrial sectors – pillar industries – spurred debates on the expansion of the state sector at the beginning of the twentieth century. As Zhou Li’an 周黎安 points out, “[...] central SOEs hold over some monopolistic and strategic industries, and their rapid expansion therein, caused concerns within the society about the ‘state advancing and private economy retreating’ [国进民退] [...]” (L. Zhou, 2018, p. 7).

Overall, during this period the reform of the state sector was regarded as essential for the effectiveness the country’s emerging industrial policy arsenal. This included both the marketization of SOEs through property rights reforms, as well as the consolidation of state assets to withstand worsened domestic and international competitive pressure. As with the debates on reforming the PRC’s industrial policy approach by simultaneously reducing its scope as well as intensifying its impact within pillar industries, these two aspects – marketization and consolidation – were at this point often not regarded as being

contradictory. Moreover, such a revitalization of the state sector was advocated for, given the importance of SOEs as primary channels of industrial policy and major vehicles to attain development goals. As Han Xiaoming states, “[...] the operation of state-owned capital is one the powerful means to achieve the government’s economic objectives, especially industrial policy objectives.” (X. Han, 2001, p. 24, transl. by author). Arguably, since the inception of the PRC the state sector has been at center of the state development strategy. Yet, with the diversification of the country’s industrial property structure, the preeminent role of the state sector became less evident and controversial. Indeed, the subsequent decade witnessed a widespread debate on the PRC’s industrial policy bias towards the state sector.

iii. 2005–2012: Global Value Chains and Global Financial Crisis Stimulus

The beginning of the 2000s witnessed a growing critique among economists vis-à-vis China’s high-growth model. The harmful consequences of the country’s rapid development, such as increasing regional and socio-economic inequality or wide-spread pollution, became the center of attention. These concerns were particularly voiced by economists from the New Left movement, who emphasized the need for economic and social equality (Qian Zhao, to be published). Furthermore, the fundamental mechanics of China’s high-growth development model were increasingly reflected upon. Especially, the reliance on extensive growth rather than intensive, that is the expansion of new production capabilities instead of the enhancement of existing capabilities’ productivity, as well as dependence on export-led growth at the expense of domestic demand was put into question (Brødsgaard & Rutten, 2017, p. 135). On that background, economic debates on industrial policy increasingly centered on its role in either enabling a change in the country’s growth model notably through an expansion of innovation capabilities or on the contrary impeding it by perpetuating an extensive development approach.

Reassessing China’s position within the global economy

In the years following China’s entry into WTO, the country’s integration into the global economy was increasingly reflected upon. The detrimental effects associated with its position within the low-end of the global value chains as the world’s factory were emphasized. In particular, the inability of processing trade to achieve an industrial upgrade was pointed

out (C. Lu & Zhen, 2008). Manufacturing enterprises active in processing trade were seen to be unable to expand into upstream production segments, such as R&D activity, or downstream activities, such as brand marketing (J. Chen & Wang, 2005). This was reflected in the concept of the lock-in effect within low-value sectors ‘低端锁定’: Chinese manufacturers found themselves restricted to low-value processing activities with foreign multinational enterprises controlling high-value production segments, such as high-tech inputs, industrial machinery and R&D activities (Lü & Zhang, 2006). Besides being ‘locked-into’ low-value segments of the global value chains, China’s export industries were also seen as being subject to increasing competition from other developing countries seeking to integrate the lower end of global value chains. More fundamentally, China’s export-led growth model was regarded as having reached its limits given its impeding effect on the growth of non-export industries and over-reliance on foreign demand (X. Jiang, 2004; C. Lu & Zhen, 2008; Zheng Xinli in M. Zhang, 2009, p. 112).

This critique of China’s existing integration into the global economy materialized into a call for a more activist industrial policy, especially with regard to high-tech industries. In order to break from the low-end of value chains the innovation capability of China’s industrial base was to be strengthened. More importantly, the control over and development of strategic industries, including energy, IT and high-tech military equipment, had to be secured (Lü, 2004). For that, industrial policy support was regarded as essential. In particular, according to Yang He Xiang 杨合, the fiscal support to enterprises should be expanded to accelerate the development of innovation capabilities along with the scope of public procurement for high-tech industries, especially industrial equipment manufacturers (H. Yang, 2008). Analogously, the establishment of R&D centers, especially within large scale industrial groups, was supported (X. Ma, 2005). In all, the reflection on China’s integration into the global economy amplified the previous view of industrial policy as an instrument to actively shape this integration, as well as the ‘strategic turn’ of the country’s industrial policy debate. As Gu Jianguang 顾建光 contended, with “ [...] China's high degree of openness to the outside world and foreign dependence having led to a certain passivity in the country's economic development [...]” (J. Gu, 2009, p. 35), the country needed to follow active economic policies, including industrial policy, so as to secure its long-term development.

Emerging industries: the state's role in fostering innovation

Importantly, despite widespread agreement among economists on the expansion of industrial policy in high-tech and emerging industries, its concrete role in fostering innovation capabilities remained a subject of debate. Overall, the need for enhanced industrial policy guidance was emphasized (Q. Huang, 2012; H. Yang, 2008). On the one hand, given the multiplication of national sectoral industrial policies as well as diverging local industrial policy approaches a comprehensive national industrial strategy was deemed essential. On the other hand, sectoral industrial policies were seen as lacking a systemic outlook on the whole value-chain. For instance, policies supporting the photovoltaic industry (PV) were driven by a multitude of government institutions, which pursued different aims (L. Yu & Yu, 2012). For that, the central government was called on to develop novel state capacities in formulating and implementing industrial policy capacities. In particular, central state institutions were viewed as lacking necessary institutional expertise and administrative personnel. As Lu Feng 路风 and Cai Yingying 蔡莹莹 stated, China's “[...] [central] government capacity for industrial administration was significantly weakened [during the first 30 years of the reform-era], and the weaker the capacity the more it relied on economic planning and commanding” (F. Lu & Cai, 2010, p. 38).

Crucially, besides the necessary expansion of state capacities, the government's intervention approach was seen to be in need of a systemic transformation. In particular, the focus on economies of scale materialized through the establishment of large-scale enterprises was increasingly regarded as detrimental to the expansion of innovation capabilities and market competition. In light of this, a shift from ‘competition in the market’ between a number of selected large-scale enterprises towards ‘competition for the market’ with free market entry was advocated for (F. Jiang & Li, 2010). Besides this, previous discussions on a reform of China's industrial policy approach were continued throughout the 2000s. These discussions included contemplations on restricting the scope of selective industrial policies, as well as ideas of transitioning towards horizontal competition-enhancing policies (Jin Bei in X. Cao et al., 2007, p. 118; H. Li & Zhang, 2009; S. Zhou et al., 2008) (see Section II. ii). Tellingly, Ma Xiaohe called on the government to act as a ‘referee’ rather than an ‘athlete’ by refraining from directly investing into and to instead provide public goods (X. Ma, 2005). This push for reform was later amplified in wake of the expansion of selective industrial policies amidst the Global Finance stimulus.

The aftermath of the Global Financial Crisis stimulus

The rapidly falling global demand caused by the Global Financial Crisis (GFC) prompted the Hu-Wen administration to launch a series of stimulus packages, most notably the so-called four-trillion RMB investment plan 四万亿投资计划 as well as an industrial revitalization plan 产业振兴规划 in 2008. While the former was mostly centered on infrastructure investments, the latter sought to accelerate industrial upgrade within a wide spectrum of industrial sectors ranging from steel to IT. Beginning in 2009, the effect of these stimulus packages became the center of economic debates. Overall, while they were credited with having had a positive effect in stimulating demand and thereby counterbalancing plummeting exports, their effect on industrial upgrade was seen critically (P. Li & Jiang, 2010; J. Wu et al., 2009). Indeed, most economists agreed that the stimulus packages largely failed in significantly improving China's technological capabilities. For instance, according to Li and Yao, while the industrial revitalization plan succeeded in swiftly expanding industrial production capabilities across the economy as well as the productivity in certain industries by increasing production scale, overall it largely failed in raising the technology efficiency and thus largely perpetuated the country's extensive development model (S. Li & Yao, 2010). The disappointing effect of the stimulus package was generally attributed to the overemphasis on direct government intervention and more specifically selective industrial policies. Markedly, for Li Ping 李平 and Jiang Feitao 江飞涛 the industrial revitalization plan "[...] continued the previous industrial policy tradition of planned economy [...]" which is characterized by direct interventions, large-scale substitution of markets and restriction of competition (P. Li & Jiang, 2010, p. 112, transl. by author). In response, a fundamental shift in China's industrial policy approach was regarded as necessary, particularly avoiding direct government interventions, shifting towards competition policy as well as horizontal industrial policies (F. Jiang & Li, 2010).

Importantly, the GFC-stimulus greatly expanded the importance of industrial policy within the country's economic policy-making. "Industrial policy and its protagonists moved to the center of Chinese economic policy" (Heilmann & Shih, 2013, p. 14). This had a significant effect on the country's industrial policy debate. First, industrial policy became the focal point of economic debates during the 2010s. With that, the intensity of industrial policy debates was greatly enhanced. As will be discussed in the next section, this culminated notably in a rare societal discussion on China's industrial policy at the end of 2016. Second, while industrial policy debates between the 1980s and early 2000s were largely dominated by

policy economists working either within government institutions or state-affiliated think-tanks, the subsequent discussions witnessed a broadening of the spectrum of participants. In particular, liberal market economists, which had previously largely focused on other research topics, such as privatization, took on a greater role.

Property regime – State retreating

Besides the reassessment the PRC's integration into the global economy, the late 2000s saw rising attention on the state- and private sector's roles within the country's industrial policies. The preferential treatment of SOEs and insufficient integration of private enterprises within industrial policies, notably in the midst of the GFC-stimulus, was widely pointed out and criticized (W. Deng, 2010, pp. 40–41). Gu Jianguang, markedly, remarks that the PRC's economy found itself faced with a dualistic structure: on the one hand, resource-monopoly industries were dominated by the state sector and closely aligned with the country's industrial policies, while export-oriented manufacturing industries in coastal regions, which were mostly privately owned, were much less integrated into the country's industrial policy efforts, notably in its strategy to develop autonomous innovation capabilities within its industry (J. Gu, 2009). More generally, the PRC's industrial policy approach was regarded as perpetuating unfair competition between the private and state sectors by discriminating the former (C. Lu & Zhen, 2008). Overall, while the state sector continued to be regarded by many scholars as an important vehicle for enacting industrial policies, the debates of the second half of the 2000s tended to underline the importance of ensuring fair competition between private and state actors. As will be discussed in the subsection paragraph, this will become a central aspect of the broad discussion on the reform of China's industrial policy following the global financial crisis.

The re-evaluation of Chinese industrial policies' reliance on the state sector was during this period further amplified by the former's disappointing performance. In fact, while SOE reforms brought about initial successes by reducing its profitability and indebtedness, the state sector witnessed setbacks during the second half of the 2000s. Specifically, the reduction of its ratio of debt to asset stagnated at around 56% between 2004 and 2007 and even rose in the years following to reach 61% in 2012. Similarly, its ratio of profits to total industrial costs declined 3.4 percentage points between 2007 and 2012 (National Bureau of Statistics of China, 2013). This spurred a debate on the reinvigoration of market-oriented SOE reforms, which also found an echo within the discussions on industrial policy. While

some authors contended that SOE reforms and adjustments in the country's industrial policy approach already had a positive effect on reducing market distortions, most economists agreed on the need to further deepen the reform of the state sector. For Qi Yudong (2009) the marketization of the state sector was still hindered by high market entry barriers in many state-monopoly sectors as well as the two-pronged governance structure of SOE, which induced them to both follow economic profitability and 'political' goals (Qi Yudong in M. Zhang, 2009, p. 116).

iv. 2013 – now: Reform of China's industrial policy approach

Quantitative evaluation of China's industrial policy

The 2010s witnessed the emergence of an intense academic debate on the results of China's industrial policies. In contrast to the previous debate on the GFC industrial policy stimulus, the primary research medium shifted from policy discussions and qualitative case studies towards quantitative studies assessing the efficiency of specific industrial policy measures as well as their secondary socio-economic effects (Y. Han et al., 2022). This 'quantitative-turn' in industrial policy debates mirrors a broader trend in Chinese economic research towards quantitative econometric research methods since the 2000s (Cheng & Qin, 2005). Arguably, this also reflects to the growing importance of industrial policy within the PRC's economic policy-making. With industrial policies having become one of the principal channels of government intervention during the 2000s, the importance of rigorously evaluating their effectiveness became more evident. As such, economists sought to study the effect of different industrial policies on the productivity of companies, their innovation capabilities, as well as more broadly on fostering a structural upgrade of the Chinese economy.

While the ability of industrial policies to allocate resources throughout the economy as well as within industries was agreed upon, their effect on the productivity of China's industry remained debated. On the one hand, studies find significant positive effects of industrial policies on industry's total factor productivity (TFP), i.e. growth which is not attributed to an increase in capital or labor input but rise in the technology level and economic efficiency (Song & Wang, 2013), as well as on the productivity of upstream domestic automobile suppliers thanks to vertical technology spill-overs (Tan et al., 2017). On the other hand, however, growing evidence of industrial policy's detrimental effect on enterprise productivity

is also presented, in particular in the form of TFP decreases in both labor- and capital-intensive industries due to overinvestments by enterprises (L. Zhang et al., 2019) as well as significant decreases in enterprise investment efficiency despite investment levels efficiency (W. Li & Li, 2014; K. Wang et al., 2017). In between these, a strand of studies indicate that the effect of industrial policy measures is contingent on the type of industrial policy. In particular, the effect of industrial policy on TFP was found to be depending on whether the policy promotes competition, i.e. results in a market concentration decrease (W. Wang et al., 2014) or whether policies promote a broadening of subsidy coverage instead of increasing their magnitude (X. Huang et al., 2015).

Mirroring this, the assessment of the effect on the innovation capability of companies also differs with some authors identifying positive effects on companies' R&D investments or the number of innovation patent applications (Y. Guo, 2018; G. Sun, 2018). In contrast, other scholars find no significant qualitative effects on innovation patents despite the overall increase in registered patents (W. Li & Zheng, 2016) or even manipulations in companies' R&D reporting directed towards receiving government support instead of actually pursuing R&D activities (G. Yang et al., 2017).

Lastly, the extent to which industrial policy has contributed to a general upgrade of China's industrial structure and more specifically export structure likewise remains contested. On the one side, provincial FYP industrial policies are observed to have spurred a general intra-provincial industrial upgrade – in particular in terms of a shift towards high labor productivity industries (Y. Han et al., 2017), as well as an upgrade in the country's export structure with respect to product quality, technological complexity and diversification (J. Zhang & Lu, 2018). In contrast to that, industrial policies designed at inducing industrial agglomerations have not been shown to significantly advance the upgrade of China's export structure away from processing trade (H. Shen & Gu, 2017), while others were observed to cause a decrease in industrial concentration and regional specialization due to detrimental competition between local governments (Y. Wu & Zhu, 2015; J. Yang & Luo, 2018). Lastly, as for the company's productivity, the effect of industrial policy on industrial structural upgrade was also found to be dependent on the type of pursued industrial policy. In particular, evidence of export upgrade, in terms of increased market share and product diversification, was only observed when the EPZ supported an industry for which a municipality's industrial concentration was

already above the national average, that it ‘followed the region’s comparative advantage’ (P. Zhang et al., 2019).

The identification of a wide variety of different effects should not come as a surprise given that economic scholars have evaluated different industrial policy channels – ranging from general industrial policy support through national or provincial FYP and national sectoral industrial policies to diverse industrial policy instruments, such as government subsidies or prioritized credit access – with different time-frames of analysis using various data sources. Although economists accounts on the impact of China’s industrial policy differ significantly, they agree – with only a few exception (see for instance H. Shen & Gu, 2017) – upon the need for pursuing industrial policies. In that, the PRC’s industrial policy does not center around whether China should or should not implement industrial policies but around different understandings of the type of industrial policy, which the state should pursue, policy suggestions for industrial policy reforms. Interestingly, the policy suggestions put forward by the authors of quantitative industrial policy evaluations show similarities.

Policy suggestions: policy framework, governance system and role of markets

Overall, the policy suggestions can be divided into three overlapping reform layers: i. the optimization of an industrial policy’s institutional framework, ii. the transformation of China’s central-local economic governance system, iii. the enhancement role of markets (see Figure 1).

The disappointing effect of industrial policies is often explained by the sub-optimal institutional framework of policies. This includes, in particular, the formulation of policies by notably taking into account different qualitative levels of innovation as well as focusing on supporting R&D projects with ‘high technological content’ (W. Li & Zheng, 2016), improving the targeting of policies towards ‘bottleneck technologies’ 卡脖子技术, i.e strategic technologies controlled by foreign enterprises (G. Jiang, 2022), or enhancing the selection process for the attribution of innovation subsidies (Y. Guo, 2018). In terms of policy tools, Wang Yong (2020) proposes to use tax reductions instead of government subsidies, as the former are less market-distorting (Y. Wang, 2020). Lastly, a growing number of economists argue for strengthening the policies’ monitoring process (Y. Guo, 2018; G. Yang et al., 2017; C. Zhang & Pan, 2012). Overall, these policy suggestions represent a continuation of Lu Feng and Cai Yingying (2010) call for developing novel state capacities, especially at the level of the

central government, to enable the country's expansion of industrial policies (see Section II. iii.).

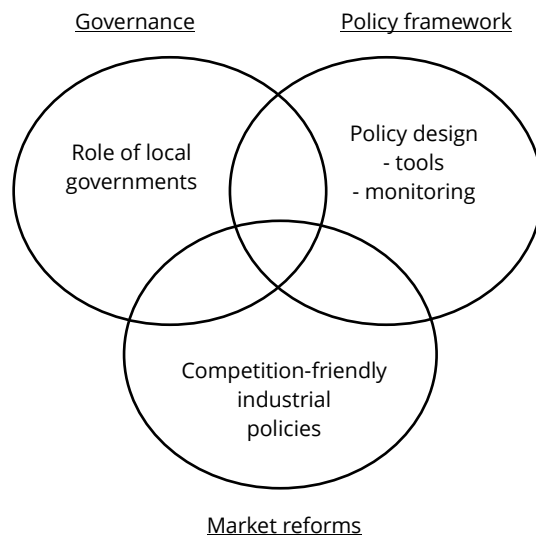
More fundamentally, industrial policy shortcomings are also traced back to the country's governance system. As Li Wenjing and Li Yaotao state, “[...] the effectiveness of China's industrial policy implementation does not depend solely on the objectives of industrial policy itself [...] [but] more on deep-rooted societal aspects, such as the political and economic [governance] system.” (W. Li & Li, 2014, p. 132, transl. by author). Importantly, the role of local governments, which given the intended vagueness of central government policies have enjoyed extensive discretion in the specific implementation of industrial policies, is seen critically. Indeed, local industrial policies are found to have not only favored short-term extensive economic growth investments over industrial upgrade (Z. Sun & Xi, 2015), but also impeded regional industrial concentration due to competition between local governments (J. Yang & Luo, 2018). On this background, a fundamental reform in the incentive structure of local officials – especially their GDP-centered assessment criteria – and through this of local government's economic role is regarded as essential for improving the efficiency of the country's industrial policies.

Besides expanding state capacities and transforming the country's economic governance system, the need for further deepening of market reforms is widely suggested. This is markedly established through the evidence found by economists on the detrimental effects of industrial policy decrease with the level of marketization (Qian et al., 2018; Z. Sun & Xi, 2015; Tan et al., 2017; J. Yang & Luo, 2018), while its beneficial economic effects are decoupled (Y. Han et al., 2017). At the same time, China's industrial policies' results are shown to have improved with the degree to which they facilitates competition through decreasing market concentration (W. Wang et al., 2014) or greater policy coverage (X. Huang et al., 2015; J. Zhang & Lu, 2018). On the basis of these findings, a growing number of economists advocate for enhancing the role of market mechanism within industrial policies. As for prior decades, this translates into a call for fundamental market reforms (R. Bai, 2016; K. Wang et al., 2017), as well as a shift from direct/vertical industrial policies towards indirect/horizontal industrial policies (X. Bai & Meng, 2018; F. Jiang & Li, 2018c; Qian et al., 2018).

Importantly, these three reform layers show a significant overlap. Firstly, calls for improving the institutional framework of industrial policy intersect with those for transforming the

country's economic governance system. For instance, Zhang Chun and Pan Liang (2012) argue for strengthening the central government's industrial policy's supervision mechanism as well as a systemically transformation of the role of local governments (C. Zhang & Pan, 2012). Secondly, other economists advocate for a simultaneous reform of the country's economic governance system away from GDP-centered and a deepening of market reforms (Z. Sun & Xi, 2015; J. Yang & Luo, 2018). Thirdly, the optimization of the country's policy framework is encouraged alongside market mechanism (W. Li & Zheng, 2016). Lastly, at the intersection of the three industrial policy reform layers, Hou Fangyu and Yang Ruilong (2018) support “[...] strengthening top-level design of the central government [...]”, “[...] redefining the relationship between central and local government levels [by] optimizing the incentives and constraints for local governments [...]”, as well as both deepening market reforms and shifting the country's industrial policy approach towards being competition-enhancing (Hou & Yang, 2018). In that these three reform layers do not represent distinct advocacy coalitions. However, across these layers groups of economists emphasize either different reform layers or different aspects within a reform layer.

Figure 1: Overlapping industrial policy reform layers



The Lin-Zhang controversy and establishment of a horizontal industrial policy reform coalition

Amidst the quantitative evaluation of the country's policy results, the latter half of the 2010s also saw the emergence of a vivid public debate on industrial policy. Between August 2016 and March 2017, Zhang Weiyong 张维迎 and Lin Yifu 林毅夫 – two renowned Economics professors from Peking University – engaged in a prolonged written dispute about the merits and drawbacks of industrial policy, which culminated in a live broadcasted verbal debate in October 2016.¹⁰ This came to be known as the Lin-Zhang controversy 林张之争. In parallel to that, a multitude of other influential Chinese economists reacted to Lin-Zhang's dispute expressing their stance on industrial policy. This broader debate significantly differed from Lin-Zhang's controversy in terms of its outlook on China's industrial policy. Overall, given the debate's resounding echo within both academic Economics circles and public media discussions, the Lin-Zhang controversy marked one of the most consequential public economic debates of the last two decades.

The Lin-Zhang controversy saw seemingly irreconcilable standpoints being opposed: on the one hand, Zhang Weiyong, a self-proclaimed Hayekian, called for the complete rejection of industrial policy, while, in contrast, Lin Yifu advocated based on his New Structural Economics framework in favor of an industrial policy approach following a country's comparative advantage. Zhang rejected the employment of industrial policies because of the inherent unpredictability of economic process, which renders selective government support ineffective, due to its distorting effect on market incentives as well as enablement of rent-seeking and widespread corruption (W. Zhang, 2016a, 2016b, 2022). In contrast, Lin emphasized the importance of industrial policies for developing countries in mobilizing limited resources into specific sectors to foster technological innovation and industrial upgrading, strengthening the competitiveness of domestic enterprises, as well as addressing market failures, such as externality and coordination problems (Lin, 2017). Crucially, he argued that in order to be successful these policies should in general be in accordance with a country's comparative advantage.¹¹ With China's industries facing different comparative

¹⁰ The following section is based on an in-depth study of the Lin-Zhang controversy undertaken in context of the author's master thesis (Erlbacher, 2022).

¹¹ This is based on the central tenet of Lin Yifu's New Structural Economics framework 新结构经济学, which stipulates that a country's economic structure, including its industrial structure, is endogenous to its labor- and capital endowments, which are given short-term but can evolve over time (Lin, 2011, 2019). In that, industrial upgrade is achieved through changes in factor endowment, in particular capital accumulation. Yet, a country's capital accumulation is only optimal when its industries align with its comparative advantage: in a country with a relatively high level of labor endowments, companies engaged in labor-

advantages, the country should, according to Lin, simultaneously pursue different types of industrial policies: actively support competitive ‘catching-up’ industries in modernizing their production capability, support innovation in industries where the country already holds the technological high ground, facilitate the transformation and relocation to other countries of uncompetitive ‘exit’ industries and for a select few strategic industries enable technological leap-frogging notably through direct government support (Lin, 2016).

Fundamentally, Lin Yifu’s and Zhang Weiying’s differing stances on industrial policy can be traced back to their diametrically different views on the state-market relationship and the government’s role within the economy. For Zhang industrial policy and more broadly government intervention impedes the development of markets. Given this, China should transition towards a ‘limited government’ 有限政府, which protects the economic rights and freedom of market actors.¹² Conversely, the market-state relationship is regarded by Lin as reinforcing. Specifically, he advocates for the government to take on a facilitating role in ensuring the efficiency of markets (Lin & Wang, 2017). Yet, despite their stark divergences, Lin’s and Zhang’s argumentations contain a few points of convergences. In fact, both economists appear to reject, although to a different degree, selective industrial policies – Zhang completely, while for Lin gradually and only for mature, competitive industries. In addition, they both agree on the state’s role in providing public goods and strengthening market mechanism (F. Jiang & Li, 2018b; C. Li, 2017).

In contrast to the Lin–Zhang debate, the broader economic debate aimed at evaluating the advantages and disadvantages of different forms of industrial policy, especially vertical and horizontal industrial policies. Overall, a consensus on the reform of China’s industrial policy approach as well as the need for shifting towards a competition enhancing and more horizontal industrial policy approach emerged.

First, the detrimental effects of China’s selective policies were emphasized. This included the occurrence of overcapacity and corruption (Q. Chen, 2016; X. Wang, 2016), impeded fair competition, as well as weakened market mechanisms (H. Huang et al., 2016; Y. Huang, 2016a, 2016b), as well as reduced incentives for innovation due to weakened competition brought about by China’s ‘traditional’ industrial policy programs (T. Liu, 2016). In addition to

intensive industries are generally more competitive both domestically and internationally. These enterprises, hence, generate more economic surpluses, accumulate capital and contribute to a gradual industrial upgrade.

¹² The concept of limited government was notably championed by Barry Weingast, a professor of political science at Stanford University, as a government form which “[...] credibly commits to honor economic and political rights” (Weingast, 1995, p. 1). In contrast to Weingast, however, Zhang does not advocate for political but economic freedom.

that, a transformation in the country's industrial policy was also deemed necessary in light of the challenges associated with a shift in the country's development model. As, Jiang and Li (2016) point out, “[...] in the context of the new economic normal and the new industrial revolution, there are no preconditions for the implementation of selective industrial policy” (F. Jiang & Li, 2016, para. 3, transl. by author). Specifically, as for industrial policy debates in the 2000s, the necessity of strengthening the country's innovative capabilities, especially within strategic emerging industries, was widely acknowledged. However, while economist remained divided on the question whether this could be achieved through selective industrial policies, the beneficial effect of horizontal industrial policies was generally agreed upon (Feng, 2016; T. Liu, 2016).

Related to this, economists advocated for a fundamental transformation of the state-market relationship. On the one hand, direct government intervention in the form of selective industrial policy was seen as detrimental and unsuited regarding the needs of the country's new development model. On the other hand, a greater reliance on market mechanisms was seen to enable fair competition and efficient allocation of markets. In this context, the state should actively enhance markets by transitioning towards a role of ‘service’ provider of public goods and guaranteeing market competition through the protection of intellectual property or anti-trust policies. (X. Gu, 2017; X. Wang, 2016; L. Zhang, 2016; S. Zheng, 2016). Importantly, the relationship between the market and state was largely accepted within the broader debate to be both inherently intertwined and reinforcing. In that sense, rather than supporting a Hayek's version of liberalism, the consensus on the reform of China's industrial policy echoes ordoliberal principles of strong government supervision and regulation of the market (Herrmann-Pillath & Zhao, 2023).

This consensus on the need to fundamentally reform China's industrial policy has found a substantive echo within the industrial policy debates of the last decade. In fact, since 2015 the policy suggestions of a growing number of economists have coalesced around a call for shifting towards a more competition-enhancing and more horizontal policy approach. This was anchored in an assessment on the detrimental effects of the expansion of selective industrial policies, in particular the emergence of wide-spread overcapacity. Markedly, Chen Junjie (2015) argued that “[...] in order to more effectively resolve and prevent overcapacity, there is an urgent need for China's industrial policy to shift to a competition policy” (J. Chen, 2015, p. 131, transl. by author). At the same time, the call for a ‘horizontal-turn’ in the PRC's industrial policy is also rooted in a reflection on the country's extensive investment-led

growth model and the need to shift towards an innovation-driven development approach. For Jiang Feitao and Li Xiaoping (2018), a shift towards horizontal industrial policies is closely related to an expansion of innovation policy (F. Jiang & Li, 2018a). Major recent industrial policies have been viewed by Chinese economists through a similar reform prism. For instance, while the ‘Made in China 2025’ strategy (MIC 2025) was seen as step towards greater emphasis on innovation capabilities, it was called into question whether it represents a fundamental transition away from traditional selective towards horizontal competition enhancing industrial policies (K. Dai et al., 2024; Q. Huang, 2015; D. Lu & Chi, 2019; W. Shen, 2019; Shi, 2018).¹³ This is in stark contrast to discussions in Europe and the US where MIC 2025 has functioned as wake-up call for the global impact of the PRC’s revived state interventionism (Wübbecke et al., 2016; Zenglein & Holzmann, 2019).

Property regime – competitive neutrality between the state and private sector

With the economic performance of the state sector continuing to worsen during the 2010s, previous criticisms on the reliance role of state-owned enterprises within the country’s industrial upgrade and economic development were amplified. In 2016 the debt-to-asset ratio of state assets culminated at 66% (PRC Ministry of Finance, 2017). At the same time, the country’s industrial sector, in particular traditional industrial upstream segments, such as steel, aluminum and cement, was faced with widespread overcapacity. Between the first quarter of 2013 and of 2016 the industrial capacity utilization rate – measuring the proportion between industrial output and capacity – fell from 75.3% to 72.9% (National Bureau of Statistics of China in Trading Economics, 2024). This prompted the government to launch a structural supply reform package at the end of 2015 aimed at deleveraging and decreasing the excess capacity of overheated industries, which were mainly targeted at state-owned enterprises (Xing Ziqiang in L. Wang & Yu, 2024, p. 11). While this structural reform effort achieved initial positive effects, to this day the indebtedness of the state sector remains high with a debt-to-asset ratio of 64,6% in 2023 and an industrial capacity rate falling since the Covid-19 pandemic boom in 2020 and 2021 (PRC Ministry of Finance, 2024).

Besides this, the differing effect of industrial policy across different property types has notably received growing attention. Indeed, a large portion of the quantitative studies on industrial policy published after 2013 sought to compare the effect on and performance of

¹³ It should be noted that the academic debate between Chinese economists surrounding MIC 2025 was rather circumspect. Indeed, both quantitative studies and the Lin–Zhang debate rarely mentioned it.

policies on state-owned- and private enterprises. Overall, industrial policies are found to be more beneficial for private enterprises compared to SOEs: for those scholars finding an overall negative effect of industrial policies less harmful on private enterprises, and for others identifying a general positive effect either ineffective or less effective for state-owned enterprises. For instance, the increase in quantitative instead of qualitative innovation is only identified for state-owned enterprises and low-tech companies (W. Li & Zheng, 2016). Similarly, Chen Junjie found evidence that industrial policy's harmful effect of inducing overcapacity is mainly driven by SOEs, small-enterprises and low-tech companies (J. Chen, 2015). On the other hand, the beneficial effect of industrial policy, in particular priority credit, tax breaks, government subsidy and easier market access, is determined to be greater for private enterprises than SOEs (Mi. Yu et al., 2016). Likewise, innovation subsidies are shown to only significantly raise the R&D spending of private enterprises (Y. Guo, 2018).

Industrial policy's differing effect is generally traced back by economists to the PRC's institutional environment, which tends to discriminate against the private sector and favors SOEs. Indeed, the positive bias towards SOEs and discrimination against private enterprises has been increasingly pointed out within industrial policy discussions (W. Li & Li, 2014; Qian et al., 2018). In reaction to that, a large portion of scholars has been advocating for improving the integration of the private sector within the state's industrial policies and more generally abolishing institutional differences between various types of property. Tellingly, Chen Qingtai calls “[...] the removal of the ‘property label’ on enterprises and the elimination of the ‘[institutional] property gap’ [...] (Q. Chen, 2023, p. 24)”. In this context, the concept of ‘competitive neutrality’ 竞争中性, which stipulates the creation of a fair competition environment without any discrimination between property types, has since the 2010s been widely popularized within Chinese academic circles. Whereas this concept originates in the neoliberal critique of the 1970s and 1980s against coercive government intervention and pushes towards greater market liberalizations (J. Liu, 2019), within Chinese economic debates the emphasis on ‘competitive neutrality’ contributes to the reflection on the country's expansion of industrial policy since the 1990s, especially following the GFC-stimulus. In that, these discussions surrounding ‘competitive neutrality’ are closely associated with the emergence of an ideational coalition, structured around a call for a shift away from broad-based selective government intervention and instead towards horizontal industrial policies, in addition to stronger linkage with competition policy. In fact, for Liu

Jiejiao 刘戒骄, the pursuit of ‘competitive neutrality’ entails a reduction of the scope of selective industrial policies and a general shift towards horizontal industrial policies (ibid).

III. Conclusion: rethinking the state-market relationship

Throughout the reform-era industrial policy debates have centered around a reflection on the transformation of the state-market relationship. In the 1980s, early economic reforms increasing enterprise autonomy spurred discussions not only on the role of markets in allocating resources, but also on the necessity of transforming the state’s intervention approach. In this context, industrial policy was widely regarded as a means of both integrating market allocation mechanisms within the state’s economic governance and shifting the state’s intervention approach from micro-economic to macro-economic management. During this time, the hierarchical relationship between state intervention and market allocation remained, however, highly contested with ‘conservative’ economists arguing for state (macro-economic) planning to partially substitute markets and ‘market-liberal’ scholars advocating for the primacy of market allocation within economic processes and thus for a fundamental market reform. In the second half of 1990s, the Socialist Market Economy established markets as the primary channel of resource allocation within economic processes. This amplified calls for fundamental market reforms, as well as economic discussions on how to reconcile state intervention with a market economy. Crucially, for a broad spectrum of economists this implied a reduction of the scope of industrial policy (macro-economic planning) and redirection on key industrial segments, so-called ‘pillar industries. Within these pillar industries a strengthening of industrial policy efforts was called for, to create large-industrial groups able to compete domestically and internationally. Crucially, the reduction of the state intervention’s scope and a reinvigoration of industrial policies within pillar industries was largely regarded by economists as complementary. Following the PRC’s entry into the WTO in 2001, calls for an activist industrial policy, in particular in ‘emerging’ industries, these were further intensified on the background of reflection of the country’s position within the low-end of the global value chains. In this context, economic scholars emphasized both the lack of state capacities in formulating and implementing industrial policy, as well as the necessity to gradually shift the country’s policy approach from selective towards horizontal industrial policy. During the 2010s, this critical

reassessment of China's industrial policy approach was further amplified. Overall, the debate centered around different policy suggestions for reforming its industrial policy with regards to optimizing the central government's policy framework and state capacity, fundamentally transforming the country's economic governance, and better aligning industrial policy with markets. In particular, a growing number of economists coalesced around the need to shift towards more competition-enhancing and more horizontal industrial policies.

Crucially, these debates have been held on the background of the country's transforming property regime. First, the reform-era witnessed the diversification of the PRC's property regime away from unitary state-centered regime with, notably, the emergence of a private industrial sector. In that context, industrial policy was widely regarded as a way to mobilize non-state actors for the government's economic governance. Second, the reform of the state sector has also played a significant role within industrial policy debates. In particular, during the 1990s, with the rapid decline of the state sector, industrial policy was seen by economists as a pathway to both raise the former's profitability and competitiveness, as well as to adapt it to the expanding market economy. Lastly, since the 2010s, on the background of the state sector's weakened economic performance and industrial policies' disappointing effect, discussions focused on addressing the country's discriminating institutional environment. Especially, the necessity of ensuring 'competitive neutrality' between different property types to foster a fair competition environment was widely pointed out.

Fundamentally, the evolution of industrial policy debates mirrors the simultaneous and interdependent transformation of the state's and the market's role during the reform era. In fact, as Zhou Li'an argues: "[China's] economic transition is a process of dual creation of the state and market. The 'market' needed to be born out from the planned system, which is a complex and difficult process; at the same time, it was more important to create a 'government' that had sufficient incentives to nurture and develop market players and facilitate market transactions" (L. Zhou, 2023, p. 19 transl. by author). As the discussion on industrial policy shows this dual creation process has long been regarded by a broad spectrum of economists as interdependent and reinforcing.

V. Bibliography

- Aghion, P., Boulanger, J., & Cohen, E. (2011). *Rethinking industrial policy* (Bruegel Policy Brief 2011/04).
https://www.bruegel.org/sites/default/files/private/wp_attachments/pb_2011-04_final.pdf
- Aiginger, K., & Rodrik, D. (2020). Rebirth of Industrial Policy and an Agenda for the Twenty-First Century. *Journal of Industry, Competition and Trade*, 20(2), 189–207.
<https://doi.org/10.1007/s10842-019-00322-3>
- Bai, R. (2016). Competition-driven, Government Intervention and Capacity Expansion: Discussion on the Micro-mechanism of “Wave Movement Phenomenon” [English title]. *Economic Research Journal [Chinese Journal]*, 11, 56–69.
- Bai, X., & Meng, H. (2018). Emerging industries, policy support and lack of incentive constraints—The case of New Energy Vehicle industry [transl. by author]. *Economist [Chinese Journal]*, 1, 50–60.
- Brødsgaard, K. E. (1983). Paradigmatic Change: Readjustment and Reform in the Chinese Economy, 1953–1981, Part II. *Modern China*, 9(2), 253–272. JSTOR.
- Brødsgaard, K. E., & Rutten, K. (2017). *From accelerated accumulation to socialist market economy in China: Economic discourse and development from 1953 to the present*. Brill.
- Cao, L. (2004). On Ownership System, Ownership, Property Rights and Shareholding System—An Interview with Economist Zhi Xiaohe [English title]. *Economic Study of Shanghai School [Chinese Journal]*, 7, 1–12.
- Cao, X., Tian, Y., & Jiang, H. (2007). Recent development in industrial policies—Survey of 2007 annual conference of China industrial economic association [English title]. *China Industrial Economics [Chinese Journal]*, 12, 117–123.
- CCP Central Committee. (1993). *Decision on several issues concerning the establishment of a socialist market economic system [transl. by author]*.
- Chang, H.-J. (2011). Industrial Policy: Can We Go Beyond an Unproductive Confrontation? In *Annual World Bank Conference on Development Economics—Global 2010: Lessons from East Asia and the Global Financial Crisis* (pp. 83–109). World Bank.
- Chen, H. (1990). Theoretical basis for Japan's industrial policy [transl. by author]. *China Industrial Economics [Chinese Journal]*, 2, 79–80.

- Chen, H. (1997). A study on the rationalization of industrial policy—Reviewing “Industrial policy during the period of economic transition” by Jiang Xiaojuan [transl. by author]. *Management World [Chinese Journal]*, 1, 217–218.
- Chen, J. (2015). China’s Industrial Policy and Excess Capacity in the Transition Period: An Empirical Study Based on the Panel Data of Manufacturing [English title]. *Journal of Finance and Economics [Chinese Journal]*, 8, 131–144.
- Chen, J., & Wang, Q. (2005). The Sustainable Development of China’s Industrial Clusters and Public Policy Choices [English title]. *China Industrial Economics [Chinese Journal]*, 9, 5–10.
- Chen, Q. (2016, December 19). Industrial policy rethinking and reform [transl. by author]. *Caixin 财新*. <https://weekly.caixin.com/2016-12-16/101027568.html>
- Chen, Q. (2023). Eliminate the “ownership gap”, enterprises will be liberated again—An interview with Chen Qingtai, former party secretary of the Development Research Center of the State Council [transl. by author]. *China Reform [Chinese Journal]*, 4, 24–29.
- Cheng, J., & Qin, J. (2005). The Econometrics’ Developing Path in China—Statistical analysis on the papers in Economic Research Journal from 1979 to 2044 [English title] (计量经济学在中国发展的轨迹). *Economic Research Journal [Chinese journal]*, 4, 116–122.
- Cohn, S. M. (2017). *Competing Economic Paradigms in China: The Co-Evolution of Economic Events, Economic Theory and Economics Education, 1976-2016*. Routledge.
- Dai, K., Chen, A., & Yang, X. (2024). Can Functional Industrial Policy Promote the Growth of Enterprise Productivity? —A quasi-natural Experiment Based on Made in China 2025 [English title]. *Nankai Economic Studies [Chinese Journal]*, 2, 43–63.
- Dai, Y. (1987). Industrial policy and economic system reform [transl. By author]. *Finance & Trade Economics [Chinese Journal]*, 10, 1–3.
- Dai, Y. (1991). A quest to optimize the industrial structure—Reviewing “Research on China’s industrial policy” by Zhou Shulian et al. *China Industrial Economics [Chinese Journal]*, 6, 78–80.
- Deng, W. (2010). The academic dispute on the “the state advances, the private sector retreats” and its next steps [English title]. *Reform [Chinese Journal]*, 4, 39–46.

- Deng, Y., & Moore, T. G. (2004). China views globalization: Toward a new great-power politics? *The Washington Quarterly*, 27(3), 115–136.
<https://doi.org/10.1162/016366004323090296>
- Ding, J. (1984). Sino-Japanese Economics academic exchange conference held in Beijing [transl. by author]. *Economic Perspectives [Chinese Journal]*, 2, 36–39.
- Du, H. (1998). The industrial fault crisis during economic transition [transl. by author]. *Economist [Chinese Journal]*, 4, 45–49.
- Du, H. (2000). Industrial policy is necessary for tackling stag-deflation recession [English title]. *Economist [Chinese Journal]*, 1, 25–30.
- Eaton, S. (2015). *The Advance of the State in Contemporary China: State-Market Relations in the Reform Era* (1st ed.). Cambridge University Press.
<https://doi.org/10.1017/CBO9781316402191>
- Eder, J., & Schneider, E. (2020). Umkämpfte Industriepolitik. *Kurswechsel Zeitschrift Für Gesellschafts-, Wirtschafts- Und Umweltpolitische Alternativen*, 4, 3–12.
- Erlbacher, L. (2022). *China's "Lin-Zhang" debate—A fragile consensus on the reform of industrial policy* [Master Thesis]. Freie Universität Berlin.
- European Commission. (2002). *Industrial Policy in an Enlarged Europe* (pp. 1–39) [COM(2002) 714]. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52002DC0714>
- Fan, A., & Fang, X. (2003). The “10+3” regional economic cooperation and China’s industrial policy adjustment [transl. by author]. *Reform [Chinese Journal]*, 5, 92–96.
- Feng, X. (2016, September 17). Competition policy is the best industrial policy [transl. by author]. *Caixin 财新*.
- Ge, W. (1985). Hisao Onoue and Masao Baba on Japan’s Economic Policy and Industrial Structure [transl. by author]. *Economic Perspectives [Chinese Journal]*, 4, 40–43.
- Gohli, H. (2022). *Steering political currents: Policy design and implementation in China's smart grid industry* (1st edition). Nomos.
- Gräf, H., & Topuria, S. (2023). The impact of the COVID-19 pandemic on industrial policy in Germany and the European Union – the case of the automotive industry. *European Journal of Economics and Economic Policies Intervention*, 1–17.
<https://doi.org/10.4337/ejeep.2023.0112>
- Gu, J. (2009). On the realization of economic initiative and strategic arrangement—About meeting the current international financial crisis [English title]. *Journal of Public Management [Chinese Journal]*, 6(1), 35–39.

- Gu, X. (2017, January 17). Government must act in a limited way: Rodrik on industrial policy [transl. by author]. *The Paper 澎湃*.
https://www.thepaper.cn/newsDetail_forward_1601847
- Guo, Y. (2018). Signal Transmission Mechanism of Government Innovation Subsidy and Enterprise Innovation [English title]. *China Industrial Economics [Chinese Journal]*, 9, 98–116.
- Guo, Z., Lu, J., Song, N., & Zhang, T. (1992). A few problems regarding our country's ownership structure [transl. By author]. *Economic Research Journal [Chinese Journal]*, 2, 3–15.
- Han, X. (2001). On mechanism of actualizing industrial policy [English title]. *Teaching and Research [Chinese Journal]*, 7, 20–26.
- Han, Y., Huang, L., & Wang, X. (2017). Do Industrial Policies Promote Industrial Structure Upgrading? Theory and Evidence from China's Development-oriented Local Government [English title]. *Economic Research Journal [Chinese Journal]*, 8, 33–48.
- Han, Y., Mai, J., & Zhang, F. (2022). Quantitative Research on Industrial Policy: A Literature Review [English title]. *Industrial Organization Review [Chinese Journal]*, 1, 148–181.
- Heilmann, S., & Melton, O. (2013). The Reinvention of Development Planning in China, 1993–2012. *Modern China*, 39(6), 580–628.
<https://doi.org/10.1177/0097700413497551>
- Heilmann, S., & Shih, L. (2013). *The Rise of Industrial Policy in China, 1978-2012* (pp. 1–24) [Harvard-Yenching Institute Working Paper Series].
- Herrmann-Pillath, C., & Zhao, Q. (2023). *The Cultural Meaning of "Market" in China and the Western tradition*. Campus Verlag GmbH. https://doi.org/10.12907/978-3-593-45587-7_008
- Hou, F., & Yang, R. (2018). New Government-Business Relationship, Industrial Policies and Governance of "Wave Phenomena" of Investment [English title]. *China Industrial Economics [Chinese Journal]*, 5, 62–79.
- Hu, C. (1996). China's industrialization strategy and industrial policy during the new era [transl. By author]. *Management World [Chinese Journal]*, 2, 102–108.
- Huang, H., Huang, Y., & Huang, Q. (2016, November 17). Interview—A summary of and reflection on China's industrial policy practice [transl. by author]. *Souhu 搜狐*.
https://www.sohu.com/a/119180239_115443

- Huang, Q. (2012). China's National Situations of "the Large Industrial Countries" and China's Strategy of "the Powerful Industrial Countries" [English title]. *China Industrial Economics [Chinese Journal]*, 3, 5–16.
- Huang, Q. (2015). The core capability, function and strategy of Chinese manufacturing industry—Comment on "Chinese manufacturing 2025" [Made in China 2025] [English title]. *China Industrial Economics [Chinese Journal]*, 6, 5–17.
- Huang, X., Song, X., & Zhu, Z. (2015). Defining the Optimal Space of China Industrial Policy—Subsidy Effect, Competition Compatible and Overcapacity Solution [English title]. *China Industrial Economics [Chinese Journal]*, 4, 57–69.
- Huang, Y. (2016a, August 23). What is a good industrial policy? [Transl. by author]. *Caixin 财新*. <https://opinion.caixin.com/2016-08-23/100980727.html>
- Huang, Y. (2016b, September 13). Historically there only a few successful industrial policies [transl. by author]. *Economists 50 Forum 经济 50 人论坛*. 历史上成功的产业政策很少
- Industrial Policy Research Group - Development Research Center of the State Council. (1988). A preliminary study of China's industrial policy [transl. by author]. *Macroeconomics (until September 1993: Planned Economy Research) [Chinese Journal]*, 5, 1–12.
- Jiang, F., & Li, X. (2010). Direct market intervention and restrict competition: The orientation of China's industrial policy and its fundamental defects [English title]. *China Industrial Economics [Chinese Journal]*, 9, 26–36.
- Jiang, F., & Li, X. (2016, December 28). The shift from selective industrial policy to functional policy should be accelerated [transl. By author]. *Sohu 搜狐*. https://www.sohu.com/a/122780166_485176
- Jiang, F., & Li, X. (2018a). Evolution and Development of China's Industrial Policy in the 40 Years of Reform and Opening up: On the Transformation of China's Industrial Policy System [English title]. *Management World [Chinese Journal]*, 10, 73–85.
- Jiang, F., & Li, X. (2018b). Market and government within industrial policy—Strating from the debate on industrial policy between Lin Yifu and Zhang Weiying [transl. By author]. *Research on Financial and Economic Issues [Chinese journal]*, 1, 33–42.
- Jiang, F., & Li, X. (2018c). The evolution and development of China's industrial policy during the past forty years of Reform and Opening-up—A discussion on the transformation

- of China's industrial policy system [transl. by author]. *Journal of Management World [Chinese journal]*, 34(10), 73–85.
- Jiang, G. (2022). The Equilibrium Effects of Chinese Industry Policy—Based on Perspective of Government Subsidy [English title]. *China Industrial Economics [Chinese Journal]*, 6, 98–116.
- Jiang, X. (1991). Discussing the effectiveness of China's industrial structural policies and the transformation of adjustment policies [transl. By author]. *Economic Research Journal [Chinese Journal]*, 2, 9–15.
- Jiang, X. (1993a). Efficiency of market operations and the transformation of government functions [transl. By author]. *Reform [Chinese Journal]*, 1, 62–67.
- Jiang, X. (1993b). *Public choice amid the implementation of industrial policy in China [transl. by author]*. 6, 3–18.
- Jiang, X. (1996). Industrial policy and the transformation of economic growth [transl. by author]. *Reform and Theory [Chinese Journal]*, 2, 10–12.
- Jiang, X. (2004). Entering a new stage: China's challenge and strategies for economic development [English title]. *Economic Research Journal [Chinese Journal]*, 10, 4–13.
- Jin, B. (1989). Serious dilemmas and choice faced—A few points of analysis on China's industrial policy at the current the stage [transl. By author]. *Shanghai Economic Review [Chinese Journal]*, 6, 11–15.
- Jing, C., Herrmann-Pillath, C., & Ling, L. (2020). *The Three Modes of Appropriation—Lessons of Chinese Practice for Theorizing Property* (1; SFB "Strukturwandel Des Eigentums" Working Paper). https://sfb294-eigentum.de/media/filer_public/30/2b/302b1677-d0ff-4390-aa31-4bcae0d5971f/wp_01_final_issn.pdf
- Juhász, R., Lane, N., & Rodrik, D. (2024). The New Economics of Industrial Policy. *Annual Review of Economics*, 16(1), 213–242. <https://doi.org/10.1146/annurev-economics-081023-024638>
- Li, C. (2017). The debate over the maintenance or abolition of industrial policy and China's economic development—Review of the conference on industrial policy (Japan) [transl. by author]. *ICCS Journal of Modern Chinese Studies*, 10(1), 144–169.
- Li, H., & Zhang, Y. (2009). A few suggestions regarding China's current economic stimulus policy in the context of contemporary industrial policy trends [transl. by author]. *Economist [Chinese Journal]*, 5, 101–102.

- Li, K. (1993). Different views on China's current industrial policy [transl. By author]. *Reform [Chinese Journal]*, 4, 112–116.
- Li, P., & Jiang, F. (2010). Evaluating the “Ten industries adjustment and revitalization plan” [transl. By author]. *People's Tribune [Chinese Journal]*, 11, 112–113.
- Li, S. (2000). Reflections on selected issues regarding industrial policy amid the twenty-first century's first decade [transl. by author]. *Management World [Chinese Journal]*, 4, 49–58.
- Li, S., & Yao, C. (2010). The impact of the national key industry revitalization plan on industrial economic efficiency—An empirical analysis based on China's industrial data from 2008 to 2010 [transl. by author]. *Review of Economic Research [Chinese Journal]*, 71, 37–40.
- Li, W., & Li, Y. (2014). Does Industrial Policy Promote Corporate Investment [English title]. *China Industrial Economics [Chinese Journal]*, 5, 122–134.
- Li, W., & Zheng, M. (2016). Is it Substantive Innovation or Strategic Innovation?—Impact of Macroeconomic Policies on Micro-enterprises' Innovation [English title]. *Economic Research Journal [Chinese Journal]*, 4, 60–73.
- Lin, Y. (2011). New Structural Economics: A Framework for Rethinking Development. *The World Bank Research Observer*, 26(2), 193–221. <https://doi.org/10.1093/wbro/lkr007>
- Lin, Y. (2016, November 9). Speech at Peking University's Industrial Politics debate [transl. By author]. *The Paper 澎湃*. https://www.thepaper.cn/newsDetail_forward_1565467
- Lin, Y. (2017). Industrial policies for avoiding the middle-income trap: A new structural economics perspective. *Journal of Chinese Economic and Business Studies*, 15(1), 5–18. <https://doi.org/10.1080/14765284.2017.1287539>
- Lin, Y. (2019). *New Structural Economics: The Third Generation of Development Economics* (GEGI Working Paper 27 1/2019; pp. 1–9). Boston University Global Development Policy Center.
- Lin, Y., Cai, F., & Li, Z. (1999). Comparative advantage and development strategy [English title]. *Social Sciences in China [Chinese Journal]*, 5, 4–20.
- Lin, Y., & Wang, X. (2017). The Facilitating State and Economic Development: The Role of the State in New Structural Economics. *Man and the Economy*, 4(2), 1–19.
- Liu, J. (2019). Theoretical Context and Practice Logic of Competitive Neutrality [English title]. *China Industrial Economics [Chinese Journal]*, 6, 5–21.

- Liu, T. (2016, October 31). Grasping the “bull’s nose” of the innovation motor—Industrial policy transformation [transl. by author]. *Sohu 搜狐*.
https://www.sohu.com/a/117666756_465915
- Lu, C., & Zhen, C. (2008). 30 years of China’s industrial reform and development: 1978—2008 [transl. by author]. *Contemporary Finance & Economics [Chinese Journal]*, 8, 5–12.
- Lu, D., & Chi, Y. (2019). Research on “China Manufacturing 2025” and enterprise transformation and upgrading Chinese [English title]. *Industrial Economics Research [Chinese Journal]*, 5, 77–88.
- Lu, F., & Cai, Y. (2010). China’s economic restructuring and industrial upgrading challenge government’s capacity—The development of China’s TFT-LCD industry in the perspective of industrial policy [English title]. *International Economic Review [Chinese Journal]*, 5, 23–47.
- Lü, Z. (2004). Stipulation for Industrial Policy and Choice of Strategic Industry [English title]. *Journal of Beijing Administrative College [Chinese Journal]*, 4, 28–30.
- Lü, Z., Bao, Q., Xiong, Z., Zheng, B., Liu, L., Wang, J., Zhu, S., Liu, H., & Jiang, X. (1993). Industrial policy issues within a market economy [transl. by author]. *China Industrial Economics [Chinese Journal]*, 5, 42–50.
- Lü, Z., & Zhang, K. (2006). Interface Obstructions and Solving Ways on Stage Change of State High-technology Park [English title]. *China Industrial Economics [Chinese Journal]*, 2, 5–12.
- Ma, H. (1979a). An in-depth investigation to explore the rational economic structure of our country [transl. by author]. *Economic Perspectives [Chinese Journal]*, 9, 13–16.
- Ma, H. (1979b). Chinese-style socialist modernization and restructuring of the economy [transl. by author]. *On Economic Problems [Chinese Journal]*, 1, 1–19.
- Ma, H., & Wu, J. (1982). The economic structure is an important determinant of socio-economic outcomes [transl. by author]. *On Economic Problems [Chinese Journal]*, 1, 1–5.
- Ma, X. (2005). The opening-up and development of Chinese auto-industry [English title]. *Reform [Chinese Journal]*, 9, 5–12.
- National Bureau of Statistics of China. (2004). *Number of All State-owned and Non-state-owned above Designated Size Industrial Enterprises and Their Gross Output Value by Type*. 2004 China Industry Statistical Yearbook.
<https://www.stats.gov.cn/sj/nds/yb2004-c/indexch.htm>

- National Bureau of Statistics of China. (2013). *Main Indicators of State-owned and State-holding Industrial Enterprises by Region*. 2013 China Industry Statistical Yearbook. <https://www.stats.gov.cn/sj/ndsj/2013/html/Z1404e.htm>
- Naughton, B. (1995). *Growing Out of the Plan: Chinese Economic Reform, 1978–1993* (1st ed.). Cambridge University Press. <https://doi.org/10.1017/CBO9780511664335>
- Naughton, B. (2021). *The rise of China's industrial policy, 1978 to 2020* (Primera edición). Universidad Nacional Autónoma de México, Facultad de Economía.
- Pan, Y. (1996). State capital and industrial policy [transl. by author]. *Management World [Chinese Journal]*, 4, 95–102.
- Piketty, T. (2020). *Capital and ideology / Thomas Piketty; translated by Arthur Goldhammer*. Harvard University Press. <https://doi.org/10.4159/9780674245075>
- PRC Ministry of Finance. (2017, January 26). *Nationwide economic performance of state-owned and state-controlled enterprises between January and December 2016* [transl. By author]. State-Owned Asset Supervision and Administration Commission of the State Council. <http://www.sasac.gov.cn/n16582853/n16582888/c16617820/content.html>
- PRC Ministry of Finance. (2024, January 29). *Nationwide economic performance of state-owned and state-controlled enterprises between January and December 2023* [transl. By author]. State-Owned Asset Supervision and Administration Commission of the State Council. <http://www.sasac.gov.cn/n16582853/n16582888/c29924008/content.html>
- PRC State Council. (1986, May 10). *The 7th Five Year Plan for National Economic and Social Development of the People's Republic of China, 1986–1990 [Official english translation]*. Bulletin of the State Council of the People's Republic of China. <https://www.gov.cn/gongbao/shuju/1986/gwyb198611.pdf>
- PRC State Council. (1989, March 15). *Decision of the State Council on the main points of the current industrial policy* [transl. By author]. https://www.gov.cn/zhengce/content/2011-09/07/content_1453.htm
- PRC State Council. (1994). *Outline for the State Industrial Policy in the 1990s [English title]*. Bulletin of the State Council of the People's Republic of China. <https://www.gov.cn/gongbao/shuju/1994/gwyb199412.pdf>
- PRC State Council. (1997). *Catalogue for Industries, Products and Technologies Encouraged by the State for Priority Development [English title]*. Bulletin of the State

- Council of the People's Republic of China.
<https://www.gov.cn/gongbao/shuju/1997/gwyb199740.pdf>
- Qian, X., Kang, J., Tang, Y., & Cao, X. (2018). Industrial Policy, Efficiency of Capital Allocation and Firm's Total Factor Productivity—Evidence from a Natural Experiment in China [English title]. *China Industrial Economics [Chinese Journal]*, 8, 42–59.
- Rosa, H. (2023). Property as the Modern Form of Weltbeziehung: Reflections on the structural change of possessive forms of relating to the world. In *“Weltbeziehung”—The study of our relationship to the world* (pp. 19–35). Campus Verlag.
- Shen, H., & Gu, N. (2017). Industrial Policy, Agglomeration and Heterogeneous Firms' Mode of Trade [English title]. *Journal of International Trade [Chinese Journal]*, 3, 120–130.
- Shen, W. (2019). Industrial Policy in the Context of WTO: Analyzing Made in China 2025 and Optimizing Industrial Policy [English title]. *Journal of Shanghai University of International Business and Economics [Chinese Journal]*, 4, 47–65.
- Sheng, H. (1988). A few thoughts on China's industrial policy [transl. by author]. *China Industrial Economics [Chinese Journal]*, 1, 34–39.
- Shi, Y. (2018, May 8). Top-level thinking on building the industrial policy system of “Made in China 2025” [transl. by author]. *Chinese Institute for Quality Research, Jiaotong University*. <https://ciq.sjtu.edu.cn/expertopinion/2125.html>
- Song, L., & Wang, X. (2013). Key industrial policies, resource reallocations and industrial productivity [transl. By author]. *Management World [Chinese Journal]*, 12, 63–77.
- Sun, G. (2018). Can Selective High-tech Industry Policies be Implemented Accurately? — Evidence based on the Identification of “High-tech Enterprises” [English title]. *Economist [Chinese Journal]*, 8, 75–85.
- Sun, W., & Wu, Q. (1994). Characteristics and industrial policy orientation during China's economic take-off stage [transl. by author]. *China Industrial Economics [Chinese Journal]*, 9, 9–12.
- Sun, Z., & Xi, J. (2015). The Effect of Industrial Policy in China: Industrial Upgrade or Short-term Economic Growth [English title]. *China Industrial Economics [Chinese Journal]*, 7, 52–67.
- Tan, S., Wu, W., & Xia, D. (2017). Local Content Policy and Total Factor Productivity: Evidence from Automobile Component Manufacturing [English title]. *Journal of Finance and Economics [Chinese Journal]*, 4, 82–95.

- Trading Economics. (2024). *China Industrial Capacity Utilization*.
<https://tradingeconomics.com/china/capacity-utilization>
- Wang, B. (2001). Strategic adjustment of China's industrial structure in the context of economic globalization [transl. y author]. *Finance & Trade Economics [Chinese Journal]*, 12, 16–20.
- Wang, H., Li, B., & Li, S. (1990). *General conception of industrial policies [English title]*. 6, 31–39.
- Wang, K., Liu, J., & Li, X. (2017). Industrial Policy, Government Support and Corporate Investment Efficiency [English title]. *Management World [Chinese Journal]*, 3, 113–124.
- Wang, L., & Yu, H. (2024, April 29). Finding solutions to overcapacity [transl. by author]. *Caixin Weekly*.
- Wang, W., Sun, Z., & Niu, Z. (2014). Industrial policy, market competition and mismatch of resources [English title]. *Economist [Chinese Journal]*, 9, 22–32.
- Wang, X. (2016, November 1). There is a need for industrial policy, but only as a supplement to market regulation [transl. by author]. *Finance Sina - Opinion leaders*.
<http://finance.sina.com.cn/zl/china/2016-11-01/zl-ifxxfysn8386552.shtml>
- Wang, Y. (2002). The mid- and long-term targets to be hit by the industrial policy: The developing technology industry [English title]. *Management World [Chinese Journal]*, 4, 72–77.
- Wang, Y. (2020). Role of Government and Industrial Policies. In Y. Yao, D. Dollar, & Y. Huang (Eds.), *China 2049: Economic challenges of a rising global power* (pp. 259–277). Bookings Institution Press.
- Warwick, K. (2013). *Beyond Industrial Policy: Emerging Issues and New Trends* (pp. 1–57) [OECD Science, Technology and Industry Policy Papers]. OECD.
- Weingast, B. R. (1995). The Economic Role of Political Institutions: Market-Preserving Federalism and Economic Development. *Journal of Law, Economics, & Organization*, 11(1), 1–31. JSTOR.
- Wu, J., Chen, S., & Wang, J. (2009). Industrial revitalization planning focusing on mobilizing market forces [English title]. *Reform [Chinese Journal]*, 2, 1.
- Wu, Q., & Li, C. (1994). Industrial policy orientation under high economic growth [transl. By author]. *Management World [Chinese Journal]*, 3, 112–119.

- Wu, Y., & Zhu, X. (2015). Why China has entered into premature re-decentralization: Industrial policy and economic geography [transl. by author]. *The Journal of World Economy [Chinese Journal]*, 2, 140–166.
- Wübbecke, J., Meissner, M., Zenglein, M. J., Ives, J., & Conrad, B. (2016). *Made in China 2025—The making of a high-tech superpower and consequences for industrial countries* (MERICS Papers on China). Merics.
<https://merics.org/sites/default/files/2020-04/Made%20in%20China%202025.pdf>
- Xiao, L., & Quan, H. (2018a). China's Development Practice of Fundamental Economic System and Innovation in Theory of Ownership [transl. By author]. In *Outline of Chinese Economics* (Vol. 1, pp. 113–154). Truth & Wisdom Press.
- Xiao, L., & Quan, H. (2018b). China's Practice of Enterprise Reform and Innovation in Theory of the Firm [transl. by author]. In *Outline of Chinese Economics* (Vol. 1, pp. 155–198). Truth & Wisdom Press.
- Xiao, L., & Quan, H. (2018c). China's Practice of New Normal of Economy and Macroeconomic adjustment and innovation in Theory [English title]. In *Outline of Chinese Economics* (Vol. 3, pp. 587–609). Truth & Wisdom Press.
- Xiao, L., & Quan, H. (2018d). Practice of China's Market Economy System Reform and Innovation in Transformational Economics Theory [English title]. In *Outline of Chinese Economics* (Vol. 1, pp. 295–319). Truth & Wisdom Press.
- Xin, X. (1990). Japanese Professor Yoshiro Miwa on the meaning and current situation of Japan's industrial policy [transl. By author]. *Economic Perspectives [Chinese Journal]*, 43–46.
- Yang, G., Liu, J., Lian, P., & Rui, M. (2017). Tax-reducing Incentives, R&D Manipulation and R &D Performance [English title]. *Economic Research Journal [Chinese Journal]*, 8, 110–124.
- Yang, H. (2008). Evolution of China's industrial structure and adjustment of industrial policies [transl. by author]. *Economic Perspectives [Chinese Journal]*, 5, 44–50.
- Yang, J. (1989a). Improve structural adjustment in the context of "rectification and consolidation" policy [transl. by author]. *China Industry and Commerce [Chinese Journal]*, 11, 10–11.
- Yang, J. (1989b). Issues to be paid attention to amidst the implementation of industrial policy [transl. by author]. *China Economic & Trade Herald [Chinese Economic Magazine]*, 21, 14–15.

- Yang, J., & Luo, L. (2018). Industrial Policy, Regional Competition and Distortion of Resources Spatial Allocation [English title]. *China Industrial Economics [Chinese Journal]*, 12, 5–22.
- Yang, M. (1987). Comparison of industrial policies across countries [transl. By author]. *China Industrial Economics [Chinese Journal]*, 4, 36–44.
- Yang, Z. (1987a). On industrial policy [transl. by author]. *Macroeconomics (until September 1993: Planned Economy Research) [Chinese Journal]*, 8, 49–55.
- Yang, Z. (1987b). Several footholds for studying China's industrial policy [transl. by author]. *Journal of Quantitative & Technological Economics [Chinese Journal]*, 3, 46–49.
- Yang, Z. (1989). Industrial policy in the context of "rectification and consolidation" policy [transl. by author]. *Macroeconomic Management [Chinese Journal]*, 5, 17–19.
- Yong, Y. (1996). Reviewing "Industrial policy theory" by Shi Donghui [transl. by author]. *Journal of Finance and Economics [Chinese Journal]*, 22(6), 64.
- Yu, L., & Yu, Y. (2012). Evaluating on the Policy System of Photovoltaic Industry: Multi-levels or Diversification [English title]. *Reform [Chinese Journal]*, 8, 114–122.
- Yu, Mi., Fan, R., & Zhong, H. (2016). China's industrial policy and enterprise technology innovation [transl. by author]. *China Industrial Economics [Chinese journal]*, 2. <https://kns.cnki.net/kcms/detail/detail.aspx?dbcode=CJFD&dbname=CJFDLAST2017&filename=GGYY201612002&uniplatform=NZKPT&v=Zqp-visU-UhhqMPxomx22MTQVCjLu4wDGN3fv99HFzV72IIA3PDaUKr2FoPghA3q>
- Zenglein, M. J., & Holzmann, A. (2019). *Evolving Made in China 2025: China's industrial policy in the quest for global tech leadership* (MERICS Papers on China). Merics. <https://www.merics.org/sites/default/files/2020-04/MPOC%20Made%20%20in%20China%202025.pdf>
- Zhang, C., & Pan, L. (2012). On the Effectiveness of Industrial Policy in a Transitional Economy: From the Angle of Interests Game of Governments at All Levels in China [English title]. *Journal of Finance and Economics [Chinese Journal]*, 12, 85–94.
- Zhang, J., & Lu, X. (2018). Does Industrial Policy Promote Export Upgrading in China [English title]. *Journal of International Trade [Chinese Journal]*, 5, 39–53.
- Zhang, L. (2016, September 20). A long-term perspective on industrial policy [transl. by author]. *Souhu 搜狐*. https://www.sohu.com/a/114696033_494876
- Zhang, L., Zhu, S., Li, S., & Li, X. (2019). Market Environment, Key Industrial Policies and Enterprise Productivity Difference [English title]. *Management World [Chinese Journal]*, 3, 114–126.

- Zhang, M. (2009). A review of academic perspectives on China's industrial economic development [transl. by author]. *Journal of Capital University of Economics and Business [Chinese Journal]*, 1, 111–118.
- Zhang, P., Li, Z., & Mao, H. (2019). How does Industrial Policy Affect China Export Enterprises' Dual Margins [English title]. *Journal of International Trade [Chinese Journal]*, 7, 47–62.
- Zhang, S. (1981). On the concept and classifications of economic structure [transl. by author]. *Research on Economics and Management [Chinese Journal]*, 2, 19–25.
- Zhang, W. (2016a, August 25). Why is industrial policy doomed to failure? [Transl. by author]. *Yicai 第一财经*. <https://www.yicai.com/news/5153303.html>
- Zhang, W. (2016b, September 22). No one can solve the limits to human cognition and to incentive mechanisms [transl. by author]. *Economist 经济学家圈*. <https://finance.qq.com/original/caijingzhiku/zhangweiyingcyzc.html>
- Zhang, W. (2022, August 10). Interview—Zhang Weiyong, an economist's conversion [transl. by author]. *The Economic Observer 经济观察报*. <https://www.163.com/dy/article/HEEE45OU0550WCN1.html>
- Zhang, W., & Cheng, X. (1988). Government behavior in a market economy—An examination of Japan's economic system [transl. by author]. *Comparative Economic & Social Systems [Chinese Journal]*, 1, 18–27.
- Zhang, X. (Director). (2020, November 4). *Tsinghua Professor Jiang Xiaojuan: The government's decision-making should consider the stakeholder's implementation effect [transl. by author]* [Video recording]. <https://www.youtube.com/watch?v=KmKoSeD49QI>
- Zhang, Y. (1998). Looking at East Asia's industrial policy from the financial crises [transl. by author]. *World Economics and Politics [Chinese Journal]*, 7, 42–43.
- Zheng, L. (1989). How to understand at the current stage of our country the function of planning [transl. by author]. *Macroeconomics (until September 1993: Planned Economy Research) [Chinese Journal]*, 1, 18–24.
- Zheng, S. (2016, September 26). "Project policy" and the transformation of China's industrial policy [transl. by author]. *Caixin 财新*. <http://cec.blog.caixin.com/archives/151821>
- Zhou, L. (2018). "Bureaucratic & Economic Markets" and China's Growth Story [English title]. *Chinese Journal of Sociology [Chinese Journal]*, 2, 1–45.

- Zhou, L. (2023). From Double Creation to Mutual Configuration—The Chinese Experience of Constructing Government-Market Relations [English title]. *Academic Monthly [Chinese Journal]*, 55(3), 5–21.
- Zhou, L., Yang, Y., & Liu, W. (1987). *Using industrial policy to advance development and reform—A study on designing China's current industrial policy* [transl. By author]. 3, 16–24.
- Zhou, S., Lü, T., & He, J. (2008). Transformation of industrial policy for Chinese high-growth industries in the new age [transl. by author]. *China Industrial Economics [Chinese Journal]*, 9, 46–57.
- Zhou, X. (1980). Japanese commentators talk about the causes, problems and prospects for Japan's rapid economic growth [transl. by author]. *Economic Perspectives [Chinese Journal]*, 9, 46–49.
- Zhou, Z., & Yu, L. (1989). The basic logic of industrial policy formation—Reflection within the debate [transl. by author]. *Economic Perspectives [Chinese Journal]*, 6, 21–26.
- Zhu, Z. (1990). Imbalances within the industrial structure and its countermeasures [transl. by author]. *Journal of Finance and Economics [Chinese Journal]*, 16(1), 16–19.

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STRUKTURWANDEL DES EIGENTUMS

The rise of industrial policy represents a key aspect of the metamorphosis of the People's Republic of China's (PRC) political economy. Importantly, this reform has been conditioned by the country's transforming property regime – its economy's ownership structure and regulation. This working paper contributes to a better understanding of China's past economic reforms by examining how China's domestic industrial policy debates have evolved during the reform-era (1978 – 2022) amidst the country's transforming property regime. Overall, four different periods are identified spanning from i) the burgeoning of industrial policy discussions in the 1980s on the background of structural readjustment policies and the integration of markets into economic governance; ii) to debates on the simultaneous expansion and refocusing of industrial policies amidst the PRC's entry into the global economy and accelerating market reforms of the 1990s and early 2000s;

iii) to the intensification of industrial policy discussions amidst the reevaluation of the country's position within the global economy and the launch of its Global Financial Crisis (GFC) stimulus package; iv) as well as finally in the early 2010s a wide-ranging reassessment of the country's policy approach and growing call for horizontal industrial policies. These discussions have unfolded against the backdrop of the country's swiftly transforming property regime away from the previous unitary state-centered regime towards a mixed economy. In this context, industrial policy has been regarded as crucial not only for the developmental mobilization of novel non-state actors, but also for the revitalization of the state sector. At the core of these debates lies the restructuring of state intervention and market allocation. Crucially, Chinese economists largely concur that these reforms of the state and market are intrinsically synergistic and mutually dependent.



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