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National System of Institutional Innovations and the Institutional Framework of China's Economic Development

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ABSTRACT: This article addresses the complexity and breadth of China's economic development since the Economic Reforms of 1978, from a macro-institutional perspective. It aims to understand the compatibility between the composition and configuration of the "institutional matrix," encompassing the relationships among the state, markets, and enterprises. Particular emphasis is placed on the existence of a "deeply embedded institutional framework" as a fundamental component of China's economic planning, which extends across all administrative spheres and includes both domestic and foreign private sectors. This framework has supported ongoing institutional innovations, which have, in turn, been essential to the country's economic development.
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INTRODUCTION

The "institutional innovations" carried out in China in recent decades (Jabbour and Gabriele, 2021; Naughton, 2015, 2021; Ping, 2013) suggest some questions that guide the understanding of its development toward aspects highlighting the importance of that country's "institutional matrix". Is China a case in which the state creates and reforms institutions to serve productive development strategies, managing markets internally to enable an autonomous and competitive international integration? In this scenario, do institutions precede structural change or are they shaped (created, adapted etc.) to constitute and drive the process of productive change? Certainly, any existing causal relationships are neither linear nor unidirectional.

Throughout the text, it is argued that one of the central factors for the success of the Chinese development strategy after the start of the 1978 Economic Reforms lies in the capacity for coevolution (Nelson, 2002) between the changes in the institutional matrix and the policies aimed at productive development. This process, in turn, would be conditioned by an "institutional framework" established by economic planning, which still preserves essential characteristics of centralization. The dynamics and configuration of this coevolution would ultimately be shaped by the challenges and contradictions that arise during the transitions among the distinct stages of Chinese development.

As the main contribution to the literature, the text proposes a necessary theoretical development to address the complexity and scope of Chinese economic development in recent decades. From different institutionalist approaches, a macro-institutional perspective of development is highlighted, compatible with the notion of the composition and configuration of the "institutional matrix". In this sense, the contribution would lie in the idea that, in the Chinese case, the understanding of its development strategy must go beyond the notion of the "institutional matrix" and move toward the notion of an "institutional framework", given the strong component of planning of its national economy, which extends through all administrative spheres and also encompasses the private sector, both domestic and foreign.

To explain: from a macro-institutional perspective, it is understood that the state, markets and firms compose the basic "institutional matrix" of a national economy, whose configuration expresses how these fundamental institutions interact and how this affects economic development. In turn, the notion of a "framework" encompasses the process of coordinating development, that is, how the institutional matrix is configured which, in the Chinese case, is dependent on a national strategy that combines internal actions with international integration, based on broad planning with long-term objectives.

The second section of this article deals with the relationship between economic development and institutional change, highlighting the macro-institutional perspective of Chinese development. The third section analyzes the relationship between institutional innovations and transformations in Chinese productive policies based on the constitutive objective of the "institutional framework" to pave the way for the rejuvenation of Chinese civilization. The final section is reserved for the final remarks.

INSTITUTIONAL CHANGE AND ECONOMIC DEVELOPMENT IN CHINA

The way structural transformations affect and are affected by institutions (the causal relationships) has been a central question that distinguishes institutionalist approaches[1]. In this sense, the perspective adopted in this article is that institutions emerge and become embedded in the development process, but also partly serve to remove (and sometimes create) obstacles to development.

The institutional changes promoted over time are considered innovations, given that each economic trajectory is unique. That is, regardless of how the causal relationships that promote development are established, the different analytical perspectives (institutionalist approaches) share the notion that change is synonymous with innovation, considering that the effects of these changes on development are not predictable.

From a macro perspective (Andreoni and Chang, 2019; Chang, 2011; Chang and Evans, 2005; Reinert, 2007), institutions can also be considered normative constructs, created and embedded based on developmental objectives that are part of a national development strategy like in China.

A macro-institutional perspective of economic development and the Chinese case

Institutions and institutional change must be understood through both "cultural elements" (values, habits, beliefs etc.) and "formal mechanisms/regulations" (laws, policies, plans etc.). In practice, these processes act simultaneously in the composition and configuration of a nation's "institutional matrix." To a large extent, economic development depends on how these mechanisms are combined with ongoing productive changes. In this sense, an "institutional matrix" with an economic bias comprises three fundamental institutions in its composition: the state, the market, and the firm, based on how they relate to each other. This relationship is established through an institutional configuration that tends to adapt to the economic development process itself, while also promoting it or creating obstacles.

To the extent that the state plays a fundamental role in development, institutional relationships become more comprehensive and, as a rule, more complex compared to a case where the state's role is restricted to that of an agent whose fundamental function would be to apply and enforce the "rules of the game." How

[1] For more details on the differences among these approaches, see Pereira *et al.,* (2019).

the state intervenes in the economy defines its role in the "institutional matrix," which also influences how markets and firms operate. It's important to note that, in a historical sense, there is no possibility for markets and firms to emerge and establish themselves in an "institutional vacuum." Thus, the idea that a development strategy exists presupposes that the state has a fundamental role in this process; markets do not formulate development strategies, and firms, in turn, adopt micro-organizational strategies based on a given institutional (business) environment, which does not prevent them from interfering in this process, but in a conditioned way.

Since it is an institution composed of various institutions, the state ends up playing an articulating role in national development strategies, especially when it assumes a developmentalist character. As Reinert (2007, p.68) observes: "Some institutions importantly serve dual, multiple, and systemic purposes." This would apply to the state as an agent of development.

An aggregate perspective of the economy becomes even more necessary as the state exercises a leading role in the development process, i.e. where planning, encompassing different levels and government strategies, becomes an embedded process, a "framework" from which the configuration of the "institutional matrix" is articulated. The relationship between the micro and macroeconomic environments is permanently permeated by a notion of development that conditions large-scale actions (conditioned by the "institutional framework"), allowing the productive structure to mold itself to the needs of development with technological and institutional innovations integrated into a single long-term objective.

China constitutes a case where the state is a base institution of the national "institutional matrix" because it is also a central agent of development. In this sense, the state's actions affect the behavior of firms, both public and private (domestic and foreign), impacting markets and altering the configuration of the "institutional matrix" according to long-term objectives, which have been established based on a sequence of "five-year plans" (FYPs).

The capacity to plan and execute major structural changes relatively quickly and on a large scale, aiming increasingly at the technological frontier, especially concerning industrial activities, has been historically supported by 14 consecutive FYPs, which are encompassed within an "embedded institutional framework" that serves as the basis for coordinating the functionality of the Chinese "institutional matrix"; in other words, the Chinese FYPs have been "key pieces" in the institutionalization of processes and mechanisms aimed at executing activities whose main objective is national economic development. To do so, they are supported by an embedded institutional foundation, a "framework."

For Naughton (2021), in the Chinese case, the limits of exploring a still "nascent" domestic market in the 1980s would have led the state to the need to implement development policies that also aimed to develop "market forces." As Nolan (2014) highlights, transforming China into the "world's factory" would be the main objective of this configuration of the "institutional matrix" throughout the 1980s and 1990s, hence the predominance of state-owned enterprises.

The embedded "institutional framework" constitutes a fundamental support, based on central planning, that coordinates changes in the composition and, above all, the configuration of the Chinese "institutional matrix." For example, the recent growing expansion of the participation of private firms in the Chinese economy, including foreign capital (joint ventures etc.), has not diminished the importance of state-owned enterprises in sectors considered strategic for national economic development. That is, this change in the configuration of the "institutional matrix" was inserted alongside the FYPs and was consequently incorporated into long-term strategies, a process made possible primarily by the maintenance of the state's planning capacity.

In the Chinese case, there would be no dichotomy of state versus market, or public versus private, but a planned and decisive state action regarding the importance of the private sector for national economic development. It is in this sense that the private sector has grown in recent decades without the state ceasing to be a central agent in national economic development.

One of the most notable aspects of Chinese economic development is the way the state still holds a large part of the control over private actions, in addition to owning a large number of firms that are extremely relevant for the execution of national economic development "plans." This process is in transition to a model that incorporates aspects of "market-driven" competition (Naughton, 2021), but is still based on strong state intervention in the economy, with a strong idea of national unity, in which the state has a funda-

mental role in the accumulation of private capital, based on a "Sino-capitalism" (Nogueira, 2018) or a new institutional form called "market socialism" (Jabbour and Gabriele, 2021; Jabbour and Paula, 2018), which would create a policy space favorable to the "socialization of investment." Thus, Naughton (2021) suggests that this would be a "government-guided market economy" (market-driven, state-guided). Therefore, it is not about correcting market failures, but about organizing their functioning based on development objectives, with a strong state presence. In other words, to "guide" the market, the state needs a broad, stable, and enduring institutional base – a "framework."

For Jabbour and Dantas (2021, p.295), there is a "strategic repositioning of the state," where the "cyclical emergence of institutions" ends up delimiting the form of "reorganization of activities between the state and private sectors of the economy, with the growth of the private sector not occurring at the expense of a decrease in the state's role."

In the case of the composition of the "institutional matrix," the importance of transnational corporations (TNCs) from the first decade of the 21st century and the growth of the participation of domestic private firms stand out. Given the changes in the breadth of the composition, the configuration of the Chinese "institutional matrix" would inevitably be altered, which is in harmony with the perspective of the FYPs and the institutional changes that enable each "new" configuration. In this sense, institutional innovations, which aim for national economic development, are supported by the "framework" as a macro-institutional support.

What is added to the "institutional matrix" over time tends to be incorporated into the development process. Therefore, productive transformations do not imply a break with ongoing processes, but rather an accumulation of knowledge in the process of productive and institutional evolution; the "institutional framework" provides the necessary stability for this process. Institutional innovations are shaped to promote and support productive transformations, which characterizes the need to promote innovations in all senses, but in an articulated way. Such changes are viable on a large scale given the embedded "institutional framework," that is, as paradoxical as it may seem, the fact that a more conservative structure exists ends up helping to enable productive and institutional innovations simultaneously and in an interconnected way.

As Nogueira (2021, p.7) highlights: "The State in China plans, regulates, stabilizes, invests, undertakes, provides, and watches." It should be noted that the Chinese state performs these different functions simultaneously, but in different gradations, depending on the demands themselves based on the objectives and the stage of development the country is in.

China would have its own characteristics, both in relation to its internal organization and its international insertion, which contrast with the prevailing capitalist logic (the prevalent "model"). In the Chinese case, the singularities of development override the "patterns of regularity" identified in other economies throughout history during attempts at catching-up. To a large extent, the way the Chinese government has promoted institutional changes as a fundamental part of its national economic development strategy has corroborated the idea of a unique strategy.

Jabbour and Gabriele (2021) highlight the idea that in China there would be a "metamode of production," which contains different modes of production (capitalist, non-capitalist, and socialist), and that would end up shaping and promoting institutional changes that enable "market socialism." In this context: "Planning compatible with the market, a consequence of innovative and complex institutional operations, can be treated as one of the most important and strategic institutions of the Chinese economy" (Jabbour and Gabriele, 2021, p.181).

It is precisely the "institutional framework" that allows for combining characteristics of different modes of production (without a pre-established pattern), as it has created an environment favorable to changes in the composition and configuration of the Chinese "institutional matrix" over the last decades, which implies more frequent institutional innovations, compatible with long-term objectives.

In the Chinese case, the "framework" preserves links associated with planning. Transactions are fundamental for the implementation of microeconomic strategies, but they need to be in line with the current institutional environment, a situation where institutional innovations (often promoted by the state) contribute to guiding the choices of microeconomic agents, according to the macroeconomic objectives of development. That is, the macro environment not only conditions but also largely guides many of the microeconomic actions and the environment of choices.

However, as Nogueira and Qi (2019) emphasize, such a direction does not occur in a single direction of

determination, from the influence of the state on the domestic capitalist class. On the contrary, the authors show that such a movement is full of contradictions and that "the state-class relationship is an evolving outcome of a complex historical process involving major class relations and contradictions of accumulation" (Nogueira and Qi, 2019, p.561). In this way, the transformations in the "institutional matrix" must have the capacity to absorb the tensions derived from class conflict and at the same time enable new configurations that are functional to the metamorphoses in the stages of Chinese development. It is in this sense that the authors demonstrate that the intensification of tensions and the exhaustion of the alliance around the "Grand Compromise" between the state and local capitalists (in effect from the 1990s to the early 2000s) forged a new set of institutional relationships that sought to use the promotion of indigenous innovation as an instrument to reduce the typical tensions of primitive accumulation movements (based on the privatization of land, state-owned enterprises, and the payment of low wages to migrant workers). In other words, as a way of circumventing these tensions, the relationship between the state and local capitalists was restructured from the mid-2000s based on a logic of transforming innovation into the main vector of the accumulation dynamic. Thus, the new relationships between the state and capitalists from the mid-2000s (called the Tensioned Alliance by the authors) would be capable of simultaneously engendering a new cycle of increased productivity, accumulation, and wages, under different conditions than those characteristic of the primitive accumulation movement that characterized the previous stage of development.

In parallel with the transformations at the local level, China's growing international integration further reinforces the need to analyze the relevance of an "institutional framework," as the pursuit of development occurs in cumulative stages associated with articulated and simultaneous productive and institutional innovations. Although permeable, given a growing internationalization of economies, the "framework" precisely highlights the national character of development; it serves as a guide/reference for public and private economic agents and also has a demarcating character for the state's actions at the international level.

In summary, the adoption of development policies, with an emphasis on industrial and innovation policy in the 21st century, does not break with the "framework" that supports the "institutional matrix," which constitutes the basis of economic policy and productive evolution that enables the simultaneity of technological and institutional innovations, in a planned way, but without neglecting the importance of domestic and international market mechanisms. Every change in the composition and configuration of the Chinese "institutional matrix"[2] has been processed based on a long-term development strategy, in which economic policy highlights the state's key role as a planner and agent of development, which is supported by the current "institutional framework." In this sense, understanding how China conducts its institutional and productive innovation policy simultaneously is an important step to analyze its economic development trajectory in the most recent scenario.

CHINA'S ECONOMIC DEVELOPMENT BASED ON THE COMBINATION OF INSTITUTIONAL AND PRODUCTIVE INNOVATION POLICIES

This section aims to understand the dynamics of coevolution between industrial policies and institutional transformation in China, in line with analyses such as Jabbour and Gabriele (2021), Naughton (2021), and Pearson (2015). In other words, it examines productive development policies as a process of permanent institutional transformation, as emphasized by Andreoni and Chang (2019).

The phases of China's national development strategy are incorporated into economic planning instruments (such as the Five-Year Plans), while the composition – and especially the (re)configuration – of the institutional matrix is continuously adjusted to make these strategies viable, given the country's high degree of economic pragmatism. In turn, institutional changes – embedded within the existing institutional configuration – carry the objectives of development strategies within their purpose. As with any dynamic process,

[2] For a detailed discussion of the Chinese institutional matrix and its transformations throughout China's post-1978 development strategy, see Diegues *et al.* (2023).

formal institutional changes, which in this case operate as instruments of national economic development, tend to modify the configuration of the prevailing institutional matrix without abandoning the long-term strategy. In this strategic scenario, institutional innovations predominantly assume a formal and instrumental character, affecting above all the configuration of the existing institutional matrix.

Thus, the analytical framework proposed in this article primarily seeks to identify both the conditions that foster institutional changes and the objectives embedded within them, that is, their origins and purposes. At the same time, it aims to demonstrate how the institutional matrix supports the implementation of long-term strategies, which largely require frequent and broad institutional changes.

According to Diegues and Hiratuka (2021), there is a "coexistence of heterogeneous phases" within China's long-term development strategy. In the institutional dimension – especially in its instrumental aspect – these changes constitute cumulative processes that may also involve overlaps. The compatibility of these simultaneous "phases" becomes feasible insofar as institutional innovations occur without rupturing the existing institutional framework, which reveals a partially inertial character in China's development trajectory, particularly in the forms of policy choices that define its long-term development strategies. This inertial feature appears to be closely related to the fact that the main economic policy decisions for China's development are made by the Communist Party of China (CPC), which has governed the country for decades – a condition largely reflected in the implementation and adoption of successive Five-Year Plans.

The embeddedness of planning as a fundamental pillar of China's national development strategy and institutional matrix requires the existence of institutional innovations with an instrumental character, in order to make changes in the composition and, above all, in the configuration of the matrix feasible. In this scenario, such institutional innovations may at times take precedence over structural changes, due to the high level of institutionalized economic planning accumulated over decades.

The acceleration of productive transformations requires a dynamic and structured institutional environment, which in turn creates favorable conditions for the emergence of "waves of institutional innovations," as observed by Jabbour and Dantas (2021, p.295). In other words, the logical circuit of the Chinese development process rests on permanent reconfigurations of the productive development strategy, which demand corresponding reconfigurations of the institutional matrix. Following Evans (1995), these metamorphoses provide the necessary support and material basis for policies, always guided by an embedded orientation within a long-term planning institutional framework.

From this logical standpoint, China's development strategy since 1978 can be understood as unfolding through three major stages:

Economic opening-up (改革开放, Gǎigé kāifàng), the transition toward indicative planning, and the construction of the "world's factory" between the 1980s and 2000s;

The socialization of investment and the consolidation and internationalization of large national champion conglomerates from the mid-2000s onward, as instruments to leverage domestic productive transformation while repositioning China within an increasingly competitive international system;

The transition toward an economy in which the dynamics of accumulation and structural transformation are increasingly driven by indigenous innovation, particularly following the reaction to the 2008 global financial crisis and the intensification of international techno-nationalist rivalries.

According to the perspective advanced in this article, these three major stages of development are associated with successive reconfigurations of the institutional matrix and productive development policies, as summarized in Figure 1. The matrix, in turn, is conditioned by a highly stable institutional framework, designed to instrumentalize planning, guide public policies, and control development strategies, all oriented toward the long-term objective – formulated after the 1949 Revolution – of paving the way for the rejuvenation of Chinese civilization.

In the first stage, the three structuring elements of the institutional matrix – state, firms, and markets – were reorganized to make possible policies aimed at establishing the "world's factory." Regarding the state, measures were implemented to foster the development of market forces (Naughton, 1995, 2021), mainly through the dual approach of "reform and opening-up," combined with a gradual transition to indicative planning. Firms remained under a high degree of direct state control, while it is also possible to identify the embryonic creation – by the state itself – of a domestic capitalist class through Chinese-style privatization of the township and village enterprises (TVEs). As for markets, Naughton (1995, 2021) notes that they became increasingly subordinated to a logic of surplus expansion and commercialization, with an emphasis on export-oriented growth as a source of dynamism and modernization.

To make these orientations viable, three main sets of institutional transformations stand out: (i) the decollectivization of TVEs, (ii) the creation of Special Economic Zones (SEZs), and (iii) the redefinition of relations with foreign capital. These transformations, in turn, established the organizational structures required for the implementation of productive development policies that operationalized the strategy of turning China into the "world's factory." Concerning domestic capital, the paradigm of productive development policies approximated that of infant industry promotion strategies.

In the specific Chinese context of a transition from imperative to indicative planning, this logical circuit was complemented by what the international literature defines as "marketization" (Lardy, 1992; Naughton, 1995). Supporting this circuit, several key policies can be highlighted: allowing the commercialization of agricultural surpluses, introducing managerial flexibility in state-owned and collective enterprises, permitting production growth beyond planned quotas (Naughton, 1995), in addition to traditional investments in urban and transport infrastructure and basic transversal inputs, which strengthened domestic accumulation.

Figure 1: The Institutional Framework of Chinese Development



Source: Authors' elaboration.

In the dimension of relations with foreign capital, the policy paradigm was structured around what Chen (2020) calls the "market for technology." In this framework, the Special Economic Zones (SEZs) served as laboratories for policy and institutional experimentation, whose main objective was "attracting FDI and promoting foreign firms to have spillover effects on the domestic economy" (Chen, 2020, p.54).

This institutional configuration simultaneously allowed for the maintenance of the principles that underpin China's institutional framework – planning and control of social, political, and economic transformations – and the reorientation of the development strategy through the dual approach of reform and opening-up. By geographically circumscribing certain reforms within the SEZs, it became possible to combine experimentation with the fragmentation of policies and institutional configurations based on pragmatism (Heilmann, 2008). However, this process evolved according to a logic of hierarchical fragmentation (Chen, 2020; Lieberthal and Oksenberg, 1988; Mertha, 2006), as both pragmatism and high tolerance for local experimentation were always conditioned by long-term planning.

Within this institutional configuration, policies deliberately sought to foster spillover effects from foreign direct investment (FDI). Initially, these were more closely linked to the development of productive capabilities and the integration of domestic firms into global value chains, generating significant multiplier effects and stimulating the domestic expenditure – income circuit. In a second stage, in line with the market-for-technology paradigm, policies promoted the establishment and transfer of technology through the creation of joint ventures between multinational and Chinese firms, requiring the local establishment of R&D activities.

To illustrate the degree of preference (and even discretion) granted to multinational corporations located in the Economic and Technological Development Zones, it is worth noting that these firms received preferential tax treatment – even compared to Chinese companies. Some examples include: a 15% corporate income tax (versus 25% for domestic firms), with full exemption in the first two years and a reduced rate of 7.5% from the third to fifth year for firms committing to stay for more than 10 years; refunds of 40% to 100% of these taxes when profits were reinvested locally; exemption from taxes on investment activities; exemption from import duties on machinery, equipment, and other inputs used in production; exemption from export tariffs; highly subsidized access to land; and priority access to credit (Chen, 2020).

In the second stage of reconfiguration of China's institutional matrix (2000s), the three structuring elements of this matrix – the state, firms, and markets – were organized according to what Burlamaqui (2020) terms the "socialization of investment." From this perspective, the logical circuit of structural transformation broadly consisted of increasing surplus generation and accumulation, followed by reinvestment associated with technological progress as a means to enhance productivity. This process was linked to the concentration of capital in large enterprises and major investment projects, coordinated by the state through a logic of socialization of investment aimed at accelerating the Schumpeterian process of creative destruction.

The main institutional innovations in this stage included the creation, consolidation, and expansion of development banks – at both national and regional levels – and the establishment of two holdings responsible for coordinating investments in the state enterprise sector: the State-Owned Assets Supervision and Administration Commission (SASAC), dedicated to the productive sector, and Central Huijing Investment, dedicated to the financial sector.

Naughton (2015) highlights the importance of SASAC, established in 2003, as a "key actor" in transforming China's development model. For Nolan (2014, p.749), "The State-owned Assets Supervision and Administration Commission (SASAC) retains tight control over all key aspects of the leading state-owned enterprises, including mergers and acquisition, human resources policy, remuneration, flotation and international expansion." According to Jabbour and Gabriele (2021, pp.217, 219-220), this represents a "typical Chinese version of coordinating institutions for developmental projects. It is the operating institution of the state's interests within the core business sector (Large State-Owned Enterprise Conglomerates – LSOECs), used by the state to govern through the market.

These innovations, in turn, sought to create the foundations for a new orientation of productive development policies, centered on the concentration of investments through the formation of large national business groups. The hypothesis underlying this strategy is similar to that presented by Lee (2019) and Chang (1994) in their analyses of the South Korean development trajectory: the idea that large national conglomer-

ates are fundamental instruments to overcome the technological and financial barriers faced by the productive structures of nations seeking catching-up in the international competitive arena.

In the third stage of the reconfiguration of China's institutional matrix – since the second decade of the 2000s – the three structuring elements of the matrix (state, firms, and markets) have been organized around the pursuit of indigenous innovation. According to Chen (2020), there is evidence of a relative exhaustion of the paradigm based on FDI attraction and recognition of the limits of the market-for-technology strategy, which prioritized technological learning through the establishment of joint ventures with transnational corporations. As a result of this exhaustion, the author identifies a shift in the power structure toward institutions associated with the national innovation system, such as the Ministry of Science and Technology, to the detriment of the Ministry of Commerce, which had been the main center of power in the previous paradigm.

In the configuration of the matrix supporting this new stage, the main institutional innovations are linked to the adoption of a techno-nationalist strategy as a vector to enhance local innovative and productive capabilities, as well as national autonomy more broadly. In this context, three institutional innovations stand out: the establishment of High-Tech Development Zones – special economic zones oriented toward fostering emerging technologies – and, most importantly, the creation of the State Capital Investment and Operations (SCIOs) and the Industrial Guidance Funds (IGFs). The SCIOs are organizations formed mainly by state-owned enterprises and subnational governments, authorized to invest in local capital markets. The IGFs, often funded by resources originating from the SCIOs, are designed to finance industries defined as strategic in the Made in China 2025 plan and the Innovation-Driven Development Strategy Plan. These IGFs, such as the China Venture Capital Fund, aim to indirectly finance innovation in non-state firms – many of them promising startups – engaged in highly disruptive technological activities (Naughton, 2021).

Thus, the SCIOs and IGFs represent significant innovations illustrating the coevolution of transformations in the institutional matrix and industrial policies. In general, their creation responds to the contradictions and tensions arising from transitions across different stages of Chinese development, pursuing multiple, seemingly conflicting objectives. First, they open space for greater reproduction of capital accumulated by large state-owned enterprises beyond the productive sphere. They also partially address internal political pressures to further develop capital markets. Second, despite this relative flexibility in capital market operations, the freedom granted to SOEs to create SCIOs and venture capital funds is conditioned on their allocation to strategic industries. Third, they introduce into the Chinese economy a mechanism for promoting innovation – venture capital – that is highly characteristic of the current techno-economic paradigm based on digitalization. This venture capital mechanism complements the activities of development banks in financing structural transformation, since these banks maintain institutional and operational cultures primarily oriented toward financing sectors aligned with the Second Industrial Revolution techno-economic paradigm (Nolan, 2015).

Despite the transformations and reconfigurations of China's institutional matrix across the three stages of development briefly described above, the defining feature of this process is its conditionality to the objectives embedded in the institutional framework. It is precisely this characteristic that enables a coevolution between transformations in the productive and institutional dimensions, in a cohesive and instrumental manner, to address the challenges arising throughout China's transition across distinct stages of development. The cohesion and functional character of this coevolution, in turn, seem to endow the Chinese development model with a distinctive nature in the relationship between institutions and development in the 21st century.

FINAL REMARKS

By guiding China's development trajectory for many decades, planning has also been incorporated into the microeconomic sphere, particularly regarding how firms adapt to the increasingly frequent institutional changes taking place in the country. In other words, the mechanisms of institutional change currently operating in China have been implemented within an environment that connects the micro and macro levels, inso-

far as planning constitutes a "key institution" in the process of change. This process shows that the institutional environment has created conditions to mitigate and/or solve productive economic problems, while also fostering institutional innovations – especially those with an instrumental character. In this sense, planning stands out for its broad and deeply embedded institutional nature and thus tends to be long-lasting, serving as a fundamental institution within the "institutional framework."

The creation of institutions – assigning them a formal character – reveals not only the need but above all the capacity of the Chinese state to employ existing institutions (such as agencies and government bodies) as instrumental institutions. In this regard, an "institutional innovation" reflects the state's ability to generate institutions as products or instruments of a previously coordinated process, insofar as national development requires such innovations to pursue objectives typically articulated in large-scale plans (e.g. Five-Year Plans) – a process that can be understood as forming a "national system of institutional innovations."

This brings us back to the central question of the article: do institutions precede structural change, or are they shaped (created, adapted etc.) to confront and drive the process of productive transformation? A plausible answer is that China combines both elements. When a formal institution is created, it is not only suited to the ongoing process but also acts as a driver of desired changes, anchored in an "embedded framework." In China's case, there appears to be a strong capacity to manage institutions, which reduces the need to "transplant" institutions from other countries, reinforcing the singularity of its development strategy. In this sense, China has built a "socioeconomic system" in which institutional arrangements support productive development, with the state maintaining a central role in the national "institutional matrix." This is reflected in the Five-Year Plans as well as in the continuous institutional innovations directed toward industrial and innovation policy.

The creation of domestic institutions with an instrumental character has been a key mechanism of China's economic development – demonstrating the capacity to innovate institutionally. Development, industrial, and technological innovation policies are embedded within a uniquely Chinese configuration of the "institutional matrix." In this context, more frequent changes in the configuration of the matrix are required, while its composition evolves more slowly – two interlinked processes supported by the "framework." Thus, planning increases the degree of predictability of the effects arising from institutional changes, particularly those directed toward the micro-organizational environment. From both a historical and institutional perspective, the Chinese "model" is therefore highly distinctive.

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NOTE

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The authors have no conflicts of interest to declare.

DATA AVAILABILITY

The entire dataset supporting the findings of this study is published within the article.

AUTHORS' CONTRIBUTION

Adriano José Pereira: Conceptualization; Investigation; Methodology; Writing – original draft; Writing – proofreading, and editing.

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