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Imbalance in the institutional design of the Chinese data governance system

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Abstract: This article examines the recent institutional developments in the Chinese data governance regime. The current institutional design in this field exhibits an imbalanced characteristic. On the one hand, the coordination-based institutional arrangements in the Personal Information Protection Law cannot effectively address the remaining issue of regulatory fragmentation. On the other hand, the rapid establishments of specialized data bureaus at both the national and local levels suggest the allocation of intensive regulatory resources. The asymmetric regulatory investments in personal information protection and data utilization signify the shift of regulatory focus from protection to utilization, which may overemphasize the data utilization dimension and further weaken and marginalize the already insufficient protection for personal information. This article thus suggests to amend the institutional provision in the Personal Information Protection Law and adopt the specialized agency model as the necessary institutional guarantee for re-balancing the competing rights and interests in the digital economy.

Keywords: People's Republic of China; institutional design; personal information protection; regulatory fragmentation; data utilization; data bureau; data governance.

1. Introduction

The development of digital technologies plays a vital role in boosting digital economy and providing impetus for the modernization of the national governance system in China. They, however, bring risks to individual autonomy, human dignity and public security. The past two decades have witnessed the shift of regulatory focus from security control to personal information protection in the Chinese data governance framework [1]. The long-awaited Personal Information Protection Law (PIPL) was enacted in late 2021, finally laying down the basic principles, rules and the regulatory model chose by the Chinese data protection regime. In parallel to the finalization process of the PIPL, the normative and institutional developments signify a new turning point in the forthcoming regulatory agenda. Following a 2019 policy declaration that includes 'data' as the 'factor of production', there occurs a surge

in data utilization policy documents at both the central and local levels. The normative developments show another shift of regulatory focus from personal information protection to data utilization for accelerating the development of digital economy.

The normative findings, however, provide only limited insights about the regulatory developments in the Chinese data governance system. The enforcement perspective may tell a different story about whether there has reached a balance between protection and utilization. On the side of personal information protection, the institutional arrangements are far from satisfactory. The sectoral approach to personal information protection before the enactment of the PIPL and the unique Chinese governance structure result in regulatory fragmentation at both the central and local levels. The enforcement innovations constitute important elements of the regulatory experimentation for preparing the PIPL, suggesting the feasibility of establishing a cross-ministerial data protection authority. Regrettably, instead of the specialized agency model, the final version of the PIPL adopts a coordination model, which cannot effectively address the issue of regulatory fragmentation. On the other side, data utilization is better supported by the (fast and determined) institutional arrangements. In contrast to the long-term hesitation concerning the institutional design in the PIPL, specialized data bureaus at both the national and local levels have been rapidly established following the release of a series of data utilization policies. Perhaps equally importantly, the promotion of data utilization fits well with the economic-driven official assessment and promotion mechanism.

These recent institutional developments constitute an important dimension of the evolving Chinese data governance system. The existing literature on Chinese data laws, however, provides limited insights of this institutional dimension in the new round of regulatory exploration. The earlier research on Chinese data laws focuses on a particular piece of legislation or policy document [2]. The more recent research either provides a more holistic view of the Chinese data law system on the basis of comprehensive doctrinal analysis [3], or focuses on a specific mechanism in the Chinese data protection law [4]. Some scholars touch upon the data utilization policy developments in China and even depict the possible direction for allocating property rights in the upcoming data commercialization [5]. But they all lack an institutional perspective; this article thus aims to fill this gap.

Following the introduction, Section 2 exhibits the regulatory fragmentation before the enactment of the PIPL, the innovative institutional arrangements for addressing such enforcement issues and the final legislative choice. Section 3 examines the surge in normative documents for promoting data utilization and the following institutional developments at both the central and local levels. On the basis of these findings, Section 4 identifies the imbalance in the institutional design of the Chinese data governance system. Such asymmetric institutional arrangements will hinder the sustainable development of the digital economy in the long run. This article thus suggests to amend Article 60 of the PIPL and adopt the specialized agency model for enhancing the protection of personal information. The suggested institutional changes can help re-balance the competing rights and interests in the data governance system. Section 5 concludes.

2. Regulatory experimentation in enforcing personal information protection and the finalized institutional design in the PIPL

2.1. Regulatory fragmentation in personal information protection

Before the enactment of the PIPL, the Chinese personal information protection regime is a sector-based and multi-level legal order [6]. The data protection-related provisions in sectoral laws, regulations and ministerial rules, enforced by different governmental departments, give rise to a problem of regulatory fragmentation.

Firstly, at the central government level, several departments have regulatory authority over the issue of personal information protection. For example, the Ministry of Industry and Information Technology (MIIT) has issued several regulations and guidelines for personal information protection and has been a main regulator in this field before the establishment of the Cyberspace Administration of China (CAC) in 2014 [7]. Other ministries or departments of the central government also have some jurisdictions over this issue. In particular, the People's Bank of China (PBOC) released two regulations on the protection of individuals' financial information. A 2005 regulation issued by the PBOC containing special protection for individuals' credit information provides the prototype of data protection rights, including the right of access and the right to rectification [8]. More recently, the CAC has been very proactive in the field of personal information protection and has initiated the drafting of a series regulations and guidelines for protecting personal information [9].

The scattered enforcement agencies at the central governmental level cannot provide sufficient protection as data protection is only a non-essential aspect of these sectoral regulators' routine responsibilities. For instance, the main responsibility of the PBOC is to safeguard financial stability. It is questionable how many regulatory resources can be allocated to protect individuals' credit information in its routine financial regulation. Without a special data protection authority, this sectoral approach to institutional arrangement may not only raise the issue of regulatory fragmentation but also cause personal information protection work to be marginalized by various regulators in practice.

Secondly, the central regulatory fragmentation can have 'vertical impacts' [10]. The Chinese governance structure differs from both classic Weberian bureaucracy and pure subcontract between equal and independent entities; administrative subcontract is a more accurate description of the relationship between the central and local governments under the broader background of economic decentralization in China [11]. Within the administrative subcontract structure, local governments are granted considerable regulatory discretion while the central government retains only residual control powers, such as the authority to appoint/remove and supervise local regulators. Meanwhile, the outcome-oriented bureaucratic assessment system gives rise to horizontal 'promotion tournaments' among local regulators [12]. As the regulatory resources at local governmental level are scarce and the issues such as food safety and environmental protection are less explicit indicators among the bureaucratic assessment criteria, local governments lack the incentives to invest intensive regulatory resources into these fields under the pressure of promotion competition [11].

In the light of the experience in online content regulation, the similar regulatory fragmentation at the central governmental level is highly likely to be passed to local governments and results in weak enforcement at the local level. Empirical research examining online content regulation suggests that the regulatory fragmentation between different ministries of the central department results in their local branches' preference to soft and non-mandatory enforcement measures [13]. Currently, both the CAC and MIIT have authority to regulate online content. But when imposing formal sanctions, their local branches often differ on the evidentiary standards and the procedural requirements to be applied in specific cases; the negotiation between these local branches to reconcile such divergent understanding of laws and regulations is costly and time-consuming, which undermines the effectiveness of law enforcement. To avoid burdensome intra-governmental negotiation processes, local branches thus also tend to default to the non-mandatory interview, which is more flexible and subject to less stringent legality requirements [13]. This over-reliance on non-mandatory tool hinders the escalation of enforcement measures, thus the efficient functioning of the enforcement pyramid and works against the effective implementation of the responsive regulatory approach.

The protection of personal information, as with the social regulation fields such as food safety regulation and environmental protection, is not an explicit indicator in the bureaucratic assessments and has thus been allocated insufficient regulatory resources. To avoid the costly and time-consuming intra-governmental negotiation process, the local branches of these central regulators tend to adopt less formal enforcement measures. These factors have resulted in the prior weak enforcement of existing data protection rules and the insufficient protection for personal information.

2.2. Innovative coordination mechanisms for overcoming the enforcement dilemma

To overcome the enforcement dilemma, special campaigns and long-term cross-ministerial mechanisms have been developed. The personal information protection compliance check from financial market regulators explains another source of compliance incentives of data processors. The following sections provide details of these enforcement innovations.

2.2.1. The special campaigns for enhancing the protection for personal information

Campaign-style regulation (C-SR) has been adopted to promote enhanced enforcement and to address the regulatory fragmentation problem in China [14]. This may take the form of 'special campaigns' ("专项整治" zhuanxiangzhengzhi), 'special actions' ("专项工作" zhuanxianggongzuo) or 'special inspections' ("专项检查" zhuanxiangjiancha), and refers to 'a short-term intense set of government actions' to tackle serious social problems [15]. C-SR has commonly been regarded as an alternative strategy to facilitate effective law and policy enforcement when routine administrative regulation fails to satisfactorily achieve regulatory objectives [16].

From an organizational perspective, C-SR can facilitate extraordinary mobilization of administrative resources and the collaboration among various administrative departments [17].

Regulatory attention and resources can be redistributed to normally marginalized issues, such as environmental protection and personal data protection [18]. The conventional downward-delegated accountability approach in C-SR can incentivize local regulators to adopt effective and innovative measures to achieve the regulatory objectives of a particular campaign agenda [19]. Corresponding regulatory collaboration arrangements can also be undertaken by local governments, at provincial, municipal and county levels [17]. C-SR can thus relieve the horizontal regulatory fragmentation at both central and local governmental level.

From a problem-solving perspective, the performance legitimacy of C-SR, reflected not only in short-term and visible regulatory outcomes but also long-term regulatory impacts, has been widely recognized in China [20]. Multiple rounds of special campaigns can generate cumulative effects and enhance regulatory effectiveness [20]. Empirical evidence in China has indicated that stringent and prompt enforcement and the usually severer penalties in C-SR can effectively deter, at least for a certain period, potential violations [17]. Additionally, the regulatory experiments in various campaigns can provide useful demonstrations of particular problem-solving methods and methodologies for future policy-making [18].

However, the nature of C-SR initiative is political mobilization: C-SR is normally endorsed by political support and initiates from internal negotiations within the Chinese bureaucratic system [21]. Special campaigns normally start with a ‘notice’ or a ‘decision’ made by the State Council or its ministries and departments. Sometimes a relatively detailed ‘implementation plan’ will also be issued by the State Council. For example, in April 2016, for regulating the risks in Internet finance, the State Council convened a video conference for 14 ministries and departments and decided to initiate a one-year long nation-wide special campaign [22]. The General Office of the State Council then issued an ‘implementation plan’ for this special campaign in October [23]. Such implementation plans can, in practice, have legal effects similar to administrative rules enacted by the State Council.

An obvious shortcoming of the C-SR is thus the lack of sufficiently clear legitimate basis and specific procedures for regulating the C-SR process. The proportionality of the stringent and prompt enforcement style and the usually severer penalties adopted in C-SR has also been seriously questioned [24].

In the field of personal information protection, the various rounds of special campaigns were initiated via proclamations jointly launched by several ministries and departments of the central government [25]. The legal basis in these special campaigns is the personal information protection related provisions in the Cyber Security Law, complemented by a non-binding regulation [26]. There lacked formal State Council ‘implementation plans’ as that in the special campaign for regulating Internet financial risks. But in the 2019 App Special Campaign, a series of normative documents have been developed at different stages, forming important elements in soft law development in this field.

These special campaigns show fresh insights about law enforcement and workable institutional arrangements in the unique Chinese governance framework; they also provide good examples of how soft law regulation concerning a particular data protection mechanism has been developed in China. In contrast with traditional C-SR where the proportionality of

the severe penalties is strongly criticized, the special campaigns in the field of personal information protection shows strong responsive regulation characteristics.

(1) Privacy policies special campaigns

In July 2017, the CAC (the lead department), the MIIT, the Ministry of Public Security (MPS) and the Standardization Administration of China (SAC) jointly convened a conference for initiating a special campaign on reviewing privacy policies [27]. For implementing the relevant provisions in the Cyber Security Law, the four departments called for enhanced protection for personal information and established a special task force – the privacy policy review special campaign working group – for overseeing the campaign work. In August 2018, a second round of special campaign on reviewing of privacy policies expanded the scope of regulatory targets to 30 companies [28].

While traditional C-SR tends to emphasize stringent enforcement and severer penalties, the special campaigns relating to personal data protection show the characteristics of responsive regulation. This can be seen in the two rounds of special campaigns on reviewing privacy policies. According to the privacy policy review special campaign working group, the 2017 first round campaign was like an examination – the companies were required to present their privacy policies and answer questions from the review committee; the review committee then provided review opinions. The 2018 second round campaign was more of an exercise in interactive supervision [28]. Companies were notified about the review and provided with the opportunities to adopt rectification measures by themselves. Upon receiving formal review opinions from the committee, the companies were provided with further chances to adjust their practices [28]. The individually tailored rectification measures reached through communications and negotiations between the reviewed companies and the review committee allowed for a better fit with the regulated companies' nature and their data processing practices.

However, the effectiveness of the pilot special campaigns on reviewing privacy policies was restricted by the limited number and scope of the regulatory targets. Giant companies such as BAT (Baidu, Alibaba and Tencent) may be easily targeted due to their large numbers of consumers; but small and medium sized companies may not receive regulatory attention and lack either the opportunity to interact with regulators or the financial and human resources to self-regulate. Even the practices of industry leaders are not satisfactory. An empirical study conducted in mid-2019 indicated considerable improvements in the adequacy of the disclosure in privacy policies; but the lack of more granular access authorization settings suggested weak control by data subjects and a significant power asymmetry between these large companies and consumers [29].

(2) The App special campaign

To prevent the circumvention of laws and regulations by companies simply providing unenforced privacy promises on websites, in 2019 Chinese regulators initiated a new round of special campaign and introduced a series of enforcement measures to combat illegitimate

data processing by mobile Apps, expanding the regulatory focus from the content of privacy policies to examining whether companies were acting in compliance with their privacy policies and whether their other practices were in violation of laws and regulations. From January to December in 2019, the CAC, the MIIT, the MPS and the State Administration for Market Regulation of China (SAMR) jointly initiated a special campaign to regulate various Apps' illegitimate collection and use of personal information (the App special campaign) [25].

The responsive regulatory approach is more obvious in the methodology of the App special campaign. A special 'personal information protection task force on Apps' was established to lead the campaign. Beginning with education and persuasion, the task force initially issued the 'Self-assessment Guideline on App's Illegal Collection and Use of Personal Information' (Self-assessment Guideline) for App developers to evaluate their personal information processing practices and adopt appropriate measures to rectify problematic practices [30]. Failure to comply with this guideline might incur subsequent rounds of escalated sanctions in accordance with laws and regulations, including requirement of rectification within a time limit, public exposure and license suspension and revocation [31]. The assessment items in the Self-assessment Guideline extend beyond the format and content of privacy policies to include the Apps' actual data processing practices and the practical protection of users' rights. On one hand, this Self-assessment Guideline provides the App developers with self-regulation opportunities; on the other, it reflects an experimentalist regulatory approach in the early stage of this special campaign.

In December 2019, on the basis of the regulatory experience gained in the App special campaign, the four departments jointly released a final guideline on identifying illegitimate collection and use of personal information by Apps and distributed it to the provincial level regulators [32]. This guideline provides more comprehensive and better structured assessment criteria, incorporating some of the assessment criteria in the Self-assessment Guideline and some more types of problematic data processing practices spotted in the special campaign. This final guideline provides a set of uniform assessment criteria and can help reduce the divergence in local regulators' implementation and thus harmonize the level of protection in different regions.

The special task force released a comprehensive report about the App special campaign in May 2020 [33], suggesting various improvements across the six aspects specified in the final Guideline and strengthened public awareness of how to protect their personal information. Alongside the four governmental departments, media and individuals (data subjects) were proactive participants in the special campaign, reporting and filing complaints to the regulators about problematic data processing practices they encountered [33]. The improvements developed in these multiple special campaigns indicate a shift from one-off output-oriented regulation towards impact-oriented regulation: the task force has started to pay more attention to the training and development of a professional information security assessment community [33]; the regulatory practice in this special campaign also contributes to the drafting of a new personal information security guideline for App developers and operators [34].

The task force established in the App special campaign served as temporary supra-ministerial body and facilitated the deliberation and collaboration between different governmental departments where issues are intrinsically cross-sectoral or where regulatory authorities have overlaps in their respective jurisdictions. Such flexibility in institutional arrangements in the C-SR is helpful in mitigating the regulatory fragmentation encountered at the central governmental level and in saving regulatory resources engaged in negotiations among various ministries' local branches. The intra-governmental collaborations in these special campaigns have also accumulated valuable regulatory experience for thinking about the design of long-term institutional mechanisms for protecting personal information.

2.2.2. The cross-ministerial long-term mechanism for safeguarding the security of personal information

There appears a tendency to routinize the regulatory experience accumulated in these special campaigns. A long-term cross-ministerial mechanism for safeguarding personal information security has also been launched. The MPS and the CAC (the two lead departments), the Supreme People's Court, the Supreme People's Procuratorate, the MIIT, the SAMR and other departments have collaborated to establish a cross-ministerial long-term mechanism to combat illegitimate processing of personal information [35]. This long-term mechanism targets upstream misuse of personal information and aims to form a comprehensive and systematic regulatory approach to protecting personal information. Both public authorities and private sector data controllers are within the regulatory scope of this long-term mechanism. It emphasizes the optimization of regulatory resources, collaboration between different authorities and participation of multiple stakeholders in the comprehensive regulatory system. The establishment of this long-term mechanism demonstrates that the experience gained through short-term campaign-style regulation has paved the way for the routinization of data protection regulation.

2.2.3. Compliance incentives from other regulators and third-party commercial entities

In addition to these special institutional arrangements and regulatory strategies adopted to enhance the enforcement of data protection laws, actions taken by third-party commercial entities and financial regulators, whose roles are not specifically focused on data protection, have also contributed to the formulation of a regulatory network in the Chinese data protection regime. Recently, the Initial Public Offering (IPO) of Moji-weather, a weather forecast App developer, was rejected by the China Securities Regulatory Commission (CSRC) partially due to its failure to comply with personal information protection laws and regulations [36]. The App special campaign task force released a circular containing a list of companies that were required to adopt measures to adjust their personal information processing practices. As Moji-weather was on that list, the CSRC referred to the task force's circular and required Moji-weather to respond to several personal information protection related questions when reviewing its IPO application. The failure of Moji-weather to provide convincing answers to these questions was largely responsible for the rejection of its IPO by

the CSRC. The CSRC has no direct data protection mandate and would normally be regarded as distanced from the regulation of personal information processing. But as this example demonstrates, the CSRC may collaborate with other authorities to combat illegitimate collection and further processing of personal information.

Other parties in the financial market such as banks and stock exchanges may also address data protection related queries to transaction participants and rely on the reports or circulars released by data protection regulators as evidence when making financial-related decisions. For example, the Shenzhen Stock Exchange, in a formal inquiry letter, required an ICT company to provide supplementary explanation about its collection, transfer, storage and use of users' personal information, its compliance with the Personal Information Security Specification and any remaining risks and rectification measures for mitigating the identified risks [37]. The Shanghai Stock Exchange, when reviewing the IPO by a data analysis company, required the company (the issuer) to explain its compliance with data protection laws, regulations and guidelines and any potential data protection related risks [38]. Pressure from such third-party commercial entities constitutes an additional source of incentives for data protection compliance [39].

2.3. The finalized institutional design in the PIPL

These enforcement innovations have, to some extent, paved the way for the PIPL to take a more proactive step to adopt the specialized agency model as the institutional guarantee for robust personal information protection. The final legislative choice, however, takes a step back and adopts the coordination mechanism, which will largely render the regulatory fragmentation issue unaddressed.

Article 60 of the PIPL sets out the institutional design, which can be understood from three aspects.

Firstly, it stipulates that '(t)he national cyberspace department shall be responsible for the overall planning and coordination of personal information protection and related supervision and administration' [40]. This provision seems to designate the CAC as a central data protection authority. However, the following sentence clearly points out that a 'coordination model' is significantly different from the specialized agency model.

Secondly, Article 60 states that 'the relevant departments of the State Council shall, in accordance with this Law and other relevant laws and administrative regulations, be responsible for personal information protection and related supervision and administration within the scope of their respective duties' [41]. As suggested above, this sentence reveals that despite the comprehensive legislative model of the PIPL, the institutional design remains a sectoral approach.

Thirdly, the sector-based allocation of authority at the central governmental level will be mirrored in their local branches. Article 60 further states that '(t)he duties of personal information protection and related supervision and administration of the relevant departments of the local people's governments at or above the county level shall be determined in accordance with the relevant provisions of the state' [42].

It is unclear whether and how this finalized institutional design can effectively address the issue of regulatory fragmentation. The availability of bureaucratic negotiations, for example, taking place between officials from the ministry of the central government and the primary officials of local governments, can provide an internal tool within the bureaucratic system to relieve the problem of regulatory fragmentation and harmonize the level of protection across different regions in China [43]. The CAC's new role of overall planning and coordination of personal information protection work in the PIPL may suggest that bureaucratic negotiations will be adopted when different ministries and their local branches hold different views regarding the enforcement of the PIPL. However, the legal basis for initiating bureaucratic negotiations, the procedure for conducting bureaucratic negotiations and the remedies for inappropriately held bureaucratic negotiations need to be substantiated in formal regulations.

3. The rapid establishment of central and local data bureaus following the normative developments in the Chinese data governance system

Apart from effective protection for personal information, Chinese policymakers have started a new round of regulatory exploration, which can provide policy catalysts for releasing the full potential in big data and the rapidly developing digital technologies. The central government started to include data as one type of 'factor of production' in late 2019 for the first time. Following this important declaration, a series of policy documents have been released to explore the approach to cultivating a data element market. There occurs a surge in academic research aiming at constructing a data property rights system, allocating the ownership and other forms of property rights in data and clarifying the boundaries of data rights enjoyed by different stakeholders. In parallel to the normative developments, specialized data bureaus (both central and local) have been rapidly established to provide the institutional guarantee for data utilization.

3.1. The shift from protection to utilization in the normative developments

The Fourth Plenary Session of the 19th Central Committee of the Communist Party of China (CPC) in October 2019 signifies a starting point in the change in data related policy orientation. The session adopted the 'Decision on Some Major Issues Concerning How to Uphold and Improve the System of Socialism with Chinese Characteristics and Advance the Modernization of China's System and Capacity for Governance of the CPC's Central Committee' (hereinafter 'The Decision') [44].

The Decision sets out the requirement to improve the reward mechanism based on the contribution evaluated by market for 'labour, capital, land, knowledge, technology, management, data and other factors of production' [44]. This expression is the first time that data are listed as one type of the 'factor of production' in the central policy document. The inclusion of data as production factor sent an important signal that the utilization of data should be promoted. It also indicates that innovative plans for clarifying the allocation of rights and interests in the exploitation of data resources will be designed.

Following the inclusion of data as one type of 'factor of production' in the Decision, the concept of 'data elements' has been introduced in a subsequent policy document. In April 2020, the 'Opinions of the CPC Central Committee and the State Council on Improving the Systems and Mechanisms for Market-based Allocation of Factors of Production' (hereinafter 'Production Factor Opinion') was released [45]. This Opinion introduced the 'data elements' concept and proposed to 'cultivate the data elements market'. This policy document can be seen as a step forward to concretize the declaration in the Decision. It shows a more explicit orientation towards data utilization, by emphasizing the promotion of the government data opening and sharing and better use of data resources and data products.

Chinese policymakers took a more proactive step towards data utilization and issued another important policy document in December 2022. The 'Opinions on Building the Data Basic Regime to Better Exploit the Value of Data Factors' (hereinafter the 'Data Basic Regime') is also known as the 'Twenty Provisions on Data' [46]. A key contribution of the Data Basic Regime is the 'bundle of rights' approach to allocating the rights and interests to various participants of the digital economy [5]. Although the Data Basic Regime stressed that the importance of personal information protection and other issues such as data security and commercial secrets protection constitute the premise of a data regime at the very beginning, it is clear that the focus of the regulatory attention has shifted from protection to utilization. As observed by Xiong and others, the major reason for issuing this policy document is to eliminate the contradictions in local rules on the commercialization and utilization of data, paving the way for a harmonized data market at the nationwide [5].

Overall, these normative developments in the policy documents show a clear and strong emphasis on the utilization of data, including personal information. The regulatory and academic attention has shifted towards the concrete design of the marketplace for the commercialization and transaction of data resources, such as the allocation of property rights to different stakeholders and the mechanisms to resolve the conflicts between competing rights and interests.

3.2. The evolving nature of the institutional design in data utilization: from decentralization to re-centralization

The institutional developments for regulating data resources at local levels have emerged before the recent round of normative developments. The local institutional designs show an evolving nature: from decentralized exploration to the recent re-centralized reform. The bottom-up institutional transformation during the eighth round of institutional reform has paved the way to the top-down coordination in the names, patterns of subordination and responsibilities in the current (ninth) round of institutional reform.

3.2.1. Decentralized local institutional exploration in data management and utilization

'Big Data' was included for the first time in the government's official work report in 2014 [47]. Following the promotion of data resources utilization from the central government, local governments (including both provincial level and municipal level) have started to establish

specialized agencies for managing and utilizing data resources. For instance, Guangdong province established the first big data management bureau in February 2014 [48]. 10 provincial level and 84 municipal level big data management agencies were established before the eighth round of nationwide institutional reform in 2018; the numbers became 12 (provincial) and 208 (municipal) respectively after the completion of the eighth round institutional reform [49].

The responsibilities of local big data management agencies suggest their strong focus on promoting data resources utilization. Taking the provincial level big data bureaus as an example, their responsibilities can be observed from three dimensions. Firstly, the provincial big data bureaus enjoy decision-making power. They are responsible for top-level policy design for data-centred industries and coordinating the data resources utilization within the provincial scope. Secondly, they enjoy enforcement power. The collection and integration, registration and management, sharing and opening of public data resources and other forms of data utilization all fall within the scope of their enforcement power. Thirdly, they enjoy the power of supervision and management, covering both public and private sectors [50].

However, different local data resources management agencies show disparities in their names, nature, patterns of subordination and responsibilities [48]. The developments of the data-centred industries form monopolies in both administrative departments and commercial platforms, resulting in regional and sectoral data barriers. The provincial level data localism and obstructions to circulation of data resources among different governmental departments will deter the allocation of rights over data and thus impede data flows and transactions. There exist similar issues of regulatory fragmentation in data resources management and utilization.

The eighth round of institutional reform provided the chance and space for local governments to conduct regulatory experimentation in promoting data resources management and utilization. The changes made in the institutional arrangements constituted a vital part of such local policy experimentation. Apart from the increase in the amount of local agencies, the completion of the eighth round institutional reform brought about changes from several aspects: 1) the nature of a considerable percentage of local agencies transformed from public institution (“事业单位” shiyedanwei) to administrative agencies (“行政机关” xingzhengjiguan) [49]; 2) the patterns of subordination shifted from diverse subordination patterns to direct subordination to the corresponding level government or the general office of the corresponding local government; 3) the agencies started to shift their regulatory focus from data utilization process management to top-level design of data-centred development strategies and data utilization standards-making; and put more emphasis on the coordination function to mitigate the negative effects caused by sectoral and regional data barriers [49].

Such changes, on the one hand, indicated the assignment of formal, broader and higher level of administrative and enforcement power to local big data agencies over data management and utilization issues [21]; on the other hand, such changes suggested the enhancement in coordinating cross-sectoral and cross-regional data utilization and data flows [21]. The bottom-up institutional exploration by local governments has promoted the reform of data management agencies in accordance with local conditions and has provided grass-roots

experience for the formation of the national data management institution [51]. But it should be recognized that the decentralized local exploration has resulted in obvious regional imbalance in institutional design [50] and vertical contradictions in the allocation of power and responsibilities between the central and local governments [51].

The lack of a central data governance agency at the national level suggests that the horizontal regulatory fragmentation will be strengthened due to the regional disparities. The local institutional exploration in data utilization, however, has paved the way to evolve more naturally towards a specialized agency institutional model. The establishment of the National Data Bureau provides a new institutional basis to mitigate the effects of regulatory fragmentation arising from those regional and sectoral data barriers.

3.2.2. Moving towards re-centralization following the establishment of the national data bureau

A series of swift institutional arrangements at sub-national levels emerge following the establishment of the National Data Bureau (NDB). These institutional arrangements made by local governments cover various aspects, including adjustments in name, nature, patterns of subordination and responsibilities. Such changes exhibit a trend of re-centralization in assigning state control over data utilization. In comparison with the campaign-based and other temporary solutions to the regulatory fragmentation in personal information protection enforcement, the proactive and flexible attitudes showed by local governments in data utilization related institutional arrangements indicate a better institutional basis for mitigating the similar regulatory fragmentation.

The NDB was formally established on the 25th October 2023 following the release of the ‘Plan on Reforming Party and State Institutions’ by the CPC and the State Council in March 2023 [52]. The NDB is a vice-ministerial level agency, administered by the National Development and Reform Commission (NDRC) [53]. According to the Plan, the NDB will be responsible for advancing the development of data-related fundamental institutions, coordinating the integration, sharing, development and application of data resources, and pushing forward the planning and building of ‘Digital China’, the digital economy and a digital society [52]. The overall objective of the NDB is to promote the development of digital economy and the utilization of data resources, having a greater emphasis on macro-level policy design and less on micro-level data security enforcement issues [53]. One of its concrete responsibilities focuses on promoting the construction of the data elements basic regime and the layout design of digital infrastructure [53].

The establishment of the NDB marks the starting point of institutional transformation from previous scattered sub-national data management agencies into an integrated vertical data management regime. On the one hand, the integration of the data management regime can help boost the overall market confidence in digital economy and break down the sectoral and regional data monopolies [54]. On the other hand, such institutional choice can enhance horizontal and vertical coordination to mitigate the effects of regulatory fragmentation and overlaps in the field of data utilization [51]. Although the Plan and related policy documents have further clarified the boundaries of different governmental departments, there still exist

regulatory overlaps among the NDB, the CAC, the MIIT and other ministries which have certain authorities over economic issues. A specialized agency (the NDB) is in a better position to deliberate and coordinate with these departments so as to cope with horizontal regulatory fragmentation [51].

Promoted by such central level institutional arrangement, sub-national level governments acted swiftly to make new institutional arrangements on the basis of their previous institutional exploration during the last round of institutional reform. For instance, on the 5th of January 2024, the 'Data Bureau of Jiangsu Province' was officially established, which is the first provincial data bureau established following the official launch of the NDB. As of the 20th February 2024, 23 provincial data management agencies across the country have undergone institutional reform and have been officially operating as new agencies.

The most obvious change in this round of institutional reform is the unification in the name of provincial data management agencies: the new agencies adopt the name of 'Data Bureau of X Province', to replace the previous diverse names such as 'big data management bureau of X province', 'big data development and management bureau of X province' and 'big data centre of X province'.

However, it is worth noting that currently the provincial and municipal data management agencies (whether renamed as 'data bureau' of a certain province or municipality or not) are not local branches of the NDB. But the Plan for the ninth round of institutional reform has drawn a blueprint for gradually developing the central-local relationships between the NDB and local data bureaus. It states that currently the adjusted and newly established provincial data bureaus can be administered by the provincial development and reform commissions (provincial DRCs) and supervised by the NDB; they may be led directly by the NDB when appropriate [52]. The Plan thus suggests the unification in local data bureaus' patterns of subordination. Such required changes in the Plan are beneficial to mitigating vertical regulatory disparities and fragmentation.

In terms of responsibilities, it can be observed that the responsibilities of the NDB can find their equivalence in those of the provincial data bureaus [53]. It is suggested that such local-central balance should not be broken. The alignment of basic responsibilities between the central NDB and local data bureaus should not eliminate the current space for local regulators to take policy experimentation in accordance with local conditions (such as the level of economic and social development) [55].

Overall, the establishment of the NDB and the following local institutional arrangements show a trend of re-centralization in the ninth round of institutional reform. In parallel to the institutional developments, normative development follows. The NDB released 'The Three-Year Action Plan (2024–2026) for "Data Elements X"' [56]. This can serve as the harmonization of diverse local action plans.

4. Imbalance in the institutional design on the two sides: data utilization prevails

The protection of personal information and data resources utilization form two equally important dimensions for the development of digital economy and society. The institutional arrangements in these two fields, however, show an imbalanced characteristic.

Firstly, the nature of the final institutional choice suggests different regulatory resources investment in these two fields. The informal institutional arrangements in personal information protection and the formal institutional design in data utilization indicate an imbalance in the whole data governance system, within which data utilization prevails.

In the field of personal information protection, the final institutional design in the PIPL is far from satisfactory. Although the innovative enforcement activities such as the special campaigns and the long-term cross-ministerial mechanism, in combination with additional compliance pressure from the oversight of financial market regulators and bureaucratic interviews as negotiation tools, can mitigate the existing regulatory fragmentation, the stability and effectiveness of these politically mobilized and *ad hoc* institutional arrangements are questionable. How the CAC will play its coordination role remains highly uncertain. It is regrettable that the specialized agency model for institutional design has finally not been adopted in legislating the comprehensive personal information protection law. The enforcement deficits of the coordination model will gradually be exposed.

By contrast, the establishment of a specific vice-ministerial level data bureau (the NDB) at the central governmental level and provincial and municipal data bureaus at local levels suggest that the regulatory fragmentation in data utilization will be mitigated in an easier way. Compared with the informal and temporary institutional arrangements in personal information protection, a specialized data bureau indicates a better institutional basis to recruit human resources who are more professional at enforcing data-centred policies in a consistent manner and a better position to coordinate horizontally and vertically. For instance, following the establishment of the NDB in 2023, in the national civil service recruitment for the year of 2024, the NDB announced seven categories of general management positions belonging to the five recruitment bureaus, with a total of 12 posts [57].

The lessons from the EU data protection regime can provide insights on the diverse functions of Data Protection Authorities (DPAs). The international influence of the EU data protection regime (both the previous Personal Data Protection Directive and the GDPR) partially comes from the mediation, coordination and promotion by the national DPAs across the Europe, which is also an important reason why the EU and the US data protection regimes came from the same starting point but diverged later towards totally different directions [58]. The specialized agency model for facilitating data utilization indicates not only the allocation of richer regulatory resources (both funding and human resources), but also clearer boundaries of authority.

Secondly but equally important, data utilization fits well with the economic-driven assessment and promotion mechanism of local officials [59]. It aligns better with both local economic development and official’s personal political interests. The protection of personal information, however, provides normative frictions to data flows and utilization. It does have

the function of promoting digital economy and economic development, but in an indirect way. Officials have strong personal incentives to promote data utilization and marginalize personal information protection and privacy enforcement.

On the basis of these findings, this article identifies an imbalance in the institutional design dimension of the current Chinese data governance system. Personal information protection and data utilization equally form two important sides of the sustainable development of a digital economy. The normative developments must be supported by appropriate institutional design to guarantee meaningful and effective enforcement. The current asymmetric institutional design cannot be justified by the reasons such as organizational streamlining and the limited number of officially budgeted posts（“编制” bianzhi）. The rapid establishment of central and local data bureaus suggests that restrictions from the number of vacancies and fiscal budgets are not decisive factors for the choice of institutional design.

It is thus further argued that the institutional design provision (Article 60) in the PIPL should be amended to adopt the specialized agency model. To be more specific, it is necessary to establish a central personal information protection authority, accompanied by robust local branches with clear responsibilities and sufficient regulatory resources. Such institutional change can help re-balance data protection and data utilization and improve the Chinese data governance system.

5. Conclusion

Both formal and informal institutional arrangements form an important complement to the understanding of regulatory developments beyond the ‘law on the book’. While the normative developments in the protection and utilization of data seems to reach an equilibrium, the institutional design and the enforcement perspective suggest otherwise. China’s evolving approach to data protection and its influence should not be overlooked when seeking to understand convergence and divergence in international data privacy laws and the regulatory competition in this field [60]. Its recent shift in allocating regulatory resources (from intensive regulatory activities for enhancing the protection of personal information to the formal institutional arrangements for promoting the utilization of data) are especially instructive for developing countries where a digital society is emerging.

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Conflicts of interests

The author declares no conflict of interest.

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