

Article

# Disorder or Reorder? The Spatial Production of State-Level New Areas in China

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**Abstract:** With rapid urbanization in the world, new town construction has become prosperous. In particular, new emerging towns in China are unique because of the most significant movement of “building cities”. Over four decades of reform and opening-up, this movement has brought about a special development model known as State-level New Area (SLNA) which, like a new town, is causing a growth spurt in national and regional economic development. By applying the critical theory of production of space, this paper gives an overall analysis. SLNAs generate a new expansion pattern of urban space in the regionalization process dominated by governments. To reveal the spatiotemporal evolution logic of SLNA, the framework identifies the main characteristics contributing to spatial production: both bottom-up and top-down project on construction; a sharp and unordered trend of increment in time scale; an unbalanced regional distribution in the sequential order of “Eastern–Western–Northeastern–Central” among regions; complex spatial overlaying with different development zones and administrative divisions; and large-scale spatial expanding. This paper finds that the ongoing growth of SLNAs is a rapid process of spatial production with more contradictions, which is especially marked by tension between disorder and reorder. We hope to provide theoretical reference and practical guidance for the sustainable urbanization and orderly regional development of SLNAs.

**Keywords:** new town; national new areas; production of space; urban sprawl; China

## 1. Introduction

New towns, whose history dates back at least as far as Ebenezer Howard’s garden cities as the right combination of city and countryside in 1898, are popular around the globe [1]. To solve the urgent need for housing in post-war reconstruction, the UK made the earliest practice of the suburban garden city in 1946 [2,3], which has had far-reaching impact on Europe, America, Japan, Australia, South Korea, China, and so on [4–7]. It is a challenge for modern new towns to promote sustainable development of cities [8]. Especially for East Asia, there had been a “mismatch” between western paradigms and local realities because the imported ideas were not properly translated by local planners [9]. The majority of new towns in China have not been built according to planning in an orderly manner and cannot be defined as real cities from a pure feature-and-function perspective [10,11]. However, to ease the problems of population pressure, traffic congestion, and limited room [12–15], the new town model is still a natural choice in many areas or countries together with the rapid urbanization. New towns or satellite towns in their true sense should be dynamic, balanced, and self-contained [16,17], while a current centralized development strategy would be counterproductive [18]. As unreasonable town planning has produced a new objective of “villagers in the city” in the third world, China has also been

criticized for many large-scale new town projects [19–21]. Meanwhile, the rapid development of new towns still brings some challenges to China's new-type urbanization [22], such as social segregation, economic underdevelopment, and environmental degradation [23–28].

The new town in China, which is often called New Area because of large-scale land use, has special social and institutional context. Compared to other countries, the Chinese State Council and the local governments at various levels play an important role in the process of land finance [29–33]. This reflects the strong influences of power and capital [34,35]. Although China achieves the transfer of land use and to realize urban-rural integration, it has encountered lots of trouble in practice [36,37]. Chinese new town movement contrasts with small-scale urbanization in other developing countries, as well as with suburban sprawl guided by local governments or the private sector in some developed countries. As both a spatial organization and administrative unit, new towns in China must be labeled with different ranks. "Balanced development" is the most outstanding principle of new towns, and the state-level title of SLNA (State-level New Area) represents a profound regional strategy which is closely related to the advantages of "growth poles" and geographic location at national scale [11,38,39]. The growth-oriented governments in China still choose the new town as spatial organization to encourage the pursuit of GDP growth. In the 1990s, the transformation from "socialist planned economy" to "market economy" provided local governments with more autonomous decision-making rights and more desire for higher administrative power. However, the explanation for this phenomenon is not enough. In consideration of the conceptual confusion between "new town" (*xin cheng*) and "new area" (*xin qu*), this paper attempts to focus on the special process and dynamic of SLNAs in China.

SLNAs have prominent characteristics of spatial production. Since the reform and opening-up policy, especially since 2000, rapid urban transformation in China has been accompanied with massive new towns. The numbers and sizes of new towns are becoming increasingly larger, reshaping the relationship between city, countryside, and new town, and even university towns have become important methods of spatial production [40,41]. As new developing spaces, new towns have fueled many uncoordinated urban sprawls via urban land-use change on the outskirts of cities [30,42]. It is the combination of the land market, local government, urban planners, property developers, and fiscal decentralization that causes rapid urban sprawl in China [43,44]. The Party-state still plays multiple powerful roles in urban development despite some decentralization of powers from the central to local levels [45,46]. Facing the problem of regional inequalities, the space of the city-region is a key form of state spatial selectivity [47–49]. Different from traditional new towns in China, an SLNA, also named National New Area, is a regional comprehensive functional area that is established based on relative administrative divisions and special functional zones, which should be approved by the State Council and undertake important strategic tasks of development and reform [50]. The proliferation of SLNAs in recent years is a typical restructuring regional strategy in rapidly developing China [28]. However, this strategy is not applicable to all kinds of new town [51]. Uneven and insufficient development has become the main feature of China's social contradictions. Therefore, it is an interesting and difficult problem to judge whether the SLNA reflects disorder or reorder of regional development, especially in terms of urban expansion and economic growth. Besides, the existing research is limited in several case studies [52] of local new towns [31,35,51,53]. Little work has been done from a theoretical perspective of spatial production. The paper aims to construct a theoretical framework to reveal the spatiotemporal evolution logic of SLNA and its main characteristics, to provide theoretical reference and practical guidance for sustainable urbanization and orderly regional development.

## 2. Research Methodology

The production of space is a significant critical theory [54–56] to interpret the development of SLNAs. Building an SLNA is a risky enterprise that requires immense financial investment [10,57], so it is an interactional process of political, spatial, and economic factors. In other words, the SLNA model mainly promotes spatial urbanization through national political power to realize orderly development between regions, especially economic growth. To some degree, it can be seen as a

spatial fix for capital or as a solution to sustain accumulation [58]. Since 1990, the rapid urbanization in SLNAs has witnessed great changes of urban spatial form and structure [59]. Thus, we need a new and strong theory to explain these new areas. The theory of Spatial Production argues for a trinity of space: ethical appeal is justice, essential attribute is politics, and the major trend is urbanization and globalization [54,60]. In short, the production of space can be defined as a process that the space is reshaped by capital, power, and class, and then turns into a product of them [61–63]. The establishment of SLNAs is a typical process of spatial production, which embodies the process among different factors. Suburbanization and the decline of central urban areas are an inevitable result of the interaction between capital accumulation and class struggle [55,64], and uneven development is the key subject of spatial production [56]. However, existing research is limited in several case studies [52], especially those of local new towns [31,35,51,53]. Little work has been done from the theoretical perspective of spatial production. It is necessary to discover the evolving spatiotemporal characteristics and developmental logic of SLNAs based on the theory of spatial production.

In the process of theoretical transformation of spatial production, there are three key methodological principles to use for reference: Firstly, do not forget and give up the starting point. Specifically, do not regard Marx as the “master of thought” and do not be too entangled in details. In accordance with the spirit of dialectics, Marx’s doctrine should be regarded as a more complete theoretical system that needs to be critically examined and developed. Secondly, stay critical and free. The methodologist should neither destroy metaphysics nor bind imagination. The task of the methodologist is to identify the tools that can be used to accomplish research and to evaluate them. Therefore, researchers must have a critical spirit. Freedom on methodology is very important and creates the necessary flexibility in the study of geographic phenomena. Thirdly, combine political and economic analysis with literary and artistic techniques. This is embodied in the traditional tool of Marxist political economics and in literature and art, including “image space” such as novels, poems, texts, and pictures. In addition, there is also a combination of the above two methods, typical as David Harvey’s *Paris*.

According to the theory of production of space, this paper designs a framework to indicate the developmental logic of SLNA. Figure 1 reveals a multidimensional and interactional process of spatial production. T1 phase represents the initial administrative division setting which is an important spatial basis for national comprehensive governance, T2 and T3 reflect the spatial evolution of development zones and new towns, respectively. Development zone is a functional spatial reconstruction based on the administrative division, while new town is based both on the administrative division and development zone. The logic is mainly manifested in four aspects.

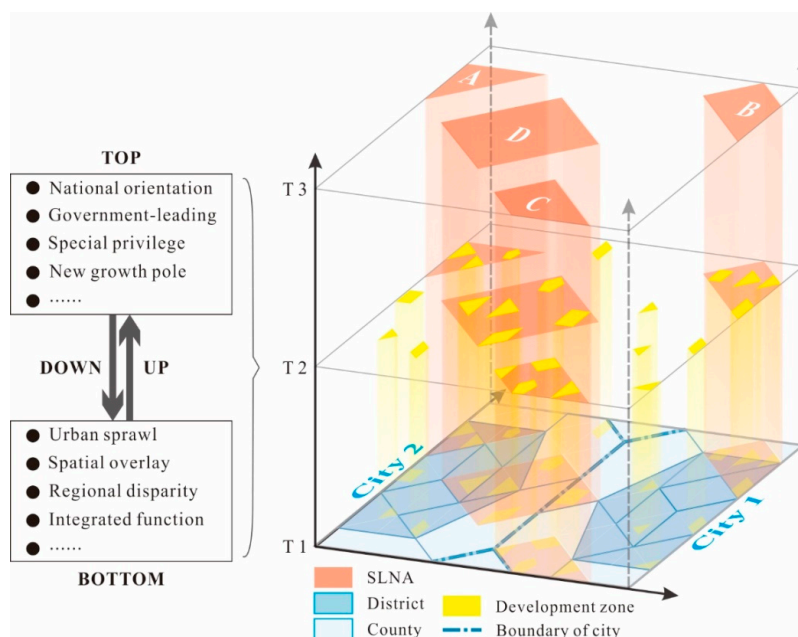


Figure 1. The basic evolution of spatial production of SLNAs.

### 2.1. The Unique Feature of SLNA

SLNAs are different from traditional new towns (defined as the general name of the relatively independent types of towns newly constructed near cities, also known as satellite towns and new communities) and other development zones, which create new spaces for rapid urbanization. On the one hand, the area of SLNA far exceeds most new towns and development zones. Traditional new towns are mostly less than 100 km<sup>2</sup> in area [5], while SLNAs are all above 460 km<sup>2</sup> and often larger than local administrative divisions at county level. Although there are widespread large-scale development zones, they are almost below their local county-level divisions. On the other hand, SLNAs, different from traditional development zones, are new exclusive spaces with comprehensive functions. Special Economic Zones (SEZs) were established in the late 1970s and early 1980s, and developed in the 1990s, marking further reform and opening-up. During this period, about 18 types of national development zones appeared and brought the total up to 646. The five major types of them are SEZ, Economic and Technological Development Zone (ETDZ), High-Tech Industrial Development Zone (HTIDZ), New Area (NA), and Pilot Free Trade Zone (PFTZ) (Table 1). However, SLNA is a unique functional area with complex function including social management and economic development, and the other ones belong to single functional zones which mainly focus on economic or industrial development. Thus, the unique comprehensiveness of SLNAs is the biggest difference from other development zones, showing the significance of regional growth poles in the national space.

Table 1. The major types of national developmental zone.

Type	Start Year	Number	Function	Key Words
SEZ	1980	7	Single	special policy, independent economy
ETDZ	1984	219	Single	preferential policy, industrial agglomeration
HTIDZ	1988	168	Single	preferential policy, characteristic industry
NA	1992	19	Complex	special policy, regional growth pole
PFTZ	2013	11	Single	flexible policy on tariff, approval, and management

Note: Special Economic Zone (SEZ); Economic and Technological Development Zone (ETDZ); High-Tech Industrial Development Zone (HTIDZ); New Area (NA); Pilot Free Trade Zone (PFTZ). Data source: Official Website of China Development Zone, 10 October 2018, [www.cadz.org.cn](http://www.cadz.org.cn).

## 2.2. Spatial Overlay: From Zone to Area and to District

The development of SLNAs is a process of spatial overlay, following the logic from development zone to New Area, and then to administrative district. The word “zone” refers to the space distinguished from adjacent parts by a distinctive feature, “area” refers to the space with indefinite boundary and comprehensive services, “district” refers to the space marked off for administrative or other purposes. To a certain extent, the final solution of spatial overlay is to reconstruct a new government of SLNA and to regain control from the different local governments gradually. Therefore, the developmental process of SLNAs reflects the order of functional evolution: from the single-function “development zone”, to the complex-function “New Area”, and then to the jurisdictional-function “administrative district”. Moreover, there is no mutual repulsion between all zones, areas, and districts. That is to say, one common space may be involved with all types of zone, area, and district. That is why SLNAs can include more different kinds of developmental zones and reshape the process of spatial overlay with administrative division, ETDZ, HITDZ, PFTZ, new town, and so on.

## 2.3. Different Types: Management Model and Spatial Pattern

SLNAs have different management models and spatial patterns. In different stages of development, SLNAs often take corresponding management models in accordance with their own conditions from three major types: Management Committee (*guan wei hui*), Combination of Administrative Region with SLNA (*zheng qu he yi*), and Government (*zheng fu*). The management committee is a dispatched agency to exercise prime powers of development and construction, and social affairs are vested in the local government. In the second model, if the SLNA and administrative division have the same overlapping area, they will build a co-working space for management. As for the last model, with the increasing requirements of urban construction, social management, and service, the SLNA needs to break the administrative division manacles to be integrated into an independent administrative district. Accordingly, the new government approved by the State Council has absolute powers of administrative management in the SLNA. Furthermore, the spatial formation of SLNAs fall into four patterns (Figure 1): “A” means the SLNA is constituted by central districts of one city; “B” refers to a combination of both central districts and peripheral counties from the same city; “C” means the SLNA is constituted by peripheral counties of one city; “D” refers to a combination of both central districts and peripheral counties from different cities. The development order of spatial patterns, A-B-C-D, reflects an urban sprawl by breaking through different borders of administrative divisions. For instance, the shift from “cross-county level” to “cross-prefecture level” has revealed that there is a trend of spatial expansion with long distance and regional cooperation among different cities.

## 2.4. Bidirectional Process: Bottom-Up and Top-Down

The SLNA underlines a mix of bottom-up development appeal (mainly referring to “right” to solve the problems of urban sprawl, spatial overlay, regional disparity, and integrated function) and top-down establishment demand (mainly referring to “power” to realize the purposes of national orientation, government-leading, special privilege, and new growth pole). For one thing, the functional appeals of social management and service are increasing due to the massive establishment of single-function development zones. Local governments need to take more comprehensive measures to integrate the functions of development zones, to change the limitations of various systems and mechanisms. Because of the gradient strategy among regions and the widening regional disparity, local governments must create more new towns as growth poles, to promote regional development. One popular phenomenon is generated: chasing higher administrative titles for more special privileges and supporting policies. A sobering fact about fierce application is that few better new towns or otherwise win a title of “SLNA”. For another, SLNA also reflects a political control from top down. Based on the spatial layout of regional strategies, the State Council will select some spaces and corresponding governments to prepare for building an SLNA. After being approved by the State

Council over several years, the SLNA should follow a top-down system of administrative control. Not only the strategic orientation of the nation, but also a direct management agency is dispatched by the upper government. For example, the establishment of SLNA must be approved by the State Council of the People's Republic of China (SCPRC) and yield to the unified management of the National Development and Reform Commission of People's Republic of China (NDRCPRC). The SLNA will be subject to the administration of governments at different levels, and level-by-level up-submission. Besides, the most important leadership positions of SLNA are often held by major provincial leaders. In short, the establishment of SLNAs is a typical process of spatial production. Under the transformation appeal of traditional development models, many kinds of single-function development zones need to be transformed into complex-function new areas. Meanwhile, traditional development order has exacerbated regional disparity or disorder, which prompts the state to build a new batch of growth poles to reorder regional development. Therefore, in the bidirectional interaction between "bottom-up" and "top-down", the state will select some exclusive spaces for SLNAs with special privileges and supporting policies that providing local governments with more new spaces for urban expansion.

### 3. The Evolving Spatiotemporal Characteristics of SLNAs

#### 3.1. The Temporal Characteristics of SLNAs

SLNA has become a significant development model since the 1990s. In the process of China's rapid spatial expansion by all kinds of development zones, SLNA was first established in the early 1990s and promoted as a new urban area for concentrating on the reform and opening. Since the further policy decision in 1992, the successful model of SEZ has been gradually transferred to SLNA. With the influence of Pudong New Area of Shanghai, China has undergone a new round of building massive new towns across the country. By the end of 2017, China had set up 19 SLNAs, covering a land area of about 22,396 km<sup>2</sup> and a sea area of about 25,800 km<sup>2</sup> (Table 2). Among them, just like the first Pudong New Area, the latest Xiong'an New Area approved in 2017 is raising wider international concerns. The reason is not only that the two major SLNAs are important historical strategies made by both of Central Committee of the Communist Party of China (CCCPC) and SCPRC, but also the latter is the only SLNA with main task of "relocating non-capital functions". Therefore, its development planning will exert a strong influence on the construction standards of future SLNAs. To some extent, the four independent municipalities of China have all achieved a strategic layout corresponding to one SLNA.

Table 2. Basic information of SLNAs.

NO.	New Area	Approval Time	Department	Planning Area/km <sup>2</sup>	Population/Ten Thousand	City	Region
1	Pudong	June 1990	CCCPC, SCPRC	1210	547.5	Shanghai	ER
2	Binhai	May 2006	SCPRC	2270	297.0	Tianjin	ER
3	Liangjiang	May 2010	SCPRC	1200	242.6	Chongqing	WR
4	Archipelago	June 2011	SCPRC	1440	97.4	Zhoushan	ER
5	Lanzhou	August 2012	SCPRC	806	16.1	Lanzhou	WR
6	Nansha	September 2012	SCPRC	803	77.8	Guangzhou	ER
7	Xixian	January 2014	SCPRC	882	95.2	Xian, Xianyang	WR
8	Guian	January 2014	SCPRC	1795	77.3	Guiyang, Anshun	WR
9	West Coast	June 2014	SCPRC	2096	180.0	Qingdao	ER
10	Jin Pu	June 2014	SCPRC	2299	158.0	Dalian	NR
11	Tianfu	October 2014	SCPRC	1578	250.3	Chengdu, Meishan	WR
12	Xiangjiang	April 2015	SCPRC	490	134.0	Changsha	CR
13	Jiangbei	June 2015	SCPRC	788	148.2	Nanjing	ER
14	Fuzhou	September 2015	SCPRC	800	155.3	Fuzhou	ER
15	Dian Zhong	September 2015	SCPRC	482	76.1	Kunming	WR
16	Harbin	December 2015	SCPRC	493	36.3	Harbin	NR
17	Changchun	February 2016	SCPRC	499	-	Changchun	NR
18	Ganjiang	October 2016	SCPRC	465	-	Nanchang, Jiujiang	CR
19	Xiongan	April 2017	CCCPC, SCPRC	1770	-	Baoding	ER

Note: (1) In addition, the sea areas of Archipelago New Area and West Coast New Area are 20,800 km<sup>2</sup>, 5000 km<sup>2</sup>, respectively. (2) Central Committee of the Communist Party of China, SCPRC (State Council of the People's Republic of China (CCCPC); Eastern Region (ER); Central Region (CR); Western Region (WR); Northeastern Region (NR). (3) The deadline for population data is 2015. Data source: Pudong New Area, [www.pudong.gov.cn](http://www.pudong.gov.cn); Binhai New Area, [www.bh.gov.cn](http://www.bh.gov.cn); Liangjiang New Area, [www.liangjiang.gov.cn](http://www.liangjiang.gov.cn); Archipelago New Area, [www.zhoushan.cn](http://www.zhoushan.cn); Lanzhou New Area, [www.lzxq.gov.cn](http://www.lzxq.gov.cn); Nansha New Area, [www.gzns.gov.cn](http://www.gzns.gov.cn); Xixian New Area, [www.xixianxinqu.gov.cn](http://www.xixianxinqu.gov.cn); Guian New Area, [www.gaxq.gov.cn](http://www.gaxq.gov.cn); West Coast New Area, [www.huangdao.gov.cn/n10/index.html](http://www.huangdao.gov.cn/n10/index.html); Jin Pu New Area, [www.dda.gov.cn](http://www.dda.gov.cn); Tianfu New Area, [www.cdtf.gov.cn](http://www.cdtf.gov.cn); Xiangjiang New Area, [www.hnxjq.gov.cn](http://www.hnxjq.gov.cn); Jiangbei New Area, <http://njna.nanjing.gov.cn/>; Fuzhou New Area, <http://fzxq.fuzhou.gov.cn>; Dian Zhong New Area, [www.dzxq.gov.cn](http://www.dzxq.gov.cn); Harbin New Area, [www.harbin.gov.cn](http://www.harbin.gov.cn); Changchun New Area, [www.ccxq.gov.cn](http://www.ccxq.gov.cn); Ganjiang New Area, [www.gjxq.gov.cn](http://www.gjxq.gov.cn); Xiongan New Area, [www.xiongan.gov.cn](http://www.xiongan.gov.cn).

The establishment of SLNAs has distinguishing stage characteristics. It can be basically divided into three stages (Figure 2): the first one is the Slow Exploration Stage (1990–2009). For 20 years, there were only two SLNAs established in Shanghai and Tianjin with a 16-year gap. At present, the planning area of Binhai New Area is approximately 1.9 times of Pudong New Area. The increased area in this stage accounts for about 16 per cent of the total land area of entire SLNAs, with an annual average of about 205 km<sup>2</sup>. The second stage is named the Accelerated Development Stage (2010–2013). China had established four new SLNAs for three consecutive years from 2010 to 2013, which kept a land rise of 4249 km<sup>2</sup> and maintained annual growth of 1062 km<sup>2</sup>. During the period, the fourth SLNA of Archipelago New Area began to include sea area for the first time. The last stage is the Soaring Explosion Stage (2014–2017). The other 13 SLNAs have been continuously set up in only four years. Furthermore, the two same historic peaks of annual increment are intensively reached in 2014 and 2015, which account for more than half of the total SLNAs. It is worth noting that another SLNA, West Coast New Area of Qingdao, has already included a sea area of 5000 km<sup>2</sup>.

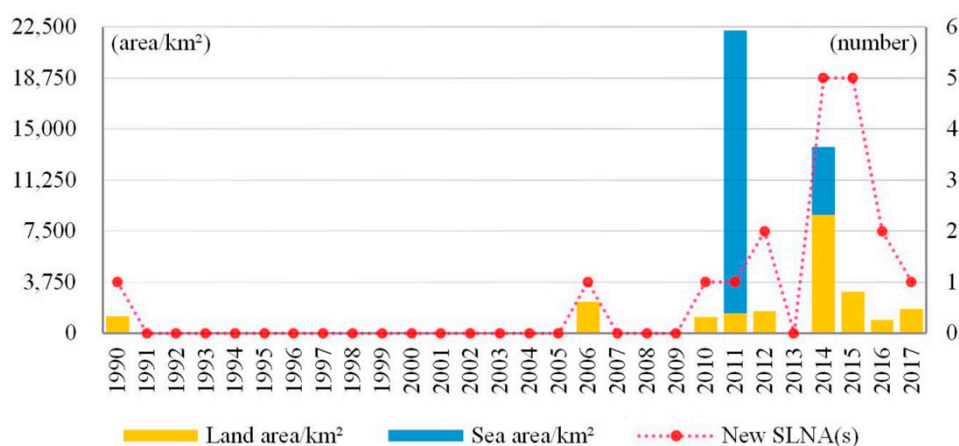


Figure 2. Annual increment of indicators of SLNAs.

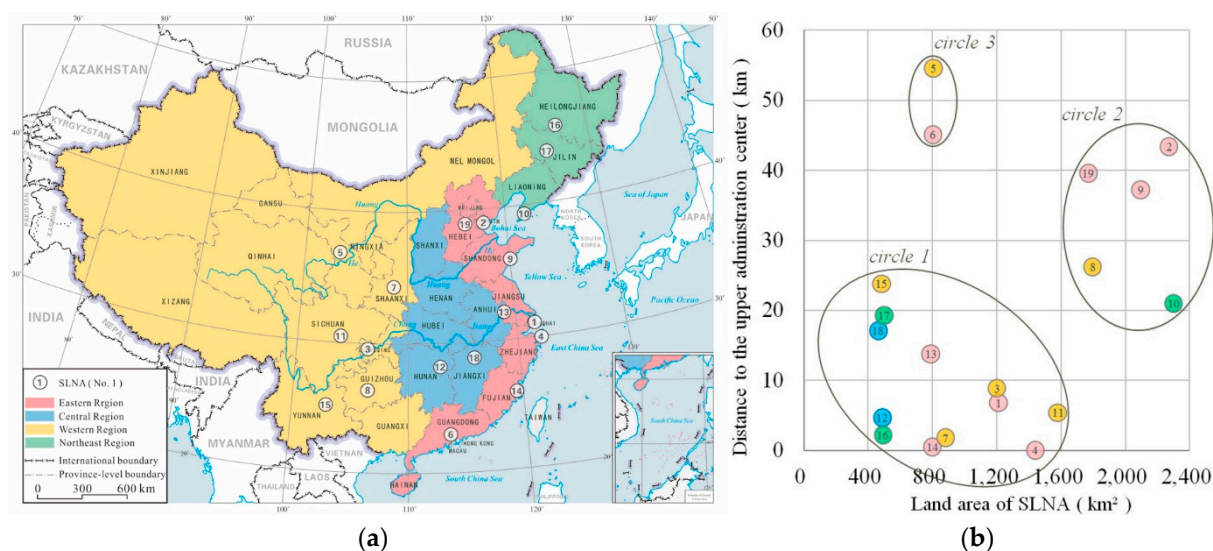
The establishment of SLNAs is a rapid but unstable process. In terms of the number of SLNAs during the 28-year establishment, there is a consecutive zero growth for 15 years and 89 per cent of the SLNAs were established during the following 8 years. Meanwhile, the average annual increment ratio for the three stages is 1:2:6.5. Regarding the planning area of SLNAs, the increased land area accounts for 84.3 per cent of the total. In particular, the 2014 is a landmark for the establishment of SLNAs. The land expansion scale of new areas in 2014 reached about 2.8 times that of 2015. In addition, the sea area has officially been included to the overall planning of SLNAs since 2011, which now is about 1.2 times that of the land area. Moreover, the establishment of SLNAs is closely related to national development strategy. In particular, China began implementing the state policy of “opening to the outside world” in 1978, and both the CCCPC and SCPRC put forth the strategy of Pudong development in 1990. As for 1992, it is a “watershed” year for China’s progressive reform and opening-up. The accelerated development zone model has brought about fundamental changes in China since then. In 2013, China entered a new era to deepen reform comprehensively, which is regularly followed by explosive establishment of SLNAs.

### 3.2. The Spatial Characteristics of SLNAs

There is a strong order correlation between the spatial layout of SLNAs and the regional division of social-economic development in China. Generally, the great majority of SLNAs are located at the peripheries of regional central cities. While relying on the central old towns, SLNAs are always required to have distinctive functions with the old towns to avoid disadvantages of traditional development paradigms. As a result, SLNA is regarded as a spatial growth pole for regional development and an engine of innovative transformation. The division of the four major regions (Eastern Region, Central Region, Western Region and Northeastern Region), based on the socio-economic development, is a key basis for CCCPC and SCPRC to formulate regional policies (Figure 3a). The earliest two SLNAs are in the Yangtze River Delta Area (YRDA) and the Beijing-Tianjin-Hebei Area (BTHA) of Eastern Region. Soon after that, the approval of the third one marks the SLNA entered the Western Region for the first time. Till then, the earlier 9 SLNAs are all located in the Eastern or Western Region (number is 5 and 4, respectively). Since 2014, the establishment of Jinpu New Area has formally filled the gap of SLNA in Northeastern Region. In the next year, the Xiangjiang New Area indicated that the SLNA began to become a national strategy for Central Region. Since then, the spatial layout of SLNAs has been gradually promoted in the four major economic regions. Currently, the distribution status of SLNAs in the four regions is uneven: 8 for Eastern Region, 6 for Western Region, 3 for Northeastern Region, and 2 for Central Region. Hence, both the development sequence and the quantitative distribution of SLNAs follows the evolving spatial orders of “Eastern Region–Western Region–Northeastern Region–Central Region”. At the same time, it also follows a fixed rule of “one province or municipality only corresponds to one SLNA”. In addition to the three provinces of



Northeastern Region, there are some provinces of the other three major regions that still have no SLNA: 2 of Eastern Region, 5 of Western Region, and 4 of Central Region. Because of the small possibility of establishing SLNA in Beijing, the spatial layout of future new SLNAs will focus much more on the Central and Western regions to promote the inland development and opening-up. However, whether it is possible to break the fixed rule in recent years remains a challenge.



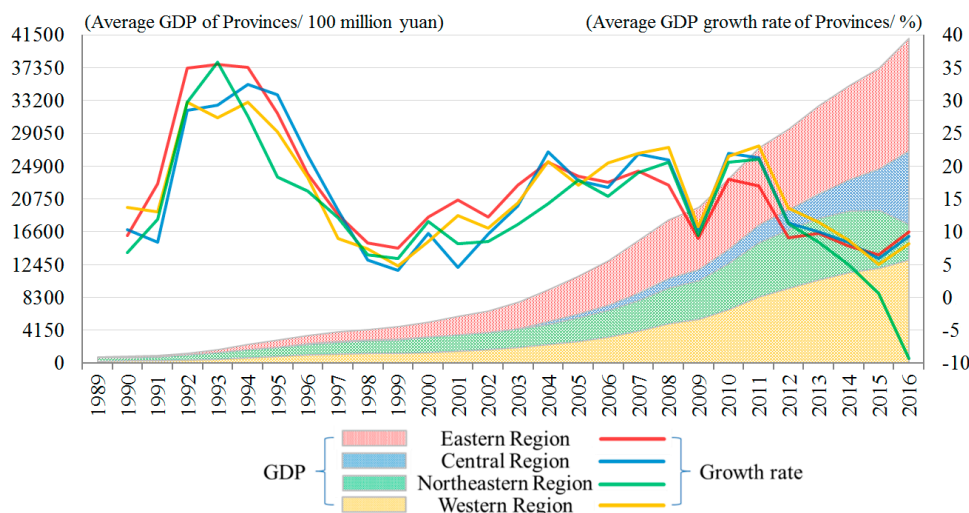
**Figure 3.** The spatial distribution (a) and indicators (b) of SLNAs in China. Note: Numbers from 1 to 19 in this figure are in a one-to-one correspondence with Table 2.

The area size and spatial distance of SLNAs are relatively larger, which is characterized by the rapid expansion of city scale. As far as land area is concerned, every one of all SLNAs is larger than 465 km<sup>2</sup> and more than half of them are intensively below 1000 km<sup>2</sup>. Besides, there are six SLNAs with areas ranging from 1000 km<sup>2</sup> to 2000 km<sup>2</sup>, and the other three super SLNAs are all over 2000 km<sup>2</sup>. Surprisingly, marine space on the eastern coast of China has been quickly incorporated into the space of SLNAs, for example, both the fourth and ninth ones have covered a sea area of more than the total land area of all SLNAs. However, in terms of the spatial distance between the management committee of SLNA and the upper administrative center, the vast majority of SLNAs are below 10 km or above 20 km, with 8 in each of the two counterparts, showing a clear polarization trend. The Lanzhou New Area has the longest distance of 54.6 km, and the proportion of SLNAs with distances ranging from 10 km to 20 km is only 16 per cent. The area size reflects the spatial potential of local development, while the distance reflects the spatial basis of radiation development. Therefore, the area size and distance are both principal spatial elements for SLNAs. According to the comprehensive data of area and distance, the SLNAs can be classified into three categories (Figure 3b): the circle 1 with smaller area and distance contains more than half of SLNAs, and the circle 2 with larger area and distance contains a medium proportion, and the circle 3 with smaller area but larger distance contains the least. Consequently, SLNAs with large areas but different distances tend to be closer to the regional central cities, such as municipalities, capitals of provinces, and large and medium-sized cities, for large-scale urban expansion. Since the integration of new town and transportation is a crucial step in building a sustainable city [65], most of these selected cities belong to the node cities of the main traffic arteries in regions. With the changing scale and distance, the combination of SLNA is becoming increasingly diversified, which is full of contradictions between internal inadequate development and external imbalanced development. This brings a huge challenge for social management and spatial governance. At the same time, SLNA has gradually shown a more salient trend of “closer distance” and “larger scale”, and it tends to be distributed along the coast or river.

China is facing growing management risk from SLNAs due to their establishment pattern which has complexity of administrative divisions and diversity of development zones. There are many management challenges of “spatial overlay” both inside and outside of the SLNAs. On the one hand, most SLNAs are not administrative entities with administrative management functions. However, their orientation of comprehensive functions also requires multiple executive powers. Therefore, the state should appropriately promote the integration of development zones and SLNAs by means of administrative division adjustment. At the same time, it is necessary to achieve multidimensional coordinated management on different spaces through institutional innovation. Otherwise, there will be much management conflicts and coordination difficulties between the SLNAs and their intersections with county-level divisions (including the districts under the jurisdiction of cities, the cities at county level, and the counties). It is about more than 3 county-level divisions in every SLNA, while Tianfu New Area and Xixian New Area have each 7 ones. In addition, the coordination difficulties also come from the upper administrative division. Especially since 2014, the “spatial overlay” between SLNAs and Administrative divisions has upgraded from “cross-county-level divisions” to “cross-prefecture-level divisions”, which means that the management coordination is involved in different prefecture-level divisions and their subordinate ones. On the other hand, every SLNA includes different levels, types, or numbers of single-function development zones and even some ones with orientations at state level. Many functional zones basically adopt the management model with dispatched committees, so each of the different zones within SLNAs is often overlaid with other ones. In summary, there is a prominent “multi-level, multi-type and multi-quantity” characteristic of “spatial overlay” between SLNAs, administrative divisions, and functional zones.

#### 4. Discussions: The Tension between Disorder and Reorder

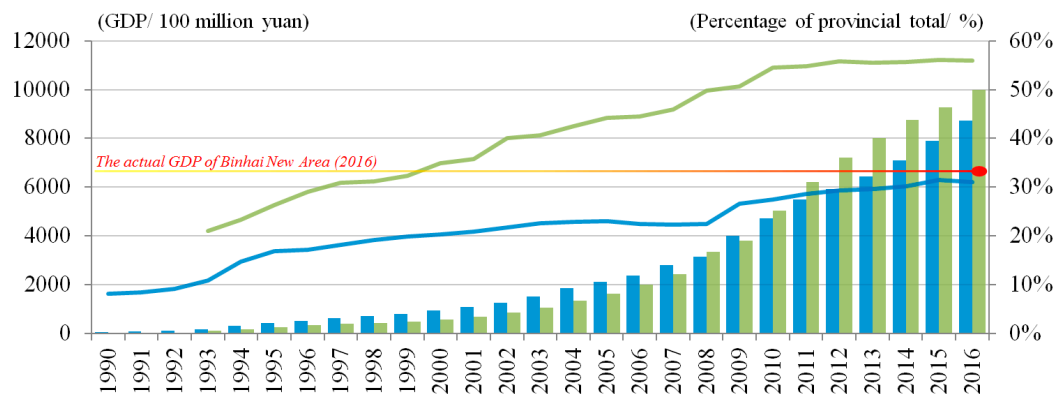
The government-led mode of SLNAs is bound up with the evolutionary orders of regional strategies in China. There is a logical consistency between the establishment of SLNAs and the strategic consequence of four major regions (Figure 4). In the first place, it is “from the south to the north” of Eastern Region. After the reform and opening-up, the establishment of SEZ provided the eastern coast of China with a rapid development. The economy of Eastern Region even through the country has gradually assumed the spatial layout of “south faster and north slower”. As national economic center, Shanghai’s economic contribution rate in domestic growth was declined year by year from 7.8 per cent in 1978 to 4.19 per cent in 1990. Likewise, another economic center of Tianjin just contributed 17.88 per cent to the GDP of BTHA. Consequently, the two major SLNAs established before 2010 show strategic significance for promoting the economic development of east coast from south to north. Secondly, “from east to west” means a turn from the Eastern Region to the Western Region. After entering the 21st century, the increasing regional disparities between Eastern Region and the other regions have received increased attention. With the development of regional strategies (including the China’s Western Development, the Revitalization of Northeast China, the Rising of Central China, and the Advancement of Eastern Region), the Central, Western and Northeastern regions has achieved a rapid progress, while the growth rate of Eastern Region was lower than the other three ones for the first time in 2008. So, the subsequent establishment of SLNAs in the Western Region is aiming to reduce the huge regional disparities between regions. Apart from the above two aspects, “from east-west to nation” is a shift from the east-west direction to the whole country. Since 2014, China’s economy has entered a stage of “new normal” (*xin chang tai*) with low growth rate, thus cultivating new growth poles for regional development is to be a key reason for soaring SLNAs. Another growing pressure comes from the “cliff-breaking” decline of economy in the Northeastern Region, leading to the first phenomenon of negative economic growth, only negative 9 per cent of average GDP growth rate in 2016, among regions since the reform and opening-up. As a result, the Northeastern Region set up SLNAs in preference to the Central Region. At present, each of three provinces of Northeastern Region has one SLNA, and the Central Region is also advancing.



**Figure 4.** The evolution of average GDP of Provinces in the four Regions of China. Data source: China Statistical Yearbook [31].

The establishment of SLNAs has not well achieved orderly development among regions. As exclusive spaces, SLNAs has carried the vital mission of national spatial and regional strategies for more than 20 years. The establishment of SLNAs has always been accompanied by the purpose of balanced development, which is more often expressed as the readjustment from “disorder” to “reorder”. However, whether it is “south-north direction” or “east-west direction”, their unbalanced development has not break through the existing difficulties. On the contrary, the economic gap between different regions continues to widen, such as the economic downturn in the Northeastern Region in recent years. At the same time, the development level of different SLNAs also differs greatly, and the GDP of some SLNAs does not match well with their corresponding area scale. For example, Guian New Area, jointly built by two prefecture-level cities of Guiyang and Anshun, has a planned area of 1795 km<sup>2</sup> but with GDP about 17,060 million yuan in 2014, contributing only 1.6 per cent to Guizhou Province. Another example is that the Lanzhou New Area, with the longest spatial distance, ranked first-lowest with 12,550 million yuan in 2014. It is also crowned with the title of “Ghost City” because of the high proportion of housing vacancy and farmland losses. In the same year, the existing SLNAs mostly contributed less than 10 per cent to the upper provincial GDP. The Tianfu New Area and Dianzhong New Area are 7.3 per cent and 7.5 per cent, respectively, which are all below the average level of their province. Due to the later establishment of other SLNAs and the municipality system, the Pudong New Area and Binhai New Area contributed as high as 31.6 per cent and 56.1 per cent, respectively [42]. As the two oldest established SLNAs, both have achieved rapid growth in more than 20 years (Figure 5). Since 2008, the GDP of Binhai New Area has surpassed the Pudong New Area for the first time and has been the leader of all SLNAs until now, and the annual economic contribution rate has continuously maintained over 50 per cent. That is why Binhai New Area has been seen as the third growth pole of China following the Shenzhen SEZ and Pudong New Area. It was also labeled as the first SLNA which hit GDP above 1 trillion yuan in 2016, reported by the Xinhua News Agency (Website source: [http://www.gov.cn/xinwen/2018-01/10/content\\_5255263.htm](http://www.gov.cn/xinwen/2018-01/10/content_5255263.htm)). However, recently, some China’s northern provinces, such as Liaoning and Nei Mongol, cut their GDP growth and admitted fudging key economic numbers. More importantly, the northern Binhai New Area of Tianjin, as the best SLNA, has substantially reduced its 2016 GDP growth data by 33 per cent (24 per cent below Pudong New Area at the same year) to 665.4 billion yuan from the initial official figure of 1000.2 billion yuan. After correcting the actual GDP, it restored the original disorder between the north and the south in China. Before this, the “8·12” catastrophic fire and explosion accident, occurred in the Binhai New Area of Tianjin in 2015, causing serious casualties, which led to a heated discussion over the hidden danger and governance crisis in the development of SLNAs. In a word, we should

rethink deeply about the development model of SLNAs. For example, the state should make necessary regulations on the city planning rights of local governments. Besides, the major cities should promote the orderly and sustainable development of SLNAs based on respecting regional differences. Of course, SLNAs must accelerate the transformation from inclined economic functions to complex functions.



**Figure 5.** Comparison of GDP between the best two SLNAs. Data source. Statistical Yearbook of Shanghai Pudong New Area [66]; Statistical Yearbook of Tianjin Binhai New Area [67].

## 5. Conclusions

Because of more significant government-led intervention, the SLNA model in China is greatly different from new towns of other countries regarding planning, construction, and management, and is different from new towns itself. The spread campaign of new town establishment aims to relieve the pressures of city center by the polycentric planning and spatial expansion. However, the SLNA has its own peculiarity. SLNAs with large-scale planning are seen as important spatial carriers for regional development that should be explored in an orderly fashion. In fact, most SLNAs are not spontaneous productions but a significant mismatch between planning and practice influenced by state powers, resulting in a disorderly urban sprawl to some extent. Compared to the traditional new town, an SLNA should be understood as a larger city-level administrative district rather than a town. Compared to the traditional development zone, SLNA is a larger special area with complex function that should be responsible for integrating the single-function development zones inside.

The development of SLNAs is a rapid process for the production of space in China. In recent years, the surge of SLNAs has been a major strategic support for the practice of a new type of urbanization. This implies that spatial production will continue, and it seems multidimensional and interactional as it is a product of the spatiotemporal characteristics of SLNAs as a whole. On the temporal scale, the establishment of SLNAs is unstable, which is experienced in three stages: slow exploration, accelerated development, and soaring explosion. On the spatial scale, the spatial layout of SLNAs has a strong order correlation with the four major regions of China, of which there is an evolutionary order of “Eastern–Western–Northeastern–Central”. It has an entanglement between disorder and reorder of regional development. Meanwhile, the area of one SLNA is generally larger than a traditional new town. These new areas are more likely getting close to regional hub cities for large-scale spatial production, even expanding to ocean space. Based on the complicated and varied development zones and administrative divisions, the comprehensive areas of SLNAs are making a spatial overlay at many different spatiotemporal levels and scales. However, SLNAs represent a more intricate form of spatial production with function from single to complex and development from local to regional.

Rapid urbanization and economic growth has generated a tension between disorder and reorder in the recent decades. The SLNA is mostly established in a tough adjustment period of regional development. There is no doubt that the building of SLNAs will certainly stimulate rapid growth in the urbanization and economy in the short term. However, the existing unbalanced development between regions can be embodied in the development sequence and the quantitative distribution

of SLNAs. The different SLNAs from different regions have different levels of development. First, some SLNAs are less-effective drivers for regional development. Second, many local governments are still focusing more on economic growth rather than institutional innovation of SLNAs. Third, skepticism surrounding SLNAs is revealing a disorder of unbalanced and inadequate development, for instance in the Binhai New Area and Lanzhou New Area. Of course, SLNAs are the top spaces for new expansion and exploration at the state level, because they are both special areas of comprehensive functions and pilot areas of reform. Although it is certainly positive to present the SLNAs as a panacea for transformation of development zones, the realization is less so. Essentially, such tension also represents a mismatch between spatial production and spatial fix. Understanding the SLNAs from the perspective of spatial production is useful if we understand the tension between disorder and reorder of regional development in China. If the logic of spatial production mainly dominated by government in the process of urbanization cannot be changed, the tension and disorder will continue and even deteriorate, even if a new spatial pattern is produced.

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