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Socio-spatial Responses Amidst COVID-19 Outbreak

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# Grid governance between spatial efficiency and social segregation: Chinese Gated Communities socio-spatial responses amidst COVID-19 outbreak

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**Abstract.** The paper analyzes how the urban model of Chinese gated communities (GCs) is changing living spaces and administrative organization, starting from the implications caused by the COVID-19 pandemic. Gated Communities represent a consolidated sociospatial model within the urban landscape of contemporary China. Its wide diffusion, which has its roots both in the historic city and in the models of collectivization of the space of the socialist era, has allowed real estate investment companies to experiment with forms and solutions aimed at supporting a rapidly growing market. Likewise, their segregation has prompted government authorities to promote reforms to reduce their diffusion and encourage new forms of integration. The pandemic has projected the morphological pattern of GCs into a new urban role, proposing itself as a model of effective fight against the spread of the disease thanks to the activation of spatial structures capable of separating and hierarchizing homogeneous social groups, as well as aligning state administrative power at the local level and the spatial layout of the urban grid. Residents are thus transferring new hierarchies of values to GCs, influencing future market prices, implementation in the regulatory field and design practices.

**Keywords:** Chinese urbanization, Gated Community, COVID-19.

## 1 Introduction

The recent pandemic of COVID-19 led us to rethink and reframe many aspects of our life. Among the many speculations, the recent outbreak has surely opened a debate, both in the academia and outside of it, on the role that planning, urban design and housing forms have on people health and security, both during “normal” times and sanitarian crisis [14]. Particularly, in the field of urban design and planning, a fierce debate arose within the study, conception and assessment of dense cities, their functional organizations, planning systems and housing models [15]. In this frame, China represents an interesting field of investigation, not because the first outbreak spreading happened

there, but because of the continuous overlapping between the urban housing spatial organization and the boundaries of its public governance.

This paper, thus, investigates the effects of the COVID-19 pandemic on the perception and assessment of housing spaces in Chinese cities, with a particular emphasis on their physical attributes and urban form. Many scholars have already acknowledged the intertwined relations between housing spaces and social practices [21], as well as spatial structure and health [5]. These studies highlight that within a certain definition of the built environment, the potential exists for architectural and spatial forms to facilitate or constraint certain types of activity and thus to transform the essence of social relations, reflecting the way in which places are perceived and manifested. This paper aims to contribute to these debates, bringing some new reflections on the assessment of physical attributes of Chinese gated communities (hereafter GCs) before, during and after the first wave of COVID-19 outbreak. Several authors have already dealt with the effects of the pandemic on this urban typology, raising questions whether and how GCs' spatial organizations are able to challenge external emergencies [20] [38], and to improve the sense of safety among what is perceived as "external" [39]. This literature assumes, therefore, a particular relevance if related to a large debate which discussed about the benefits and constraints of opening GCs in major Chinese cities [37] [28], after they have been largely assumed as a socio-spatial dispositive able of reinforcing the social role of an emerging urban middle class [27].

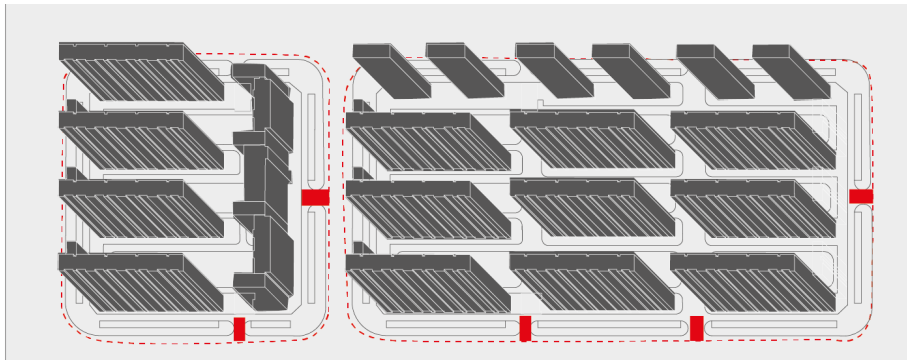
After this type of development has been criticized both in academia and in institutional bodies, this paper asks whether and how, in a very contingent situation such as the COVID-19 outbreak, China's gated communities have been reconsidered; how their space have been adapted to new uses and possibilities; and how their design features are changing in the near coming future. To answer these questions the contribution, compare forms of use and perceived values of Chinese GCs before, during and after the first wave of the pandemic. Analysis have been carried out on secondary sources (particularly Chinese newspapers, online magazines and scientific articles), real estate datasets [17] (National Bureau of Statistic of China for the years 2016-2020) and long period of on-field research in China's GCs. The conclusions of the paper are based on the cultural shift that are detectable on the sources of this research, which count also on the direct observation of newest GCs architectural competitions occurring in China asking participants to imagine for the future housing solutions able to fight health emergencies.

## **2 Gated community in China. Between market value and urban form**

Although GCs have spread globally, their prevalence in China is worth of interest for many reasons. Indeed, CGs represent the basic model of urban development in the country, not only in terms of social organization and service management but also in terms of urban structure and design. According to Wu [35] Chinese GCs accounted in 2018 for the 80,61% of the housing type of urban population and, reaching a diffusion

of 300,000 units across the country, becoming its market dominance [36]. After 1979, China has undergone a period of fast-paced urbanization, together with a profound reformation of its economical and planning system. This brought to an important process of land and housing commodification, in which the development of large-scale land plots represented the DNA of urban expansion. Chinese large and densely populated cities based their urban planning approach on the idea of the “super-block”, a spatial construct that started to become popular in the western modernist urban planning discourse during the early stage of the 20th century [26].

Even though, the idea of the “super-block” is not a recent concept in the country, during the period of real estate market formation and transformation, the super-block remained the basic unit of urban planning and real-estate transaction, and thus it strongly defined the “new Chinese city” [16]. Similarly, to what happened in the American context during the post war period, the introduction of a grid plan model, developed under the western influences, brought the concept of block to partly loose its physical and social acceptance and to assume the meaning of a big parcel of land dived by giant roads, also before being transformed into a housing estate or a commercial cluster [13] [29]. Such type of real estate developments dilatated the urban fabric until turning urban monads into microcosms. Indeed, although often externally gated, inside they contain not only multiple places and functions to satisfy the needs of urban communities, but also all major public facilities [2].

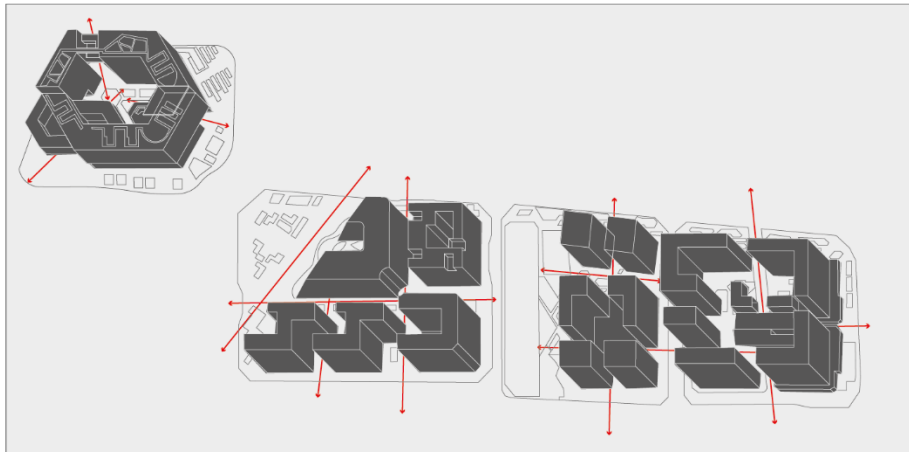


**Fig. 1.** General Plan of Beijing Vanke COFCO Holiday Town (Source: Elaboration by the authors).

However, within the Chinese culture, gated living is not only a recent trend. According to Wu [33], it is possible to retrace different functions of gating in the Chinese history. Under socialism, gating reinforced political control and collective consumption organized by the state, while in the post-reform era, the gate demarcates emerging consumer clubs in response to the retreat of the state from the provision of public goods. In this regard, Huang [9] suggests how residents began to form collectives to protect their lifestyle and interests. Gating started to also have some influence on the privatization of service provision and governance, among the Chinese city and culture. New Chinese residents started to form homeowners’ associations [4], in addition to other governance bodies such as residents’ committees and community service centers [25],

which work strictly with developers and community managers companies to provide and ensure basic private services to residents. Indeed, we need also to consider the influence of the rising awareness for privacy in the Chinese culture associated with a new form of private property ownership [18].

In addition to this, it is possible to see Chinese gated residential estates not just in terms of governance issues, but also in terms of symbolic value. After the system of public housing provision has been replaced by commodity housing programs, gated and architectural design features started to enter the Chinese culture and create a vehicle of desirability of newly built residential areas. Instead of simply providing security, the gate of newly built suburban estates can be considered a way to create a sense of magnificence and status among the residents. Large real estate developers, such as China Vanke, Poly and Longfor, adopted exclusive and innovative urban services, including both physical structures such as a laundry, a nursery, a swimming pool and a park with a games area and sports equipment, as well as social amenities such as educational structures, cultural activities and health care support, to market their estates [32] especially in the suburbs; this strategy became crucial for gaining a competitive advantage on the real estate industry.



**Fig. 2.** Masterplan (Phase 1 + Phase 2) of Guangzhou Vanke Cloud City (Source: Elaboration by the authors).

This fact makes the Chinese context different from that of western gated communities because the debate is not only focused on the theme of private governance [31], but rather about the specific building forms and their packaging practices [34]. Moreover, differently from the West, gating in China did not raise too much concern for such long time. It was only in 2016 that, because of a new national strategic direction within the “New Type of Urbanization Plan”, China announced policy recommendations intending to end GCs. This policy, however, faced societal resistance and it was very little successful. Very few interventions were effectively developed under this direction (Fig.

3). As Chiu et al. [3] have largely acknowledge, indeed, privately produced communities continue to promote and justify exclusion, reinforcing socioeconomic and spatial inequalities. If this kind of values were the “normal” before the pandemic, the external health issue questioned spatial organization and local governance as discussed in the following paragraph.

### **3 Evaluating Chinese Gated Communities socio-spatial responses during COVID-19 outbreak**

#### **3.1 The reactivation of the gates**

The lockdown in Wuhan, where, according to statistics, 60% of all cases happened in China [22], reflects how Chinese urban areas have dealt with the pandemic, using their common planning grid as a spatial mean to curb population movements. The gated structure of GCs permitted to reactivate pre-existing surveilled entry points to contrast the diffusion of the virus. Only those who do not show symptoms of contagion were allowed to enter inside; entrance was permitted presenting digital certificates tracing previous activities, with relevant repercussions on the issue of social surveillance and how it worked during the pandemic. Outside the GCs, mobility infrastructure was again monitored by local authorities. This double mechanism, which contingently separated homogeneous social groups in space, allowed to activate a meticulous and capillary control. It recalls the frozen spaces, hierarchically organized and segmentable into controllable areas, described by Foucault in “Discipline and Punish” [6]: a form of control in which the government aligns its tools to local spatial characteristics, and in which the pandemic represents the temporary opportunity to conceive a disciplined exercise of power.

Facing the sanitarian emergency, the compartmentalized model of GCs separates and hierarchizes the flows of the population, allowing stricter forms of control [19]. In this sense, the GCs result as latent structures capable of activating tight control during emergencies, becoming administrative tools inextricably linked to the urban structure.

#### **3.2 From efficient GCs responses to new market values**

Although a significant body of literature describes the Chinese urban phenomenon as part of a neoliberal transition [8], where the capital drives local governance choices, the transformation of GCs as a control tool for facing external emergencies, suggests the re-emerging of the state in the management of local spaces and communities, partially overcoming the private management of the real estate sector. In this sense, Li [10] speaks of a pre-liberal disciplinary society, in which the policy of the "grid governance system", inaugurated in 2013, is implemented for building even more rigid control perimeters, activated by the government thanks to the distribution of dedicated personnel [24].

The efficient use of gates as a separation of the urban grid during the pandemic has challenged the 2016 tentative reform, which never took off due to residents’ oppositions [7]. According to the values assigned by the study of Blakely and Snyder [1] to describe

the preferences for living in GCs - lifestyle, prestige and safety - safety was surely the less significant on the desirability of Chinese gated enclaves [11], the implementation of control by property management companies and government bodies was not fully enforced, making them de facto open communities rather than fortified estates. Furthermore, the low level of criminality in Chinese cities defined the need for a fenced boundary only as a psychological device rather than an actual deterrent. On the contrary, a recent study by Li, Wan, and He [11] display that, in the case of some GCs in Beijing, the sanitary control activated at the entrances of CGs during the pandemic has strongly influenced the social perception of safety. This increased the social value of gating, because associated to a limitation of the effects of the pandemic, having thus a real impact on market prices of CGs.



**Fig. 3.** Entrance of a GC during COVID-19 outbreak surveilled by dedicated personnel (source: [www.sixthtone.com](http://www.sixthtone.com))

The increasing positive perception of gating by the residents may solicit the introduction of restrictive measures of spatial governance even beyond the current contingency. In addition, real estate developers may take advantage from a real demand for increasing speculative profits, thus reducing the provision of new affordable housing spaces. Average selling price data (National Bureau of Statistics of China) from 2016 to 2020 [17] display how in the 5 first-tier cities of China the pandemic did not arrest the fast pace rising average selling price for residential building and confirmed local decreasing tendencies in already developed metropolitan areas [table 1].

### 3.3 New local alliances

During the pandemic, GCs held also new forms of governance based on a stronger alliance between public institutions and homeowners' associations. The use of the "grid governance" was implemented thanks to the insertion of the state power at the local level, which reconfigured the presence of the public authority, increased the number of specially trained officials and cadres, and brought to experimenting new ways of cooperation between public bureaucracy and local private companies [40]. Indeed, the

SARS crisis of 2003 had already demonstrated that the public administration could not entirely rely on private management companies to counter the emergency, because such firms were divided into a myriad of small realities and moved by profit-oriented mechanisms. During the new pandemic of COVID-19, a series of street offices, managed directly by the local government, had the opportunity to coordinate an increased number of volunteers, regaining in this manner the confidence of the emerging middle class living in CGs [22]. At the same time, the socio-spatial structure of GCs, formerly under a revision by some urban policies soliciting a better integration between the residential estate and the external urban realm [6], is now becoming more introverted.

**Table 1.** Average selling price of commercialized buildings [residential buildings] (yuan/sqm). Data available from the National Bureau of Statistics of China 2017, 2018, 2019, 2020, 2021. [<http://www.stats.gov.cn/>]

City	2016	2017	2018	var%	2019	var%	2020	var%
Beijing	28489	34117	37420	+9,68	38433	+2,70	42684	+11,06
Tianjin	12879	15139	15924	+5,18	15423	-3,14	16391	+6,27
Shanghai	25910	24866	21582	+16,54	32926	+13,61	36741	+11,58
Guangzhou	16346	17685	21582	+22,03	24015	+11,27	27112	+12,89
Shenzhen	45498	48622	55441	+14,02	55769	+0,59	56844	+1,92

The result is a more significant growth of social inequalities within the spatial grid and a further limitation in accessing public services and goods [23]. In these regards, planners and architects are invited to envision how dedicated regulation may guarantee the collective enjoyment of public assets even in case of public health crisis.

### 3.4 Emerging spaces in GCs design practices

Observing how GCs responded to COVID-19, it is possible to envision them as resilient socio-spatial devices within the urban realm, which bring to reflect more upon the future lines of development of the Chinese process of urbanization. Some physical elements of GCs are changing how humans interact with spaces responding to the contingent state of emergency.

As described in the previous paragraphs, the most evident is the entrance gate, which selects and distributes the external complexity by channeling it within a homogeneous and monitored context. The entrance device feeds social segregation, but when it becomes a market value expressed by a segment of consumers, it legitimizes planning action reinforced by the state of emergency. It is the same for the distribution of internal services, which guarantee the self-sufficiency of the community. If on the one hand, residential facilities urge to design GCs as multifunctional zones, on the other hand, they trigger the possibility that urban enclaves also become privileged places of consumption separated from the urban context. Even elevators are also changing the way in which they are used by local inhabitants. Allowing the vertical movement of masses inside residential towers, their use is becoming a second control barrier. Restrictions in the number of users and continuous sanitization, open the doors to both new technological means and a reconsideration of their dimensioning – larger and therefore more



expensive – in future residential investments. Finally, apartment entrances represent the last sanitized threshold that must be as much as possible preserved. Thus, for instance, new spaces in other parts of the gated community are defined to accommodate delivery storages for online purchases, increasing more and more the distance between residents and external users of the space.

In the absence of a clear legislation that regulates the design of new GCs within the current pandemic contingency, spontaneous experimentations arise. Real estate developers, planners and local agencies are considering the mitigation of risks connected to pandemic and public health issues among the main criteria for assessing new design proposals. This was for instance the case of a design competition for the development of a multifunctional GC in Shenzhen, to which the authors have recently participated: innovative solutions, spanning from open space to interior design, were welcomed by the jury to evaluate the proposal under a holistic point of view. It is thus possible to record how the private sector is advancing in the standardization of new spatial features that might be delivered to an upcoming emergent market, in which the safe management of residents' flows might play a predominant role.

#### **4 Concluding remarks**

This study displays how the emergence of COVID-19 had some significant implications on the urban model of Chinese GCs. Their spatial characteristics, even considering problems of segregation and separation between different social classes raised over time, gave an efficient response to the pandemic, easily re-activating latent structures, such as gated entrances and internal facilities for securing and monitoring residents' activities [30].

The rigid division between the inside and the outside of the estate, has, even more than before, become a market value for residents and prospective homebuyers. Therefore, firms operating in the real estate sector, in the absence of a specific legislation, could operate to intensify the socio-economic separation between the inhabitants of the GCs and urban citizens that from them are excluded. This drift would bring Chinese GCs closer to transnational models of enclave urbanism, which separate homogeneous social groups from the collectivity, far from representing the historical process of production of collective housing within Chinese society [12].

GCs thus find themselves representing a bias in the face of future public health challenges. They position themselves in between the efficiency shown in controlling health emergencies, thus legitimizing themselves from the point of view of public safety, and the acceleration of a process of social segregation. This study encourages further post-pandemic investigation to carry on in-depth analyses and fieldwork data collection on the physical and social impact of GCs on urban life, determining how COVID-19 may have defined new interpretative categories and values for framing, assessing and design contemporary Chinese urban development.

## References

1. Blakely, E.J., Snyder, M.G.: *Fortress America: Gated Communities in the United States*. Brookings Institution: Washington (1999).
2. Carota, F.: City's Fragments. In Bonino, M., Carota, F., Governa, F., Pellicchia, S. (Eds.) *China Goes Urban. The City to Come*. Skira Editore: Milan (2020).
3. Chiu-Shee, C., Brent, D. R., Vale, L.J.: Ending Gated Communities: The Rationales for Resistance in China. *Housing Studies* 0(0): 1–30 (2021).
4. Deng, F. (2022). Is HOA capitalized in housing price? Evidence from Chongqing, China. *International Journal of Housing Markets and Analysis*, 15(1), 94–107.
5. Forsyth, A., Salomon, E., Smead, L.: *Creating Healthy Neighborhoods: Evidence-Based Planning and Design Strategies*. Routledge: London (2017).
6. Foucault, M.: *Discipline and Punish: The Birth of the Prison*. Vintage Books, New York (1975).
7. Hamama, B., Liu, J.: What is beyond the edges? Gated communities and their role in China's desire for harmonious cities. *City, Territory and Architecture*, 7(1), 13 (2020).
8. Harvey, D.: *A brief history of neoliberalism*. Oxford University Press, Oxford (2005).
9. Huang, Y.: Collectivism, political control and gating in Chinese cities. *Urban Geography* 27(6), 507–525 (2006).
10. Li, P.: Conceptualizing China's spatial lockdown during the COVID-19 pandemic: A neo-liberal society or a pre-liberal one? *Social Transformations in Chinese Societies*, 17(2), 101–108 (2021).
11. Li, L., Wan, W. X., He, S.: The Heightened 'Security Zone' Function of Gated Communities during the COVID-19 Pandemic and the Changing Housing Market Dynamic: Evidence from Beijing, China. *Land*, 10(9) 983 (2021).
12. Li, M., Xie, J.: Social and Spatial Governance: The History of Enclosed Neighborhoods in Urban China. *Journal of Urban History*, (2021)
13. Liu, H., Zhou, G., Wennersten, R., Frostell, B.: Analysis of sustainable urban development approaches in China. *Habitat International* 41, 24–32 (2014).
14. Madden, D. (2020). The urban process under covid capitalism. *City*, 24(5–6), 677–680.
15. Megahed, N. A., Ghoneim, E. M.: Antivirus-built environment: Lessons learned from COVID-19 pandemic. *Sustainable Cities and Society* 61, 102350 (2021).
16. Monson, K.: String Block Vs Superblock Patterns of Dispersal in China. *Architectural Design* 78, 46–53 (2008).
17. National Bureau of Statistics of China, <http://www.stats.gov.cn>, last accessed 2022/02/28.
18. Pow, C.-P.: *Gated Communities in China: Class, Privilege and the Moral Politics of the Good Life*. Routledge: London (2009).
19. Qian, Y., Hanser, A.: How did Wuhan residents cope with a 76-day lockdown?. *Chinese Sociological Review* 53(1), 55–86 (2021).
20. Shi, C., Liao, L., Li, H., & Su, Z. (2022). Which urban communities are susceptible to COVID-19? An empirical study through the lens of community resilience. *BMC Public Health*, 22(1), 70.
21. Shove, E., Pantzar, M., Watson, M.: *The Dynamics of Social Practice: Everyday Life and How It Changes*. SAGE: Los Angeles (2012).
22. Song, Y., Liu, T., Wang, X., Guan, T.: Fragmented restrictions, fractured resonances: Grass-roots responses to Covid-19 in China. *Critical Asian Studies* 52(4), 494–511 (2020).
23. Sun, C., Xiong, Y., Wu, Z., Li, J.: Enclave-Reinforced Inequality during the COVID-19 Pandemic: Evidence from University Campus Lockdowns in Wuhan, China. *Sustainability*, 13(23), 13100 (2021).

24. Tang, B.: Grid governance in China's urban middle-class neighbourhoods. *The China Quarterly* 241, 43–61 (2020).
25. Tomba, L.: Middle Classes in China: Force for Political Change or Guarantee of Stability? *PORTAL Journal of Multidisciplinary International Studies* 6(2), (2009).
26. Vale, J.L.: Standardizing Public Housing. In Ben-Joseph, E., Szold, T.S. (Eds.) *Regulating Place: Standards and Shaping of Urban America*. Routledge, New York (2013).
27. Wang, L., & Gilroy, R. (2021). The Role of Housing in Facilitating Middle-Class Family Practices in China: A Case Study of Tianjin. *Sustainability*, 13(23), 13031.
28. Wang, H., & Pojani, D. (2020). The challenge of opening up gated communities in Shanghai. *Journal of Urban Design*, 25(4), 505–522.
29. Wang, Z., Li, L., Li, Y.: From super block to small block: urban form transformation and its road network impacts in Chenggong, China. *Mitig Adapt Strateg Glob Change* 20, 683–699 (2014).
30. Wang, Z., Liu, L., Haberman, C., Lan, M., Yang, B., & Zhou, H. (2021). Burglaries and entry controls in gated communities. *Urban Studies*, 58(14), 2920–2932.
31. Webster, C., Glasze, G., Frantz, K.: The Global Spread of Gated Communities. *Environment and Planning B: Planning and Design* 29(3): 315–20 (2002).
32. Wu, F.: Transplanting cityscapes: the use of imagined globalization in housing commodification in Beijing. *Area* 36, 227–234 (2004).
33. Wu, F.: Rediscovering the 'Gate' Under Market Transition: From Work-Unit Compounds to Commodity Housing Enclaves. *Housing Studies* 20(2): 235–54 (2005).
34. Wu, F.: Gated and packaged suburbia: Packaging and branding Chinese suburban residential development. *Cities* 27, 385–396 (2010).
35. Wu, X. L. 2018. "Utopian ideals and privatopia dilemmas in urban gated communities." [In Chinese.] *J. China Natl. Sch. Administration* 2: 122–127.
36. Wu, X., & Li, H. (2020). Gated Communities and Market-Dominated Governance in Urban China. *Journal of Urban Planning and Development*, 146(3), 04020025.
37. Wu, Z., Yang, L., Xu, K., Zhang, J., & Antwi-Afari, M. F. (2021). Key Factors of Opening Gated Community in Urban Area: A Case Study of China. *International Journal of Environmental Research and Public Health*, 18(7), 3401.
38. Zeng, P., Sun, Z., Chen, Y., Qiao, Z., & Cai, L. (2021). COVID-19: A Comparative Study of Population Aggregation Patterns in the Central Urban Area of Tianjin, China. *International Journal of Environmental Research and Public Health*, 18(4), 2135.
39. Zhong, T., Crush, J., Si, Z., & Scott, S. (2021). Emergency food supplies and food security in Wuhan and Nanjing, China, during the COVID-19 pandemic: Evidence from a field survey. *Development Policy Review*, dpr.12575.
40. Zhu, T., Zhu, X., Jin, J.: Grid Governance in China under the COVID-19 Outbreak: Changing Neighborhood Governance. *Sustainability*, 13(13), 7089 (2021).