

## Article

# Alternative Governance Model for Historical Building Conservation in China: From Property Rights Perspective

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**Abstract:** With the rapid advancement of urbanisation, the adaptive reuse of heritage plays a key role in achieving sustainable development, which is widely recognised by UNESCO and International Council on Monuments and Sites (ICOMOS). In the process of urban renewal, unclear property rights have seriously hindered the relocation of old houses, compensation and the adaptive reuse of historical buildings, even causing a series of social contradictions, such as violence. Moreover, forced evictions and controversy in dealing with the rights of residents, particularly the so-called ‘nail households’ have attracted public attention. However, few studies have analysed the problems and countermeasures from the perspective of unclear property rights. This study focuses on analysing the unclear property rights of historical buildings to propose an Alternative Governance Model for Historical Building Conservation in China. Founded on the Coase Theorem of externalities and property rights to examine the existing complex property ownership and rights patterns of 63 historical buildings in the famous Pingjiang Historic Block in Suzhou, China, the model provides reasonable and feasible reconstruction schemes for each situation. The operation model can also provide a symbiosis of new and old building solutions for urban renewal in developing countries, which may encounter a similar challenge of urbanisation.

**Keywords:** sustainable urban development; governance; urban renewal; historical buildings protection; property rights



**Citation:** Guo, N.; Chan, E.H.W.; Yung, E.H.K. Alternative Governance Model for Historical Building Conservation in China: From Property Rights Perspective. *Sustainability* **2021**, *13*, 203. <https://doi.org/10.3390/su13010203>

Received: 6 November 2020  
Accepted: 24 December 2020  
Published: 28 December 2020

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## 1. Introduction

To meet the sustainability agenda of urbanisation in the process of smart and sustainable urban development, there has been a certain consensus that, compared with new buildings, the protection and transformation of old buildings have been generally accepted, due to either social effects or environmental benefits [1]. In terms of the environment, renovating building materials of old buildings can reduce the pressure on energy consumption. By recycling existing materials, which can reduce carbon emissions, the impact on climate change can be reduced [1,2]. On the other hand, from a social perspective, old building protection projects can maintain social continuity and protect buildings that have been in disrepair for a long time [3].

However, given the insufficient awareness about the protection of historical buildings and facing a shortage of urban land, in numerous densely populated countries and regions, particularly in the fast-growing East Asia regions, historical buildings are demolished to meet various development needs. This practice is pervasive in many cities that are in the initial stage of economic development. For example, after the Second World War, Japan’s large-scale urbanisation development resulted in the arbitrary destruction and demolition of many ancient buildings [4]. In the 1950s, the ancient walls of Beijing were demolished on a large scale [5]. Moreover, at the beginning of this century, Lee Tung Street in Hong Kong was demolished and rebuilt by the government as a pedestrian shopping street without any distinctive local style [6]. The continuous growth of modern cities is gradually compressing

the space of historical buildings. As such buildings are demolished, a city's features and its people's sense of identity in terms of culture are disappearing. Historical buildings are under many threats in many historic cities, including rapid urbanisation, an increasing housing demand, and socio-cultural and climate changes [7,8]. From the perspective of sustainable development, the adaptive reuse of historical buildings can play a decisive role not only in terms of heritage conservation, but also as an urban strategy capable of contributing to environmental protection and generating new economic, cultural, and social values [9,10].

In recent years, an increasing number of successful adaptive reuse projects have given the government confidence, and policy makers are also trying to apply this method more to protect historical buildings and blocks [11]. However, there are numerous cases of obstacles caused by unknown ownership and property rights, which seriously hinder the construction of smart and sustainable urban development. Specifically, unclear property rights can neither deter the destruction of important historical buildings nor effectively protect existing ones [12]. On the one hand, the government experiences difficulties paying high amounts of money for repairs. On the other hand, the excessive use of such historically valuable buildings with existing conditions may devastate numerous households. The government has encouraged the public to participate in adaptive reuse projects, which is an important measure for achieving sustainable urban development [13], but chaotic property rights, particularly as a legacy of transition from state-ownership property in China, seriously hinder the transformation of these buildings by developers. Incidents such as demolitions and violence against demolitions have occurred owing to mistrust among the government, residents, and developers [14,15]. Meanwhile, residents who do not cooperate in demolitions waste time and increase the cost of reconstruction projects [16,17]. Property rights issues hinder the renovation of old buildings, making sustainable urban development difficult to pursue. Such problems are particularly serious in developing countries such as China, which has transformed from a centrally planned to a market economy. Ancient buildings with rich historical and artistic value have become a sweet burden in the urbanisation of a city.

This study selected the most representative case, namely, the Pingjiang Historic Block in China, as the research test bed. An on-site field investigation was conducted in this district. A total of 63 historical buildings have been, are being, or are about to be transformed in this area. By examining these historical buildings, this study analyses the influence of the complex property rights structure on the protection and redevelopment of historical buildings. The problems in this test bed case are typical of numerous other historic cities in China and worldwide. Based on the Coase Theorem, the authors combined the reality and difficulties of historical building protection to establish an operational governance model founded on property rights. Therefore, the findings can provide a feasible operational model that can solve the primary problem in sustainable urban development and be applied to similar historical buildings in China and other countries during the smart and sustainable urban development process. The result may provide policy makers with measures to solve urbanisation challenges, such as the inadequacy of urban conservation management and sustainable development policies, dilemma in balancing public and private rights, the lack of resources amongst decision makers, and persistent conflict and competition between heritage conservation needs and developers' interests [7].

## 2. Theoretical Framework

### 2.1. Property Rights

Property rights refer to the behavioural relationships of people resulting from the existence of objects and their use. Property rights are rights unified by government enforcement and market forces. The property rights system refers to the systemised property rights relationships and system support for dividing, determining, defining, protecting, and exercising one's property rights [18]. The property rights system can be further divided into formal rules, including laws, regulations, social contracts, the construction and

determination of organisations, and informal rules, including cultural traditions, habits, conventions, moral rules, and so on [19,20].

Property rights include ownership, power of possession, right of control, and right of use. Coase holds a view in *The Problem of Social Cost*, which won the Nobel Prize, that the initial delimitation of legal rights affects the efficiency of an economic system [21]. If property rights are not explicitly defined, then individuals cannot have reasonable expectations whilst making transactions with others, and society will lose benefits generated by labour division and cooperation. Additionally, opportunistic behaviours, such as encroachment on the rights and interests of others, will emerge, and social disruption will be inevitable. Similarly, when individual property rights cannot be protected by society, individuals cannot make long-term economic plans and arrangements and thus lose incentive to accumulate and protect resources. Furthermore, negative drawbacks include the act of wasting and destroying resources [10]. If we want to optimally allocate limited resources, we need to consider and avoid the damaging impact caused by two parties whilst determining their actions [21].

The Coase Theorem shows the decisive effect of property rights on transaction costs [21]. The key points are summarised by Chappelow [22] as:

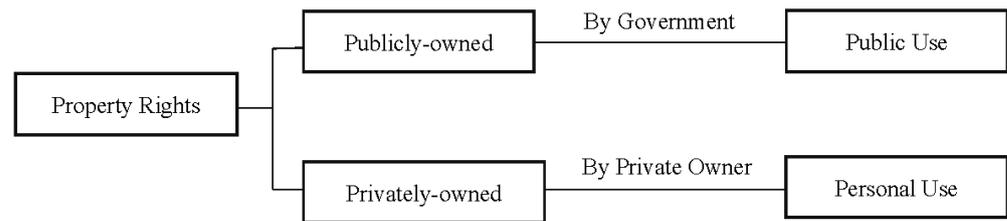
- *Under the right conditions parties to a dispute over property rights will be able to negotiate an economically optimal solution, regardless of the initial distribution of the property rights.*
- *The Coase Theorem offers a potentially useful way to think about how to best resolve conflicts between competing businesses or other economic uses of limited resources.*
- *In order for the Coase Theorem to apply fully, the conditions of efficient, competitive markets and, most importantly, zero transactions costs must occur.*

The clear delineation of private property rights is an essential prelude to market transactions. The clearer the property rights, the lower the transaction costs and the higher the efficiency. This theorem can be reflected in the protection of historical buildings; that is, when the property rights of historical buildings are clear, the operation of the market mechanism and adaptive reuse of historical buildings are efficient and can be used appropriately. However, when property rights are unclear, the protection of historical buildings is hindered and their destruction is exacerbated.

Coase holds the view that 'The delimitation of rights is an essential prelude to market transactions' [19]. In the process of urban renewal and adaptive reuse of historical buildings, clarifying property rights is a prime concern [17]. Coase further states that a government is a super firm because it can influence the use of production factors through administrative decisions. For example, a given government can establish a set of legal systems about rights that can be adjusted through market transactions. It can also compulsorily stipulate laws and require people to obey them. The adjustment of one kind of right produces more output values than other arrangements [21].

## 2.2. Hypothesis

On the premise of conforming to the law of Chinese Cultural Relics, according to the Coase Theorem, an operational model can be established to properly maintain the historical buildings as far as possible. In this governance model (Figure 1), the government is responsible for the management and maintenance of the historical buildings with public property rights, while the private property owners are responsible for the maintenance of their buildings. In this research, Pingjiang Historic Block is selected to test the feasibility of this model.



**Figure 1.** Governance Model for Historic Buildings Conservation.

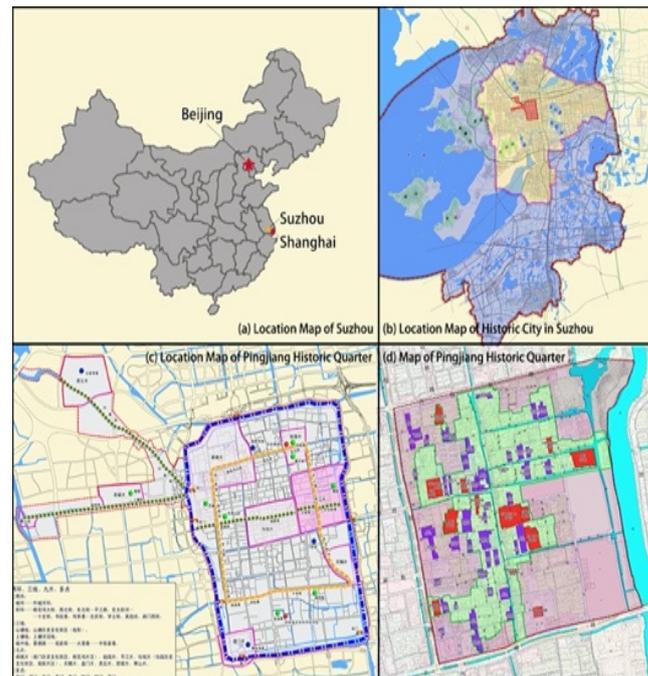
### 3. Methodology

This research selected Pingjiang Historic Block as the test-bed object because the historical buildings in this district cover nearly all modes of property rights existing in China, which are highly concentrated in the current reconstruction of old cities, as well as in the protection and renewal of historical blocks in China [23]. The government has taken numerous effective measures to protect the historic block, such as the Protection and Restoration of Historical Buildings Project. It was highly praised for the revitalisation project. In 2005, UNESCO awarded the Asia-Pacific Heritage Award to the Pingjiang Historic Block. According to the organising committee, ‘The revitalisation project is a commendable example of integrated urban rehabilitation, which has restored the physical, social and commercial fabric of one of China’s most well-known waterway historic towns’ [24]. However, certain renovation projects still have been delayed owing to property rights issues. Pingjiang Historic Block is highly representative and is of prohibitive research value. The present study focuses on the discussion of historical buildings with complex property rights structures.

There are a total of 63 historic sites arranged along both sides of the street (Figure 2), including one material cultural World Heritage Site, one nonmaterial cultural World Heritage exhibit place, three national-level cultural relic protection units, and 15 provincial and municipal cultural relic protection units and controlled and protected buildings (as of 2015). The property rights analysis conducted in this study was based on real and accurate data. These sites provided a considerable number of research subjects [25,26]. Official data obtained from functional government departments would have been the best choice. However, the government claimed that it lacks accurate property rights data. Based on the literature, the property rights structure of several historical buildings in Suzhou are only recorded in the ‘Protection and Utilisation of Controlled and Protected Buildings in the Ancient City of Suzhou’. However, obtaining property data that genuinely and thoroughly reflect the current state was difficult. Therefore, to fill this gap, the authors selected the Pingjiang Historic Block, which is a representative historic quarter, as a pilot for a field investigation for two years and discovered and sorted out information that contradicted certain literature descriptions.

The survey was based on the latest version of the Suzhou Pingjiang Historical and Cultural Street Protection Plan (2014) issued by the Suzhou Municipal Planning Bureau. In conjunction with the ‘List of Suzhou Controlled and Protected Buildings’ of the same year provided by the Suzhou Bureau of Cultural Relics, a field investigation was conducted in the 63 existing national, provincial, and municipal cultural relic protection units and controlled and protected buildings, which were set up by the Suzhou municipal government. Registered property right structures, households, resident compositions, the current protection situation, existing functions, and other aspects were also investigated.

Face-to-face interviews were conducted with experts, administrators, and residents (Table 1). The authors also visited competent government departments in Suzhou, including the Department of Housing Management; Department of Planning, Land and Resources Bureau; and Urban Construction Archives Bureau. A massive amount of first-hand material was obtained, documents with approximately 80,000 characters transcribed from audio recordings were compiled, and nearly 3000 photos and videos were sorted. The investigation lasted for two years of 2017–2019, and the data were updated in August 2019.



**Figure 2.** (a) Map showing the location of Suzhou; (b) map showing the location of the historic city of Suzhou; (c) map showing the location of Pingjiang Historic Block; (d) map of Pingjiang Historic Block (source: Suzhou Planning Bureau website).

**Table 1.** Interviewees in face-to-face interviews.

Category	Name of Interviewees or Institutions
Experts	AA (expert in ancient city protection) BB (director of China's Famous Historic and Cultural City Protection Research Academy) CC (expert in ancient city protection in Suzhou) DD (general manager of Suzhou Ancient City Investment and Construction Co., Ltd.) EE (director of Suzhou Pingjiang Historic District Protection and Maintenance Co., Ltd.) FF (director of Department of Planning of Suzhou University of Science and Technology) GG (founder of Cat's Castle in the Sky Concept Book Store)
Departments	Department of Housing Management Urban Construction Archives Bureau Department of Planning, Land and Resources Bureau Planning Bureau
Enterprises	Suzhou Pingjiang Historic District Protection and Renovation Co., Ltd. Suzhou Culture and Tourism Development Group (SCTDG)
NGOs	Suzhou Institute for the Conservation of National Historic Cities
Residents	Residents and users in the 63 historical relics in Pingjiang Historic Block

## 4. Results

### 4.1. Survey Results

The research results presented certain views that verified and corrected published literature. In the actual situation, records of the 63 historical relics in Pingjiang showed that 35 buildings were publicly owned, accounting for 55.6% of the total number of buildings. A total of 22 publicly and privately owned buildings had property rights, accounting for approximately 35%. However, six buildings were privately owned, accounting for 9.5% of the total (Table 2). Among the controlled and protected buildings, 40 public houses were under the direct administration of the Housing Management Department, accounting for 63.5% of all historical relics. This portion was mainly used as low-rent houses provided for low-income families in Suzhou.

**Table 2.** Property rights of historical relics in Pingjiang Historic Block (summarised by the authors).

Type of Property Rights	Ownership	Management/Responsibility/Repair	No.	Case
Publicly-owned	Enterprises and Public Institutions	Enterprises and Public Institutions	16	Ding Residence <sup>6</sup> , Huiyin Garden, Quanjin Guildhall, etc.
	Department of housing management	Department of housing management	18	Hanchong Residence, Zheng Residence, Zhu Residence, etc.
	Enterprises and Public Institutions+ Department of housing management	Enterprises and Public Institutions+ Department of housing management	1	Panzuyin Residence
Privately-owned	Individual	Individual	6	Yang Residence, Zha Residence, etc.
Publicly and Privately Owned	Enterprise and Public Institutions+ Individual	Enterprise and Public Institutions	1	Xushichunhui Yizhuang
	Department of housing management+ Individual	Department of housing management	18	Aibuchan Residence, Qian Residence. Etc.
	Enterprises and Public Institutions+ Department of housing management+ Individual	Enterprises and Public Institutions+ Department of housing management	3	Weidaoguanqian Pan Residence, Hongjun Residence and Zhuangci

These survey results indicated that the property rights of the privately owned buildings, which accounted for 9.5%, were clear and that these buildings were in a satisfactory condition and beautiful after proper maintenance. Moreover, these buildings were the most fortunate of the 63 buildings in terms of protection. As for public houses and buildings under controlled protection with property rights shared by public and private entities, which accounted for 63.5% of the total number of buildings, excessive use by numerous residents was apparent. Meanwhile, given the unclear property rights of owners and users, the severe shortage of protection funds, and serious inappropriate construction issues, the completeness, appearance, and structural stability of buildings under controlled protection were considerably affected.

According to the actual situation surveyed, the hypothesis model should be expanded. There are three forms of property rights in this model: publicly owned, privately owned and publicly and privately owned. Among them, the public property rights were owned by the Housing Administration Bureau, Public Institutions, and jointly owned by the Housing Administration Bureau and Public Institutions. Private property rights remained unchanged, that is, those of private property owners. The public and private ownership rights were owned by the Housing Administration Bureau and the private property owners, jointly owned by Public Institutions and the private property owners, and jointly owned by the Housing Administration Bureau, Public Institutions and the private property owners (see Table 2).

#### 4.2. Reasons for Unclear Property Rights

In order to establish an effective governance model for historical building conservation, the form of property rights was clarified in the investigation stage, and then the relationship between different transformation modes and property rights needed to be found. Before that, the following problem needed to be solved: the formation of the confused status of property rights. Knowing the reason behind it, we could then solve the problem of urban renewal thoroughly.

#### 4.2.1. Historical Factor

Several stages of the evolution of property rights in China are described below (Figure 3).

Time	Events	Change of Property Rights		
1949	The founding of PRC	Private house		Vacant house
1958	Socialist Reformation	Private house	Rental house	Public house
1966	Cultural Revolution		Public house	
1980s	Partially returned	Private house	Public & Private house	Public house

**Figure 3.** Timeline for changes in property rights (summarised by the authors).

1. Before 1949: Before the founding of the People's Republic of China, the property rights of houses were extremely chaotic, mainly owing to the imperfect property rights registration system of the Kuomintang authorities. Years of war led to the flight of property rights holders, and large numbers of properties were vacant and unmanaged for long periods of time, illegally seized, and so on.
2. From 1949 to 1956: Clean-up of real estate property rights during the early period of the regime of the new People's Republic of China Following victory in the Anti-Japanese War, the new government implemented a series of measures to register housing property rights and issued housing ownership certificates to clarify housing property rights and quickly establish regular social order. Before the socialist transformation, domestic real estate was divided into public and private property. Between them, public property (including escrow properties without owners converted into public property after the expiration of the escrow), which was mainly taken by the government, was divided into three parts, namely, directly managed public housing (houses directly managed by the municipal housing management authority in the name of the municipal people's government), institutional self-managed public housing (houses managed by institutions with rights of possession, use, profit, and disposal of buildings, as well as an obligation to protect state property from loss and infringement), and allotted public housing (housing property approved for use by the government or housing authority, with institutions only given the right to use the building without ownership).
3. From 1956 to 1966: Large numbers of private houses converted into 'rental houses' On January 18, 1956, official documents suggested that the socialist transformation of urban private houses be carried out and privately rented houses in cities that met the starting point of the transformation by the nation, or so-called 'rental houses', be implemented [27]. The documents proposed that '*The overall requirement for the socialist transformation of private houses was to strengthen the state control, first of all, to let private houses rent completely subject to the state policy, and then gradually change its ownership*'. Local governments introduced corresponding policies to specify the starting point of the quantitative reconstruction. Private homeowners were required to divide their living area by population, with surplus areas classified as 'rental houses', which were rented to residents with housing difficulties [27]. On 30 December 1963, the State Administration of Real Estate stated in its *Report on Issue of the Socialist Transformation*

of *Private Rental Housing* that ‘private homeowners could not recover the houses which already rented by the state’. At the time, the property rights structure appeared in three forms, namely, public property, private property, and rental houses. Rental houses were products of the socialist transformation. Former private homeowners could no longer retrieve their property, but the state had not clearly defined the ownership of property. During the Cultural Revolution in 1966, the Red Guards forcibly seized the property rights of private homeowners through violent means. All houses had one property rights attribute, that is, state ownership [27].

4. From 1983 to 2004: Implementation of private housing policy and resolution of the problem of ‘standard houses’ After the Cultural Revolution, the government implemented the private housing policy and returned the property rights of private houses to private homeowners. However, the government claimed that the property rights of ‘rental houses’ belonged to the state and implementing the private housing policy was not feasible [27,28]. From the 1980s, historical houses became private properties and rental houses. However, the most dramatic difference during the 1950s was that the property rights of ‘rental houses’ changed from being private to public property, thereby becoming part of the directly managed public housing, which was the most complex existing property rights structure in China.

In summary, the structure of real estate property rights was extremely complex in 1949 and the new government then issued a series of measures to clarify it. However, the original problem of property rights during the Cultural Revolution was not clarified and was worsened by the political struggle.

After the reform and opening up in 1980s, the government attempted to readdress the problem, but failed to achieve the desired effect owing to insufficient implementation. Since the 1980s, China has entered the stage of large-scale civil construction. In the process of the demolition and reconstruction of old cities, removal and relocation have become significant problems for the government, and the drawbacks of the unclear property rights structure have become apparent. However, no one has been willing to tackle such sensitive topics, and the government and academia have prevaricated with ‘problems left over by history’, claiming that ‘property rights are too complex’ to be resolved. Although the awareness of the protection of traditional culture has increased since 2000 and the government has invested large amounts of capital to preserve and renovate historical blocks, property rights problems remain between the ideal and reality, thereby severely delaying the pace of urban renewal. The property rights issue affects the entire process of urban development and cannot be avoided. Therefore, the issue, that is, the existing complex property rights structure in China, should be addressed and resolved with sound theoretical basis.

#### 4.2.2. Legal Factor

To protect outstanding traditional architecture, the government implemented the Law of the People’s Republic of China on the Protection of Cultural Relics in 1982. Historical buildings were classified as national, provincial, and municipal cultural relic protection units according to their historical, cultural, and artistic value. In addition, local governments established protection lists for outstanding historical buildings excluded from cultural relic protection units, such as the Excellent Historical buildings in Shanghai, the Excellent Modern Buildings in Beijing, the Historic Feature Buildings in Xiamen, and the Controlled and Protected Buildings in Suzhou [3,29]. However, the original complex property rights problem worsened when the cultural relic labels were added to the buildings [28].

Article 5 of the 1982 Law stipulates that for all memorial buildings, historical buildings, and cultural relics publicly or privately owned, ownership is under the protection of national laws, and the owners of these cultural relics must abide by the regulations of the country on cultural relic protection and management. In addition, the law stipulates that buildings owned by the state and protected as cultural relics cannot be sold on the market [30,31]. The property rights of these buildings are redefined by national laws; that

is, residents and users only have usage rights. The buildings are publicly owned and the local government represents the state in terms of supervision and control. Given the feature described above, an intersection between these two types of property rights emerges when historical buildings are listed as cultural relics, thereby making it difficult to determine and obtain rights to yields derived from ownership [32]. The value form cannot be separated from the value entity. Therefore, defining the boundary of property rights is difficult, as it is obscure in an actual operation.

In addition to unclear property rights, inappropriate modes of property rights can damage historical buildings. Certain historical buildings are public houses with property rights under the direct administration of the government. Most of such buildings are overused, endure exposure to wind and rain, and incur degrees of damage that are extremely high. Therefore, maintenance expenses are considerably large, and residents have no incentive to contribute to the maintenance of such buildings. Article 6, Chapter 1 of the 1982 Law stipulates that expenses for cultural relic protection and management shall be included in the financial budget of the central and local government; that is, the government should arrange the protection and management of historical resident houses and fund their repair and protection. Although residents are not required to make contributions, they can enjoy the benefits. In such cases, historical houses repaired with government funds can be regarded as public articles and thus enjoyed by residents free of charge. Therefore, people ignore the protection of historical buildings, as they can enjoy the benefits without assuming responsibility. To maximise such benefits, residents may overuse or damage buildings under controlled protection. Conflicts between the use and maintenance of historical buildings will result in a conflict between the government's invalid investment in such buildings and residents' overconsumption.

Therefore, currently, historical buildings that suffer from the most severe damages are historical buildings whose property rights belong to the state. This problem is common in historical cities in China. As the maintenance and upgrading of historical buildings require large amounts of financial and technical resources, the government's budget cannot satisfy this demand. Therefore, for such buildings, the government has maintained an attitude of 'not aspiring for the ownership but the existence', in order to transfer usage or property rights, activate and reuse historical buildings by cooperating with social forces, and extend the longevity of such buildings. In the case of complicated property rights, the clarification of property rights and adaptive reuse were problems that needed to be resolved.

### 4.3. Causes of Changes in Property Rights in Pingjiang Historic Block

#### 4.3.1. External Causes

Most external reasons were influenced by policies from different eras. The timeline shows a series of changes. Figure 3 illustrates the timeline of the evolution of property ownership from 1949. In the early 1950s, every parcel of land in the country was registered, government authorities issued the Property Ownership Certificate, and the 1954 Constitution protected lands and houses.

Figure 4 shows the timeline for changes in property rights in Pingjiang Historic Block. In 1956, the government initiated the socialist transformation of industry and commerce. In the same year, the central government approved the 'Basic Conditions of Private Property in the Cities' and 'Opinions on Initiating Socialist Transformation'. Moreover, private houses in these cities were subject to 'transformation'. In 1958, the compulsory transformation of private property campaign emerged. The primary form was 'lease by the country', which meant that 'the country will be responsible for the overall leasing, distribution and maintenance', targeting certain privately leased houses and drawing a starting line for the transformation; that is, if a property leased by its owner ventured beyond the starting line, then it would be subject to transformation. The intended purpose of this policy was to 'use the methods like purchase, which pays fixed rent during a certain period, to gradually change their ownership'. However, in practice, the government only collected compulsory rent from owners without purchase or similar activities, and ownership remained in the

hands of owners with a Property Ownership Certificate. When the Cultural Revolution began in 1966, the Red Guards seized private properties through violence and claimed ownership. According to Article X of the 1982 Constitution, urban lands shall be the property of the state. Between 1982 and 1988, the government cleared private properties on a massive scale, owners were granted Property Ownership Certificates, and the concept of land ownership ceased to exist. However, according to residents, they lost ownership not only of their land, but also of their houses.

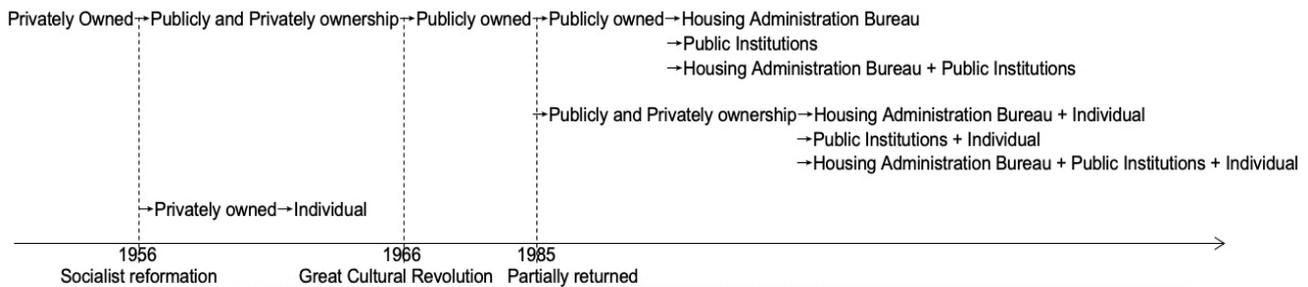


Figure 4. Timeline for changes in property rights in Pingjiang Historic Block (summarised by the authors).

### 4.3.2. Internal Causes

Internal causes included the residential function of houses entering the market as a commodity since the 1980s, thereby resulting in the circulation and transaction of property or usage rights, which could lead to a change of property rights, as shown in Figure 5. It presents a summary of the circulation pattern of properties in history according to market conditions. After the Cultural Revolution, numerous private houses transformed into directly controlled public houses under the ownership of the housing authority. In recent years, the number of low-income individuals gradually decreased. Therefore, residents of affordable housing have disregarded the value of houses and overused them. To protect historical buildings, the government intends to recall the right to use such houses. In terms of ownership changes, properties are transferred to the government or private enterprises after purchase and primarily consist of public-interest and commercial houses. The circulation of property rights mainly depends on the government’s redemption and is relocated through the transfer of property rights or currency.

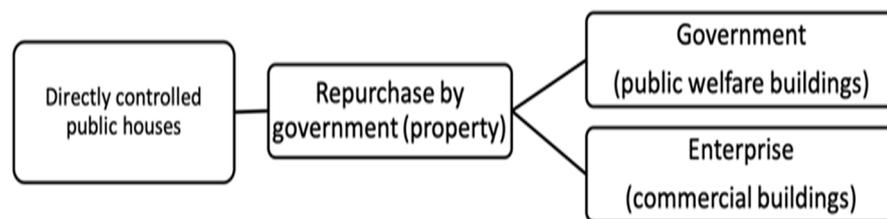


Figure 5. Circulation of property rights of historical buildings.

## 5. Discussions

Coase’s view involves a key word that is a problem to be solved, i.e., resource redistribution. In the field of urban renewal, historical buildings have multiple attributes. As cultural relics, historical buildings have very high historical and artistic values, so knowledgeable people are needed to maintain these buildings through professional means. Houses have residential functions, but houses are dilapidated and entail high maintenance costs, which are hard for residents to bear. Whether to protect them as cultural relics or to continue to allow them to serve as houses is the redistribution of production factors in urban renewal. When the ownership is fragmented it will bring many constraints. Taking back the usage right and unified planning by the state is more conducive to the preservation of historical buildings [33,34].

Indeed, historical and artistic values cannot be copied and reconstructed, as opposed to the dispensable residential function. The government is a super enterprise, which can control production factors via administrative means [35]. The government also plays such a role in promoting urban renewal [36]. For the protection of cultural relics, the government should promulgate compulsory regulations to restrict the behaviour of users, whether property rights are publicly or privately owned, under the protection of the law, whilst the use function should be considered. When property rights are public, the government has the right to take back the house and optimally allocate resources. While retaining the artistic and historical value and the use function of traditional architecture, the government can protect the historical buildings according to the public and market demand. Through policy adjustment, the government can expand the market of historical buildings [35]. Experiential reconstruction will become the trend in future historical building protection. This type of reconstruction resembles 'haematopoiesis', which can also solve the problem of a shortage of funds for the protection of historical buildings. For houses with use functions belonging to residents, when the property right is clear and the transaction cost is relatively low, the government hopes to maintain the decision-making power of the housing function. Residents who live here are willing to move out after they receive satisfactory compensation, given that they do not have the property rights of historical buildings and cannot afford high maintenance costs. Generally, the compensation they get is much higher than the value of the house because the high-value properties tend to be overcompensated [37]. Therefore, those who have no property rights but only the right to use them are willing to cooperate with the government. Even the nail households just want to haggle over the compensation rather than move out. Once an agreement is reached, the government can take back the property rights.

However, when property rights are private, property owners know that permanent private property rights are scarce resources. The property owners have the exclusive right to alienate or to not alienate the buildings [38]. In addition, they have lived in their own houses for generations and are not willing to hand them over to the state easily. In their minds, the transaction price is very expensive. The government only plays a supervisory role and does not pay high relocation fees, thereby forcing property owners to protect their houses.

With due reference to key points of the Coase Theorem highlighted in the above Section 2: Theoretical Framework, when these rights belong to the same subject, the owner has initiative and motivation to protect and maintain a historical building effectively. The research results substantiate the authors' view as proposed in the beginning. For example, during the survey, privately owned buildings, such as the Fang residence on Xuan Qiao Alley, were in a satisfactory condition. Private owners had lived here for generations. However, when the right to use is transferred, ensuring that the user will seriously protect the historical building is difficult. As shown in Figure 3, the property rights system has continuously changed since 1958. Therefore, defining the rights and responsibilities of parties is challenging. Residents only possess the right to use a historical building and thus lack a cultural identity and sense of belongingness. They have no enthusiasm to maintain the 'public house', but hope to obtain tangible benefits from its demolition. The rent of such houses is too low to afford maintenance costs. These housings are dilapidated, suffering from the daylighting and dampness for years. There are various safety hazards in the house with a danger of collapse at any time. Meanwhile, the Housing Management Department, which has right of ownership, also lacks sufficient funds to protect historical buildings. 'Rental houses' and 'public houses' suffer from damages or are destroyed, similar to the Xu residence.

Moreover, when the government attempts to recall right to use, large numbers of residents become unwilling to move out. The term 'nail households' refers to people who refuse to move out of buildings for demolition, often owing to disagreements about compensation, which severely delays the progress of the redevelopment process. The DeLin Hall Wu residence is an example of such a case, which was delayed for five years. In

the above case, the non-zero-sum game between residents was a typical prisoner's dilemma model. Some people are willing to move out early and get rewards and resettlement houses. However, some nail households are willing to get more compensation. The personal best choice is not the group's best choice. In the face of interests, the relationship between people becomes subtle. While competing for interests, they also have selfish desires to get more. In a group, individuals making rational choices often lead to collective irrationality.

Through interviews with developers and contractors of many projects, it was understood that property rights and funds are common problems in all current historical building reconstruction projects. The biggest uncertainty in funds is the demolition compensation, and the contractor must overcome the difficulties that cannot be overcome by traditional crafts.

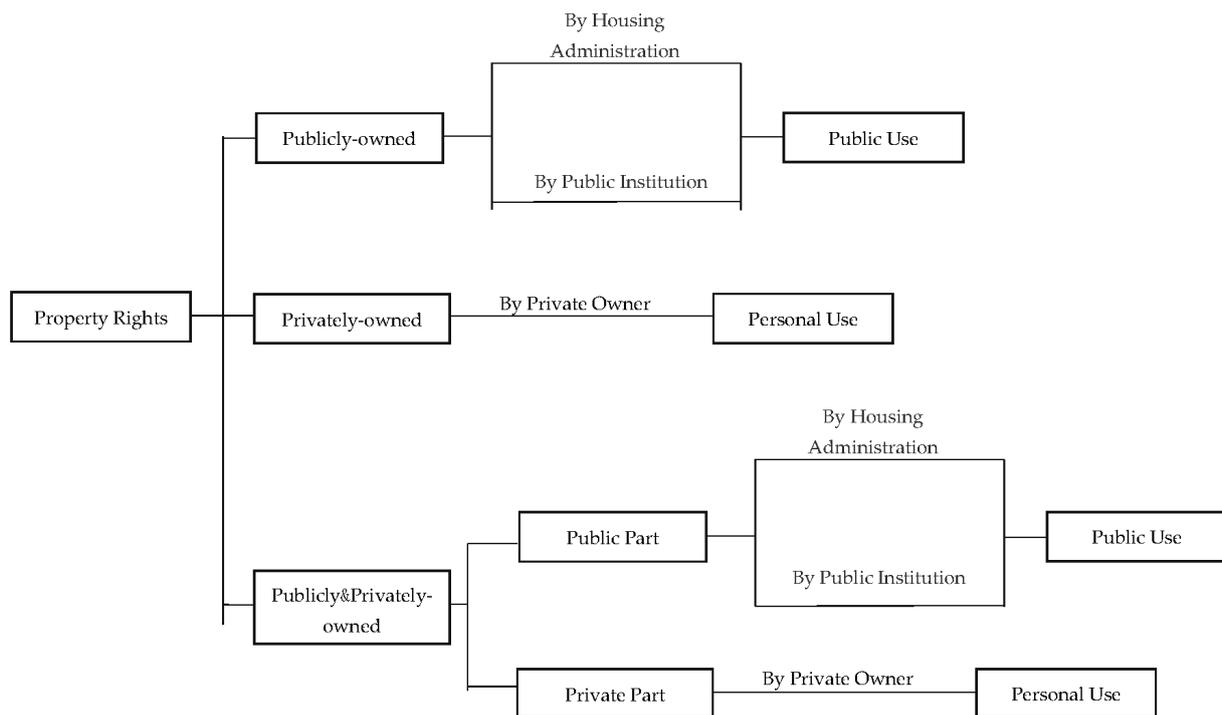
For the 10 pilot projects of the first batch of ancient building protection and repair projects in Suzhou, some ancient buildings abandoned the reconstruction, and some projects were promoted. The whole project progressed very smoothly when all tenants accept the reconstruction, such as with the former Fang residence, the current Xiao Hui Wang Art Centre. Regarding the projects that all the residents refused to relocate, such as private property owners or projects with proper building maintenance and living environment, the government gave up the relocation and allocated funds for the optimisation of living conditions, from the reconstruction project to the people's livelihood project. For most projects, some residents coordinated with the relocation and some residents refused. Demolition was repeated in each process along with the betrayal and cooperation between households, and the Nash equilibrium gradually became Pareto Optimality. That is, in this situation, no property right owners or residents could be better off without making at least one individual worse off [21]. It was considered to be a minimal notion of efficiency that did not necessarily result in a socially desirable distribution of resources [39,40]. Although this was not the optimal solution, it was the only way to solve the property rights problem of historical building adaptive reuse.

Such cases can be seen everywhere in China where cities are developed constantly, such as in this red-headed document, *Announcement of the Suzhou Municipal People's Government on the Determination of Houses on State-Owned Lands* (Su Fu Gong [2013] No. 3), which is the housing compensation plan of Pan Zuyin's former residence (a historical building in Pingjiang Historic Block) project:

*The expropriated person may choose monetary compensation or exchange property rights. The expropriated households who choose the monetary compensation can purchase the fixed-quotas commercial houses provided by the government. If the property rights exchange is chosen, the value of the property exchange houses and the expropriated houses will be calculated after the price is calculated at the same evaluation point, and the difference is settled.*

Among them, (1) monetary compensation means that in the house expropriation compensation, the owner of the expropriated house is compensated in monetary form based on the market evaluation price. (2) Property rights exchange means the exchange of houses provided by the house expropriation department for the exchange of property rights and the houses to be expropriated. After the price is calculated, the difference is settled. For the residents who cooperate with the relocation, different relocation incentive fees can be obtained depending on the degree of cooperation.

Through the above analysis, the model can be improved as shown in Figure 6. It is consistent with the hypothesis model that privately owned historical buildings are still protected and repaired by private property owners. In order to protect the interests of the private property owners, the private parts of the public-private ownership buildings will still belong to the private property owner, and the buildings will be maintained by the private property owner. Similarly, the Public Institutions shall be responsible for the management of the parts in public-private historical buildings and the public-private historical buildings that belong to them.



**Figure 6.** Governance Model for Historic Buildings Conservation in China (proposed by the authors).

In this governance model, the most complicated part belongs to the Housing Administration Bureau, which is called direct management of public housing. Due to the historical reasons mentioned before, this type of housing is rented to citizens with poor economic conditions. To avoid excessive use, local governments should take back the usage rights of these buildings gradually through two ways, that is, property rights replacement and monetary compensation. For a successful adaptive reuse project, two principles should be followed, that is, to obey the government's unified organisation and management, and to follow the government's planning scheme and functional orientation.

The analysis shows that whenever a whole building is publicly owned, the transaction cost to the government is close to zero, and the government has the autonomy to renovate the building. Among the 35 public historical buildings in Pingjiang District, 20 of them have been renovated and are managed by the government, and seven are under renovation, accounting for 77% of effectively protected public historical buildings. Residents in the remaining eight buildings have expressed their desire to move away from the dilapidated buildings. They are willing to move to new homes if the government will give a satisfactory compensation. Meanwhile, six buildings are owned by private individuals, accounting for 100% of private buildings. These private residents refuse to make deals with the government. Yet, the government is not willing to pay high fees to obtain the property rights of such houses. These types of property rights are distinctive, and thus, renovation or maintenance work should be carried out smoothly. However, the public–private ownership of property rights is considerably complicated. A total of 22 historical buildings in Pingjiang Historic Block are public–private owned, and 14 of them (accounting for 64%) cannot be promoted for renovation. Five buildings have been transformed, and two are under renovation. However, from the perspective of renovation projects, several owners of private properties, including such buildings, are willing to trade with the government, whereas the rest of them refuse. For private property owners who refuse to trade, the government will transform the public areas of their buildings. The private property owners can still reside their own houses, but they have to take up the responsibility of routine maintenance of the historical buildings in the areas that they own. The government will help them with the exterior transformation. Without affecting the daily life of private property owners, the appearance of buildings with private property rights should be made

consistent with that of the public parts, resulting in consensus between landscape and art value. Such complex cases can be explored in detail in future studies. The 'bargain' mentioned by Coase also exists in the protection of historical buildings. In the process of repeated communication, the government and private owners can achieve the optimal allocation of resources. When both sides cannot agree on the price, they should arrive at a symbiosis to work together.

## 6. Conclusions

Taking Pingjiang road as a test bed for analysis of property rights in historical buildings, this study highlights two key findings through the application of the Coase Theorem in the conservation of historical buildings. First, the impact of property rights, that is, whether the property rights are clear or not, will affect the progress of protection work. Second, the governance model for heritage conservation, that is, different property rights of historical buildings lead to different transformation methods.

Firstly, in the case of Pingjiang Historic Block, the result of the survey showed that unclear property rights seriously hinder urban renewal. Unclear property rights will lead to unclear responsibilities and rights, and lack of responsible persons to maintain historical buildings. Unclear property rights can hinder transactions and incur higher costs. Given the unclear property rights, historical renovation projects experience difficulties in proceeding according to their plans. Gradually eliminating the unclear parts of the chaotic property rights and implementing transformation in batches are necessary. The reconstruction project can be implemented gradually according to the unique layout of historical buildings.

Secondly, urban renewal is a process of resource optimisation and reuse. The historical and artistic values of historical buildings are valuable resources to society as a whole. In the process of sustainable urban development, it is necessary to retain the artistic and historical value and the use function of traditional architecture. When property rights are clear, public buildings are protected by the government. Similarly, when property rights are private, private property owners should be responsible for the maintenance. With a regulatory role to play, the government has the obligation to protect historical buildings through designing good policy. Therefore, historical buildings with public property rights should be gradually taken over and transformed by the government. Historical buildings with private property rights should still be maintained and managed by private property owners, which is the low transaction costs option, and the government should assume the supervisory and regulatory role.

This study has its limitations. Firstly, urban renewal is a dynamic process, and the role and capacity of government or individuals are constantly evolving or even changing functions. The data listed by the author can only cover a certain period of time, and subsequent changes are excluded. Secondly, the authors attempted to obtain official data from the government, but the property rights issue is sensitive, and the government is reluctant to provide such data. In addition, we find that the data obtained from some literature differ from the actual data. Thus, the authors spent several years collecting the data on-site themselves. However, it is admitted that some deviations were observed in cases that involved oral history, but they are verified as far as possible. This condition can be regarded as both a limitation and a unique contribution of this paper. Firsthand data are closer to the truth, and they can be used to verify the governance model in this paper. Lastly, the proposed model only provides a method, but each historical building has a unique story and value in practice. As such, the protection work must be analysed on a case-by-case basis, which can be elaborated in subsequent studies.

This model, based on sound theories, successfully solved the primary problem of adaptive reuse projects and provided solutions for other old building renovation projects with disordered property rights, so that the property rights problem was no longer an obstacle to sustainable urban development but could be explored to provide the drive force. An increasing number of vacant and dilapidated old buildings have been given new

life, which is conducive to sustainable urban development from social and environmental perspectives. While reducing the impact of buildings on climate change, at the same time, the social and artistic value of buildings has also been extended.

**Author Contributions:** All authors contributed to this paper with N.G. taking the leading role. E.H.W.C. and N.G. helped design the framework. N.G. conducted the investigation, analyzed the data, and drafted the article. E.H.W.C. and E.H.K.Y. revised the article and approved the final manuscript. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research was partially funded by the Research Grants Council of the Hong Kong SAR Government Project No.15200614 (grant B-Q42P), and supported by a PhD study grant of The Hong Kong Polytechnic University.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** The data presented in this study are available on request from the corresponding author. The data are not publicly available due to the subsequent studies.

**Acknowledgments:** The authors would like to thank all the experts who shared their valuable opinions on heritage conservation and contributed their experiences and views on the heritage conservation in Suzhou. In addition, the authors would like to express their gratitude to Cao Xiuan and Zhou Sijia, who helped with data collection.

**Conflicts of Interest:** The authors declare no conflict of interest.

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