

Research on the Influence and Strategy of Rivers on Economy in Shanghai

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Abstract: This paper explores the significant influence of the Huangpu River and Suzhou River on Shanghai's economic landscape, focusing on the periods before and after the World Expo. The study delves into the transformative effects of the 2002 campaign aimed at revitalizing the river and riverbank environments to accommodate the Expo. This initiative included a series of measures to protect industrial heritage, enhance the historical value of these waterways, and improve the overall urban landscape. By examining the critical role these rivers have played in shaping Shanghai's industrial, commercial, and residential development, the paper offers strategic recommendations for restoring the economic value of riverbanks. It emphasizes the need for a comprehensive and long-term approach to urban development, addressing the current challenges of environmental restoration, social impact, and economic sustainability. The findings of this study are invaluable for understanding urban planning and development strategies in river-based cities, where the interaction between natural waterways and urban growth is pivotal in achieving sustainable and balanced development.

Keywords: Influence, Strategy, Huangpu River, Economy Development, Shanghai.

1. Introduction

A river, such as the Huangpu River in Shanghai, China, surrounds many major cities all over the world. It plays a major role in the city's history, culture, and economy. As the final tributary of the Yangtze River, Huangpu River offers the city easy access to the East China Sea as well as the Yangtze River basin. Since the Song Dynasty, Huangpu River and its major tributary, Suzhou Creek, have brought Shanghai lasting prosperity for the next thousand years. In the late 19th century, the city witnessed industrial development along the rivers, and the plants created considerable economic value for the city in the next few decades. Many influential companies were born during this period. It was not until the late 20th century that the region realized the environmental issues of the industries and started to take action to relocate the factories and restore the environment.

The references cited in this article mention two problems: 1 The preparation and the geographic importance of good city planning for the World Expo 2010 in Shanghai. 2 The economic and social problems that occurred during the river regulation campaigns throughout Shanghai.

Yawei Chen et al. analyzed the city's plans for changing the city structure and the usage of the buildings and areas of World Expo 2010 in Shanghai. They summarized the different campaigns before 2010 and gave a brief idea of how the city would work after 2010 in the plan. Kuo and Jin give

a thorough conclusion on the role the greenways along Huangpu River and Suzhou Creek play in local people's daily lives. This paper gives a brief history of the legacy of heavy industry in Shanghai, including its buildings, culture, and economic value.

This article will analyze and ask questions about the importance and influence of the Huangpu River on Shanghai in different economic forms, the rationality of the 2002 campaign through World Expo 2010, and the recent progress of the city. Hence, suggestions should be given based on citizens' opinions and statistical data.

2. Case Description

In 2002, Shanghai succeeded in applying for the World Expo 2010. The city decided to hold the event on the sides of the Huangpu River, which is a good opportunity to clean and restore the river bank. That year, the city government started the Huangpu River Comprehensive Development 2002 campaign in order to give space to the event, and the Suzhou Creek comprehensive development was also added to the campaign [1]. After the modest success in river management and a big achievement at the world expo, amounts of spare land were left unused by the Huangpu River in the expo region [2]. The land lost its economic value in the short term as factories were relocated elsewhere, and nearby residents did not appreciate the remains. Though a few countries succeeded in retaining their buildings for the World Expo, all of them except the China Pavilion had to leave due to policies years later, leaving the area with no tourists and few locals.

Unlike the Olympics, which offer cities with a large number of usable legacies for sports, the World Expo is simply an expo, and its influence could fade away quickly after it comes to an end [3]. Despite the rapid GDP increase of the city in the 2000s, its government had to face the problem of how to reuse the legacy of the event and whether to keep on the 2002 campaign.

Huangpu River and Suzhou Creek now act as a symbol of fully equipped public service and complete natural protection. The restoration of the two major waterways has influenced other inferior rivers and creeks. The city government is now working not only to spread the campaign but also to bring back the economic value that used to be created by all the heavy industries located along the river [4].

This article is going to focus on reintroducing the economic value and searching for new solutions to legacies of international events based on existing facilities. It will also give suggestions on future reforms of similar situations.

3. Analysis on the Problem

3.1. Influence on Industrial and Commercial Economy before World Expo 2010

Shanghai's economic development has long depended on industrial companies and commercial activity that clusters along the Huangpu River and Suzhou Creek because they rely on the water source and accessibility of transport of the rivers [5]. A number of commercial and industrial areas were set up in the region, and we can still witness their influence through some local names nowadays [6]. For example, Shiliupu, a dock that is still in use beside Huangpu River, played a major role in shipping goods for foreign traders in the early 20th century; Doushijie, which represents the street for soybean trade market located near both Huangpu River and Suzhou Creek which acted as a trade center for locals and also the nearby cities before being destroyed in 1938; The Jiangnan Shipyard, a large Chinese enterprise of heavy industries that used to sit by the Huangpu River, now relocated on Chongming Island. It is obvious how industrialists and businessmen from China and abroad value the waterways in Shanghai as they were all important commercial areas of the city before the 2002 campaign.

Despite the thriving trade work along the rivers, they also create a huge disturbance to the locals living nearby, and in the long term, they have left pollution, including sound, soil, air, and water. The government used to force companies to take action to reduce the negative environmental effects during their production, but it has brought little results. It was not until the 2002 campaign was put into practice that many factories were relocated to the outskirts of the city. YaWei Chen et al. noted that, in the region of 40 square kilometers that was offered to the World Expo 2010, most companies were in charge of the national or state-owned capital, together with the remaining private capitals, they were concerned about their benefit [7]. Due to the World Expo being a national event, the companies made concessions. They have relocated to other districts that also have easy access to water transportation, such as Baoshan district and Jinshan district. However, as the companies move, employers move as well, even their families. It was common sense that workers lived near their companies either in the dormitory or their own apartment. It became unreasonable for them to reach the workplace when companies sit far away while employers live downtown. There was not much research in this area. It should become another study-worthy point of the city government. Though this process did offer them more space for production and expansion, it is notable that the change in location takes time and effort. Were there any unexpected consequences in both the short term and the long term during this process that caused the overall slowdown in GDP and an overall decrease in employers' willingness to work, especially during the difficult period after the Asian Economic Crisis?

3.2. Influence on Residents and Consumptions before World Expo 2010

The author also noted that both before and after the World Expo 2010, in order to offer more space river bank space for the event, a number of residents living in the region were affected and had to relocate their housing, especially the ones living close to Huangpu River [8]. The city government used to spend over 24.8 billion yuan to work as compensation for the residents[7]. Usually, they are relocated to suburbs where there is no easy access to the city center. Would these residents in the suburbs come back and utilize the area that used to be long for them, or would there be any riverbank areas similar to those in the past for leisure? This shall be considered before relocation.

For example, based on the existing research in 2012, Shang and Che suggest that urban residents living near rivers tend to use riverbanks as places for leisure and entertainment, including strolling, while their willingness to use natural river courses as places for swimming and boating is less than half of the former [9]. This phenomenon could decelerate people's acceptance of new activities on the river bank or the river, such as sightseeing and sports activities, in the next few years. Though the 2002 plan for the Huangpu River comprehensive development offers the main waterway of the city vitality, do inferior rivers and urban branches of the Huangpu River receive proper treatment?

Furthermore, Lingyan Yao et al. noted that the city's project of cleaning the environment of Suzhou Creek involves real estate capital. In order to provide the campaign with enough money, between 1998 and 2002, real estate investments were invited to this area to provide enough money for the campaign[10]. Some riverside lands were sold to companies, and they were free to build high-rise residential areas. While the result is not as it was thought, residential estates with tall buildings and low green rates were constructed, which caused the view of the river bank to be blocked from far away, while the environment looks as unaesthetic as the past. The large private area along the river also annoys the riverside planners and disturbs their idea of creating a public place for leisure. The city quickly stopped the plan for investments and sought other sponsors

3.3. Influence on Residents and Consumptions after World Expo 2010

Under the new 2016 and 2017 campaign of Transformation of Industrial Heritage, more river banks along the Huangpu River and also Suzhou Creek are being connected together, and historical buildings from discarded factories and buildings are accepted as part of the river bank environment [4,11]. This is quite a good reflection of the 2002 campaign. Though the major rivers are being well treated, it seems that the governors are using this to show off their power, as the inferior rivers were still overwhelming.

Since 2018, the city has started another campaign for the remaining rivers [12]. It was not until the later years that organized river banks were sent back to the locals. After all these projects, we shall consider whether and how to bring the economic value back to the riverside bank, which used to be created by large factories and heavy industries.

The 2018 campaign does mention the importance of bringing the economic value of the river bank by building museums in the discarded factory buildings with cheap tickets and selling related products such as souvenirs of Huangpu river and different exhibitions, but it didn't mention other forms of selling such as encouraging retail commerce along the river bank greenways.

In 2019 Min Wang et al. and in 2021, Zheng Zhao et al. started to investigate the residents living by all kinds of rivers that have gone through the campaign, including the Huangpu River and the Suzhou Creek. They mentioned the rivers' aesthetics, accessibility, social role, etcetera. For the ones along the two major rivers, the interviewees claim that these areas have sufficient leisure facilities but lack easy transportation [13,14]. The author suggests that besides the large shopping malls and conference centers, the regions also lack retail commerce facilities. For the other inferior waterways, interviewees say that these regions have easy transportation access, but there are fewer leisure and commercial facilities [13,14] due to narrow space.

In recent years, under a few campaigns, major river banks have slowly become tourist attractions. Tourists or residents who live far away may visit these places to take their time. How would the city make full use of these people to promote tourism consumption in these areas and increase their economic value?

4. Suggestions

4.1. Strategies on Industrial Economy based on Existing Campaigns

As mentioned above, considering the industrial economy before the Expo 2010, the city government had indeed put plenty of effort into helping relocate the industries. To compensate the loss of production during the relocation process, a certain amount of subsidies were offered to them. Factories were able to restart production soon afterward. As for the employees, there used to be a common solution in the 1970s and 1980s that if an above-mentioned occasion took place, the regional government would offer the firms newly built apartments by the government near the companies' location and let them hand out the properties to the employees. It makes it possible for the government to do so since there are hardly any private enterprises, and the government makes decisions on the usage of the lands. Similar strategies could be applied to the companies. However, the reform and opening up policy made this a much more complex thing to accomplish. What's more, even though the apartments were completed successfully and were offered to the workers, their families might move there as well. This might reduce the quality of life for the family members due to the long distance to the city center where they used to live. Governments can hardly do anything but provide some money for compensation.

4.2. Strategies on Commercial Economy Based on Existing Campaigns

The commercial economy of the city is quite different from the industrial economy, and the city government shows different interests and puts different efforts in different time periods, especially before the campaign of 2002. As new buildings were built along the Suzhou Creek and the Huangpu River, many old or unrepresentative ones were pulled down instead of refurbished [15]. The Doushijie market was a typical one, left with only a road name. The market was nowhere to be found; it had never been rebuilt, and residential quarters now sat on its original site [15]. The city government could refurbish or rebuild them firsthand. Suppose the market loses its customers due to new products or a changing social environment. In that case, they can be turned into other forms of commercial economy, such as memorial halls or public service centers in the region.

To help the river banks regain their economic value that used to be created by industries using commercial economy, the city should make plans to build public areas on river banks convincing enough to most residents. It is not only to make the river banks look fancier or to put more large shopping malls along the riverside roads that residents never visit while having a walk but a long-term and comprehensive work that attention should always be paid. There could be strategies, including stopping the illegal discharging of wastewater in rivers to help rivers recover from pollution and restore the environment by reintroducing river plants and animals to maintain the water quality in the long term. As soon as the water was no longer smelly, and the overall experience of taking a walk along the river was appealing enough, residents' willingness to entertain beside the river would rise, which is a social phenomenon of the Huangpu River these years, the Suzhou Creek is showing this trend as well [16]. This phenomenon is also appropriate with some inferior rivers, but it takes time to realize it truly.

However, over twenty years after the 2002 campaign and about 8 years after the new campaign, the commercial economy alongside main rivers still doesn't seem conspicuous. As mentioned, there are limited small-scale commercial activities. Considering the different levels of management, there could be specialized plans for different kinds of rivers. For main rivers like Huangpu River and Suzhou Creek, which are almost done with constructing riverside walkways and restoring the environment, they can have more individual shops or bars for people to run into while having a walk, as people around the world enjoy doing so and this method is quite successful. This could attract more residents compared to fancy shopping malls and large conference centers, even though they look really magnificent and show the power of the city. Individual shops and small-scale economic activities are the ones that truly light up the river banks, and they are very convincing to residents. While inferior rivers might not attract a lot of tourists, it seems suitable to operate vending machines along the riverbank to provide basic supplements for pedestrians as they didn't really have an industrial economy before being reconstructed by the campaigns.

Despite having clean water and nice-looking riverbanks, all the rivers shall have easy accessibility for the locals and tourists to reach, which greatly encourages commercial activities. This is the point that the government should be considering more, especially for riverbank parks along inferior rivers and, especially, Huangpu River. There could be strategies like building more paths connecting roads and riverside lanes or pulling down walls or fences that reduce the reachability of rivers and affect people's will to walk by the rivers. And especially for Huangpu River, more buses can be set up to make it easier for residents to reach the river. Current bus routes connecting different parts of Huangpu River and residential areas are showing great popularity [16].

5. Conclusions

This article provides a comprehensive analysis of the influence of the Huangpu River and Suzhou River on Shanghai's economy, focusing on the periods before and after the 2010 World Expo and the

strategies implemented in 2002 and 2016. The study underscores the crucial role these rivers have played in the city's industrial, commercial, and residential development.

Before the World Expo, the Huangpu and Suzhou rivers were vital hubs for industrial activities and commercial trade, serving as lifelines for the city's economic growth. However, the intense industrial use of these waterways led to significant environmental degradation and pollution, threatening their long-term viability. Recognizing the World Expo as a unique opportunity, the city launched a major campaign in 2002 to restore the environmental health of these rivers. This initiative focused on cleaning up pollution and revitalizing the riverbanks, which, while essential for environmental recovery, resulted in some economic losses in terms of industrial activities along the riverbanks.

In the years following the World Expo, particularly with the 2016 campaign, the Shanghai government shifted its focus to preserving industrial heritage and enhancing the aesthetic and cultural value of the riverbanks. Efforts were made to decorate and beautify riverbanks of all scales, creating more attractive and accessible public spaces. However, despite these efforts, the full economic potential of the riverbanks has yet to be fully realized. The study suggests several strategies for unlocking this potential, including improving water quality and increasing accessibility to the rivers, which could further enhance the value of these areas for tourism, leisure, and commerce.

The findings of this study emphasize the importance of adopting a comprehensive and long-term approach to river restoration and urban development. By addressing the needs of the environment, the local population, and the economy, Shanghai can continue to transform its riverbanks into dynamic and vibrant centers for leisure, tourism, and sustainable economic growth. These strategies will be crucial for ensuring that the city's waterways continue to contribute to its development while preserving their historical and cultural significance.

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