Urban Governance, Economic Transformation, and Land Use: A Case Study on the Jimei Peninsula, Xiamen, China, 1936–2023

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Abstract: The purpose of this study was to explain how the heterogeneous elements embedded in the Jimei Peninsula affect the transformation of the production landscape into a consumption landscape and the connection between urban governance and economic transformation. The study took a qualitative approach, utilizing historical literature analysis, a field investigation, and in-depth interviews to explore the driving forces and impacts of coastal-zone functional transformation. A total of 26 residents were interviewed individually or collectively, the current situation in the coastal zone with a length of about 16.1 km was recorded in detail, and all the collected elements were divided into six landscape categories for analysis. The results indicate that urban positioning, economic development, policies, and residents are the main factors driving the continuous advancement of the Jimei Peninsula zone. The coast has completed the functional transformation from meeting the residents’ survival needs to tourists’ sightseeing needs. The traditional fishing culture in this area is slowly disappearing with the tide of time, and navigation technology is being passed down through the Jimei School Village. This study reveals the dynamic process of the transformation of coastal functions in representative coastal tourism cities in China, bringing attention to coastal ecology and local fishing culture, and raising people’s awareness of cautious coastal development and sustainable blue-economy development.

Keywords: heterogeneous; embeddedness; moments; commodity; consumption landscape

1. Introduction

Coastal zones are the most productive areas [1], but the dynamic nature of the interface between land and sea [2] makes coastal areas particularly vulnerable to the effects of human activities. Although the consequences of changes in coastal areas are local or regional, they are likely to affect human society within a decade and cause irreversible changes [3]. Economic globalization has led to the economic growth of coastal port cities, which requires the expansion of hinterlands into the sea.

By the end of 2020, the cargo and container throughputs of Chinese coastal ports (which were 48.5-fold higher than those in 1978) were ranked first, globally [4].

For China, the economic transformation over the past half century has been driven by coastal cities. Most of the prototypes of these cities are fishing villages of varying sizes. Fishing is the main form of livelihood in these villages, which encouraged the development of shipbuilding, and in turn, shipbuilding technology promotes human trade, migration, and exploration. Thus, it can be said that fishers and their related landscapes gave birth to the modern world [1].

However, most of the fishing village landscapes along China’s coast have disappeared with the rapid economic growth, and there is a lack of historical records of this process in the literature. This study attempts to document how the fishing village landscapes that relied on the sea for survival disappeared due to economic growth, including...
the reasons for their disappearance and how the changing coastal landscape accelerates economic transformation.

1.1. Background

China’s reform and opening up began in 1978, and every decade since then the coastal zone has undergone drastic changes. In the first decade, the continuing increase in population coupled with economic growth, rapid urbanization, and infrastructure development resulted in the disappearance of space/resources in the coastal zone, including salt pans, breeding ponds, and agricultural land [5]. In the second decade, more than 70% of large Chinese cities were located in the coastal areas, accounting for 55% of China’s gross domestic product (GDP) [6]. Furthermore, in 1998 alone, the occurrence of diseases in maricultural animals reached 30%, resulting in high economic losses [7,8]. In the third decade, with rapid economic growth and urbanization in China’s coastal zone, new issues emerged, such as increased coastal pollution, ecosystem degradation, water resource depletion, and coastal erosion. From the fourth decade to the present, the coastal areas accounted for approximately 70% of the GDP in China [9,10] and contributed to China’s rapid urbanization from 2000 to 2020 [11]; however, there were land use conflicts (cultivated land, construction land, and the ecological spatial layout in coastal zones) in all the coastal provinces of China [12]. Human activities have increased the exposure and vulnerability of China’s marine and coastal ecosystems, causing a reduction in coastal wetland areas, as well as degradation of biodiversity and ecosystem stability [13]. The research of Li, Sun [14] showed that in the past 30 years, overall, the landscape in China’s coastal areas has rapidly fragmented, with reduced aggregation, complexity, and irregular edge shapes [14].

In general, in each decade of the past half century, China’s coastal zones have lost their space/resources, achieved economic growth, and experienced environmental decline.

The coastline of China is approximately 18,000 km long. The comprehensive governance of coastal zones in its true sense began in 1994 with the cooperation between China and the United Nations Development Program (UNDP). It was only in 2004 that the country started considering integrated land–sea governance as a national strategy [15]. However, prior to this, China’s coastal provinces had already been the fastest developing regions in the country. By 2017, the per capita GDP in coastal-zone areas was close to that of high-income countries [15,16]. On the other hand, the high intensity of land development and population density in these coastal zones have resulted in significant social and environmental changes, resource pressures, coastal pollution, a continuous decline in ecosystem health, and increased environmental risks [17–21]. These issues indicate that the economic benefits of coastal zones are not proportionate to the governance of their ecological environment.

1.2. The Value of the Jimei Peninsula as a Case Study

Xiamen was a pilot city for the United Nations Partnerships in the Environmental Management for the Seas of East Asia (PEMSEA) in 1994 [22]. Earlier, in the 19th century, Amoy (Xiamen) was one of China’s foreign treaty ports [23], which were the instruments that forced China to open up to the world, and also the places that could more readily adapt to globalization [24]. The difference between Xiamen and other treaty ports is that it is an island. Since it was a trading base for the Portuguese, Spanish, and Dutch from the 16th to the 19th century, it was an island on the “must have” list for foreigners [23]. Although it developed relatively slowly in the 19th century, it was also an “attractively provincial” port [23]. The open nature of Xiamen Island means it easily accepts foreign things. The surrounding waters of Xiamen Island are very rich in fishery resources [25], and it has a long history of development of fishing and hunting, fishing ports, and fisheries [26], and even as a treaty port; fishery production continues to be maintained. In 1980, Xiamen Island immediately became a special economic zone in China, and the commercialization of the city was rapidly promoted. In 2001, Xiamen was positioned as a tourist city and began to renovate the surrounding sea areas [27]. At this time, all aquaculture in Xiamen
Island was withdrawn from the coastline [25], and since then, the fishing village landscape of Xiamen Island has completely disappeared.

Tourism became a development priority during the transition from a planned economy to a market economy [28]. Coastal tourism that has undergone the transition from a planned economy to a market economy contributed to the rapid development of the coastal zone in China and it has been one of the major marine industries since 1993 [29]. China’s economic growth and the functional transformation of coastal spaces are mutually exclusive, and the coastal zone of the Xiamen Special Economic Zone has a certain degree of representativeness, which can be used to infer the changes in the spatial distribution of fishing villages in southeastern China. At present, only the coastal zone of the Jimei Peninsula can be used to study this process.

1.3. The Issue and Purpose of This Study

Coastal tourism was seldom studied under the framework of the coastal-zone management considering the influence of China’s economic and political reform [29]. The coastal function of the Jimei Peninsula has transformed the urban positioning of Xiamen in different periods. The process of how a coastal zone transforms from a production space to a consumption space has rarely been discussed. We posit that the function of a coastal zone changes with the positioning of the city and is affected by the dynamic influence of heterogeneous elements in the process of change. Geographical studies can highlight the appearance of local reproduction for consumption practices and how consumption processes and practices create special geographical features [30].

However, although the Jimei Peninsula in the north of Xiamen Island is closely related to the development of Xiamen and belongs to the Xiamen Special Economic Zone, it has a very different landscape. The Jimei Peninsula is characterized by its long coastline, which still maintains a fishing village landscape, and is also affected by the Xiamen Treaty Port. The peninsula is studded with fishing villages, ports, schools and other elements, still maintaining the landscape of the early 20th century. However, the latest research from Yu-Yan Zhang, Zhe Zou [31] and Zou, Zhang [32] points out that the spatial pattern of the Jimei Peninsula coastal zone generally maintains the mosaic pattern of fishing villages and educational spaces [33]. However, after 1994, the spatial governance model of the coastal zone completely changed. The change in this model came with the economic transformation of the city. Among these changes, the “Coastal Exclusion Policy (CEP)” has had a significant impact on the fishing villages around Xiamen Island, as fishers were forced to withdraw from coastal areas [32]. This policy means that coastal communities and fishing villages will also lose their unique production patterns and landscapes, but this important point was not mentioned in the aforementioned article. This study will continue to explore the current situation of coastal-zone changes after the policy’s implementation and all the impacts brought by the changes.

This study takes the coastal land-use changes on the Jimei Peninsula as the object; the purpose of this study was to explain how the heterogeneous elements embedded in the peninsula affect the transformation of the production landscape into a consumption landscape and the connection between urban governance and economic transformation. The coastal zone is a place where people closely interact with the environment, and it is also the most developed. However, focusing only on the economic advantages of a single industry is likely causing us to ignore more important issues, for example, the decline of the ecological environment and the irrecoverable fishery culture, as these important issues are hidden behind the changes in the coastal landscape. The aim of this study is to increase the awareness of sustainability in the current blue economic boom.

2. Methods and Materials

2.1. Study Framework and Design

Today, China’s consumption model has also shifted from material goods to more experiential consumption [34]; Chinese consumers have entered an era of cloud consumption,
where the start- and end-point of the commodity cannot be seen during the consumption process. Moreover, the concept of a linear or one-way commodity chain is no longer enough to explain the process of production and consumption [30] because different locations and nodes in the commodity chain are bound to be connected [35]. A non-linear research approach transforms commodities into social practices, relationships, and policies, which are conceived as different aspects that are connected in different ways [36]. This study treated these as heterogeneous mosaics and identified the coastal landscape through on-site surveys and coding.

This study adopted two research approaches, namely historical geography and post-structuralism geography; the former can explain the regional dynamics in the long-term process of change, while the latter can explain the investment of political and economic energy in specific areas, making the space appear open, and all endogenous and exogenous factors can freely enter and exit. Spaces refer to newly created areas in the ever-changing dynamics [37,38]. The coastal zone is the junction between the sea and land, with the characteristics of openness, freedom, and imagination. The above characteristics coincide with those of post-structuralism, such as openness and conflict; difference, transcendence, loosening, and freedom.

This study uses the concept of an “underground rhizome” to reflect the spatial fragmentation of the coastal zone. We believe that, hidden under the spatial fragmentation, there are close relationships. It uses the point-to-point rhizome concept [39] to focus on the dynamics of coastal land changes, with particular attention to the relationship between heterogeneous elements and changes in coastal landscapes. Only by constructing a network among all spatial elements in the coastal zone, including culture, education, tourism, ecology, and policies, can we identify the various relationships hidden in the handover and transformation.

2.2. Study Steps and Contents

This study was conducted from October 2022 to February 2024. A total of 26 residents were interviewed individually or collectively, including fishers, retail store owners, coastal residents, community administrators, Jimei University teachers, Jimei University students, and police officers (Table 1). Furthermore, the current situation in the coastal zone with a length of about 16.1 km was recorded in detail, including tourist attractions, public facilities, settlements, and historical sites. All the collected landscape elements were divided into six categories for analysis.

<table>
<thead>
<tr>
<th>No.</th>
<th>Sample Coding</th>
<th>Sample Coding</th>
<th>Age</th>
<th>Background</th>
<th>Interview Time and Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>S1</td>
<td>M</td>
<td>Above 60</td>
<td>Grandpa’s main job is as an employee in the logistics department of a construction institute, and his side job is as a fisher.</td>
<td>15 April 2023, online interview; 28 October 2023, grandpa’s home.</td>
</tr>
<tr>
<td>2</td>
<td>S2</td>
<td>M</td>
<td>20–35</td>
<td>Fisher</td>
<td>16 April 2023, telephone interview</td>
</tr>
<tr>
<td>3</td>
<td>S3</td>
<td>S3-A: M</td>
<td>36–60</td>
<td>Vegetable retailer (husband and wife)</td>
<td>20 April 2023, Jimei Dashe</td>
</tr>
<tr>
<td>4</td>
<td>S4</td>
<td>F</td>
<td>Above 60</td>
<td>Clam-digging residents</td>
<td>20 April 2023, Jimei Dashe</td>
</tr>
<tr>
<td>5</td>
<td>S5</td>
<td>F</td>
<td>36–60</td>
<td>Nearby residents</td>
<td>29 May 2023, Jimei Dashe</td>
</tr>
<tr>
<td>6</td>
<td>S6</td>
<td>M</td>
<td>36–60</td>
<td>Nearby residents</td>
<td>9 April 2023, East coast of Xinglin Bay Landscape Belt</td>
</tr>
<tr>
<td>7</td>
<td>S7</td>
<td>S7-A: M</td>
<td>20–35</td>
<td>Employees of Dashe Neighborhood Committee</td>
<td>30 May 2023, community neighborhood committee</td>
</tr>
<tr>
<td>8</td>
<td>S8</td>
<td>M</td>
<td>36–60</td>
<td>Photographer</td>
<td>30 May 2023, online interview</td>
</tr>
<tr>
<td>9</td>
<td>S9</td>
<td>M</td>
<td>36–60</td>
<td>University teacher</td>
<td>31 May 2023, Jimei University College of Art and Design</td>
</tr>
<tr>
<td>10</td>
<td>S10</td>
<td>M</td>
<td>20–35</td>
<td>Sailing instructor</td>
<td>31 May 2023, online interview</td>
</tr>
<tr>
<td>11</td>
<td>S11</td>
<td>M</td>
<td>Above 60</td>
<td>Clothing store owner; digs oysters and sells them to surrounding businesses.</td>
<td>4 June 2023, Jimei Dashe</td>
</tr>
</tbody>
</table>
Table 1. Cont.

<table>
<thead>
<tr>
<th>No.</th>
<th>Sample Coding</th>
<th>Sample Coding</th>
<th>Age</th>
<th>Background</th>
<th>Interview Time and Place</th>
</tr>
</thead>
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<tr>
<td>12</td>
<td>S12</td>
<td>S12-A:F</td>
<td>Above 60</td>
<td>Manager of Chen Clan Association</td>
<td>4 June 2023, Chen clan ancestral hall</td>
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<td></td>
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<td>S12-B:M</td>
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<tr>
<td>13</td>
<td>S13</td>
<td>F</td>
<td>36–60</td>
<td>Fishmonger</td>
<td>4 June 2023, Jimei Dashe</td>
</tr>
<tr>
<td>14</td>
<td>S14</td>
<td>M</td>
<td>Above 60</td>
<td>Retired high school teacher</td>
<td>4 June 2023, Jimei Dashe</td>
</tr>
<tr>
<td>15</td>
<td>S15</td>
<td>S15-A:F</td>
<td>36–60</td>
<td>Jimei Dashe small shop owner</td>
<td>23 November 2023, Jimei Dashe</td>
</tr>
<tr>
<td></td>
<td></td>
<td>S15-B:M</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>S16</td>
<td>F</td>
<td>Above 60</td>
<td>Fishmonger</td>
<td>24 November 2023, Jimei Dashe</td>
</tr>
<tr>
<td>17</td>
<td>S17</td>
<td>S17-A:F</td>
<td>Above 60</td>
<td>Street vendors at Jimei Dashe</td>
<td>24 November 2023, Jimei Dashe</td>
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<td></td>
<td></td>
<td>S17-B:M</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>S18</td>
<td>F</td>
<td>36–60</td>
<td>Owner of a retail store next to Ao</td>
<td>24 November 2023, in the store</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Garden</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>S19</td>
<td>F</td>
<td>36–60</td>
<td>Specialty shop owner next to Ao</td>
<td>24 November 2023, in the shop</td>
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<td></td>
<td></td>
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<td></td>
<td>Garden</td>
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</tr>
<tr>
<td>20</td>
<td>S20</td>
<td>F</td>
<td>36–60</td>
<td>Specialty shop owner next to Ao</td>
<td>24 November 2023, in the shop</td>
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<td></td>
<td>Garden</td>
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<tr>
<td>21</td>
<td>S21</td>
<td>F</td>
<td>36–60</td>
<td>Specialty shop owner next to Ao</td>
<td>24 November 2023, in the shop</td>
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<td></td>
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<td></td>
<td>Garden</td>
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<tr>
<td>22</td>
<td>S22</td>
<td>F</td>
<td>20–35</td>
<td>Street vendors</td>
<td>24 November 2023, in the shop</td>
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<td></td>
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<tr>
<td>23</td>
<td>S23</td>
<td>M</td>
<td>36–60</td>
<td>Police officer</td>
<td>24 November 2023, in the shop</td>
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<tr>
<td>24</td>
<td>S24</td>
<td>F</td>
<td>30</td>
<td>Student (with part-time job selling</td>
<td>21 January 2024, online interview</td>
</tr>
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<td></td>
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<td></td>
<td></td>
<td>bouquets)</td>
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<tr>
<td>25</td>
<td>S25</td>
<td>F</td>
<td>20–35</td>
<td>Full-time flower shop owner</td>
<td>21 January 2024, online interview</td>
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<tr>
<td>26</td>
<td>S26</td>
<td>F</td>
<td>20–35</td>
<td>Student (with part-time job selling</td>
<td>22 January 2024, online interview</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>bouquets)</td>
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</tbody>
</table>

Note: The age of the interviewees is based on the year of the interview. The personal information of the interviewees was as complete as possible. In accordance with research ethics, the interviewees are represented by codes. The code “F” represents female, “M” represents male, “A:F” represents female A, and “B:M” represents male B.

In response to the heterogeneous elements in the coastal zone, a variety of data collection methods must be used. The data used in this study include historical documents, official documents (including laws, regulations, propaganda, and announcements), news media reports, publications, and social media content. The above data correspond to the nonlinear research framework, and triangulation was used to determine the correctness of the content. Study methods including case studies (including Dashe Fishing Village, Shi Li Chang Di), secondary literature analysis, fieldwork, and interviews (a total of 26 samples, Table 1) were used. These study methods were selected based on the results of exploratory research and the data of the study cases, which show the main characteristics of fragmentation and heterogeneity.

Changes in coastal fisheries were the focus of the interview, and the topics included the “Coastal Exclusion Policy (CEP) and the differences before and after CEP”, land reclamation, and the impact on ecology, culture and life. The interview location was the interviewee’s home, pier, workplace, coastal zone, etc. Please see the Supplementary Information for interview time and summaries (Supplementary Table S1).

The numbers and illustrations used in this study are defined as follows: ① refers to the site number shown in Figure 2 and (S1, S2, S4) refer to the interviewees’ sample number. The sample numbers and interview summaries can be found in Supplementary Table S1.

2.3. Study Space and Time Scopes and Definitions

This study focused on the Jimei Peninsula (shown in Figure 1), located at 117.57° E to 118.04° E and 24°25′ to 24°46′ N. Its land area is approximately 275.79 square kilometers [40], and is located at the junction of the eastern and western sea areas of Xiamen city. The coastal zone at the southern tip of the Jimei Peninsula is one of the few areas in Xiamen that remains relatively unchanged, and it is also one of the few living areas that still retain the culture of southern Fujian. Administratively, it falls under the jurisdiction of Xiamen City, in the period of 1936–2023. The coastline on the Jimei Peninsula in 1936 still maintained the natural terrain, but 1949 was the starting point for coastline changes. From 1978 to 2000, the coastal zone underwent the most dramatic changes, and from 2020 to 2023, tourism represented the main function of the coastal zone.
Figure 1. Study area.

The Jimei Peninsula features a combination of various geographical features, including low mountains, hills, plateaus, plains, and coastal tidal flats, as it is situated in a transitional zone between land and sea. This has contributed to the formation of a semi-fishing and semi-agricultural society [41]. The maritime area of the Jimei Peninsula is approximately 40 square kilometers. Due to natural siltation, land reclamation, and the construction of reservoirs along the coast, the coastline and tidal flats have gradually been reduced, and some areas have experienced varying degrees of pollution. Before 1956, the coastline of the Jimei District consisted of the coastlines of the Jimei Peninsula, Xinglin Bay, Xinglin Peninsula, Maluan Bay, and islands in Xinglin Bay, which were relatively long.

However, with the construction of the Xinglin Dam (Xinglin Reservoir) and Xinglin Bay Reservoir, as well as extensive land reclamation, the coastline has gradually shortened. The area of this study was defined as between Jimei Bridge and Shi Li Chang Di, and Antarctic Ao Garden and the end of Xinglin Bay Greenway.

3. Results
3.1. Spatial Distribution of Heterogeneous Landscapes in Coastal Zones
3.1.1. Production Landscape

When the coastal currents from Zhejiang and Fujian carry sediments deep into Xiamen Bay, tidal flats are formed around the Jimei Peninsula [13]. The low temperature, low salinity, and nutrient-rich characteristics of ocean currents create favorable conditions for the reproduction of organisms in the coastal zone, especially in autumn and winter [42]. The coastline of the Jimei Peninsula is winding, and there are clams, oysters, crabs, mantis shrimps, conches, sandworms, octopuses, seaweed, and other coastal creatures on the tidal flats [43]. These stable biomasses have attracted coastal residents for hundreds of years. In autumn and winter, the residents have used many simple tools, such as bamboo baskets of different shapes, and shovels, to set traps, search for food, and collect these...
organisms, in a process which is called Tao Xiaohai (which means “foraging behavior in the intertidal zone”) [43,44]. On the tidal flats of the Jimei Peninsula, as long as you understand the tides, you can collect mollusks in large quantities; thus, residents in the coastal zone have a predictable food source in autumn and winter. A tide sign is still erected in this area (8). The location around this signboard is the only place where the collection activities can be seen on the Jimei Peninsula. The tidal flats have a stable productivity, encouraging the cultivation of fields on tidal flats and forming a system of sea fields (S1, S2, S4, S8, S11, S12, S15, S16, and S17). The sea fields of the Jimei Peninsula are distributed at the southernmost end (1, 2, 3, and 4). The sea fields have enabled the fishing village to have mature social organizations, economic activities, and a fishery culture. Coastal residents have a tradition of using the coastal tidal flats to grow food or breed livestock, and reclamation is carried out based on economic needs. For example, the reclamation on the west coast of the peninsula turned 40,000 acres of tidal flats into land for growing rice (12) [45,46]. The original intention of reclamation was farming or salting, but the economic benefits of aquaculture are much higher than those of farming or salting, so most of them were converted to aquaculture.

Shellfish excavated on the tidal flats can be easily boiled or grilled, and eaten, but their weight limits the distance they can be transported, and so they must be processed or eaten locally. Therefore, women can be seen everywhere in fishing villages shucking oysters, which are sold fresh or dried (11) (S15-B, S16). There are also fishers living on the coast who harvest clams and distribute them to the market (S4, S11). Most residents of Dashe Fishing Village make a living from fishing or aquaculture, and in its heyday there were about a hundred boats (S2) [47]. There is a boat repair shop in Dashe Fishing Village. Fishing equipment such as fishing nets are repaired by the fishers themselves (11). Tao Xiaohai, processing, purchasing, selling, and repairing fishing gear constitute the primary production landscape of the Jimei Peninsula coastal zone.

In 2007, the western sea area of the peninsula began to be regulated: aquaculture and fishing were prohibited, and the scale of aquaculture dropped sharply (S1, S2). Due to natural siltation and land reclamation (S1, S6, S7, S10), sea reclamation, and reservoir construction, the area of coastlines and tidal flats gradually shrunk, and the sea areas were also polluted, to varying degrees (S1, S2, S4, S9, S16). So far, the visible production landscape of the fishing village consists of only very sporadic fishing and oyster-shucking activities.

3.1.2. Cultural Landscape

Carefully observing the tides on the shore is the first step before fishers start production. The understanding of nearshore fish drives humans to build rafts to go out to sea for fishing. There were at least four piers on the Jimei Peninsula, and currently, only the ruins of the Dragon King’s Palace pier still exist (5) [48,49]. However, fishery production is a high-risk labor industry. Due to safety needs and spiritual sustenance, many beliefs and taboos have arisen [48]. For example, the fishers of Dashe Fishing Village go to Tianfei Palace and Dragon King’s Palace together before going to sea for the first time in the new year [32]. The same beliefs and practices strengthen the cohesion of local fisher organizations [47,50].

The unpredictability of going to sea is the essence of fishers’ traditional beliefs. Therefore, there are many specific landscape elements connected to beliefs on the coast that are exclusive to the fishing culture. Therefore, the Tianfei Palace was built on the rocks on the east side of the peninsula (8) [51,52], and the Dragon King’s Palace was built on the small island on the west side (5). The purpose was to seek safety at sea with the power of faith [51,53]. The landscape pattern also extends to the more exclusive fishing culture. For example, when a fishing boat returns to port, the whole family will greet it and hold a “peace” ceremony. When returning to port, if something unlucky happens, you are not allowed to drive past the Dragon King’s Palace [54,55]. During the Lantern Festival, fishers will go to Tianfei Palace and Dragon King Palace to worship (S11), and fishers burn incense twice a month to worship those who died at sea (S1). The elaborate rituals, customs, and economy are all related to fishery production. Before the implementation of the CEP,
various clans in Dashe Fishing Village would still have activities in the sixth and seventh lunar months and at the Lantern Festival (S11).

Tianfei Palace was destroyed by artillery fire during World War II, and Ao Garden was built on the original site. The fishing piers have also disappeared, due to land reclamation. Only the Dragon King’s Palace pier still has a temple, and is the only fishery cultural landscape (The numbers and illustrations used in this study are defined as follows: ① refers to the site number shown in Figure 2).

Figure 2. Coastal line changes and landscape elements of the Jimei Peninsula.

3.1.3. Educational Landscape of Maritime Technology

For scholars, illiterate fishing communities are elusive because fishers keep knowledge within their communities, passing it on from generation to generation and rarely allowing it to leave the community [1]. For the same reason, until the early 20th century, education in the fishing villages of the Jimei Peninsula was still poor [45,56]. Because fishers have been cultivating the sea, and using animal husbandry and fishing practices for a long time, children learn to fish on the tidal flats at the age of six or seven and go to sea with their family elders when they are more than ten years old. All knowledge is accumulated and transmitted at sea, and the content is related to fishery and navigation. The new generation of fishers enjoys the experience passed down by their predecessors, has accumulated many industrial habits that adapt to and promote productivity, is proficient in the fishing season and flood season, has sufficient practical experience, and can “observe the mountain situation”, judge the direction, and avoid dangers (S1, S2, S3). Regardless of fishery or trade, the livelihood of fishing villages is derived from community inheritance, and education is not widely available in fishing villages.

“When they did not have a living skill, they went to Southeast Asia, Singapore, and Malaysia to make money. It was easy to make money with clans, so they usually stopped studying after they reached junior high school. Even if they went to college, they would not necessarily earn more than they did. At that time, the Chen family not many of our children can go to high school.” (S3-a)

Therefore, the education level in coastal areas has not improved.

However, there is the famous Jimei School Village, which is a fishing village at the southern end of the Jimei Peninsula. It consists of a mosaic of villages and schools, which are famous for their knowledge and navigation technology courses [33]. The reproduction of the fishing community is attributed to the inheritance of navigation technology, which can be used to develop fisheries and easily expand the transnational trade space. Tan Kah
Kee (also known as Chen JiaGeng, the founder of Jimei School) of the Chan clan in Dashe Fishing Village is an important kin leader because of his prosperous overseas trade and his allocation of assets for education [56]. He recognized the importance of revitalizing navigation and fisheries, and allocated wealth to navigation technology education [57]. Jimei Primary School, Normal School, Fisheries, Navigation, and other schools are collectively referred to as the Jimei Schools ([7]) [58]. The six buildings at the core of the campus bear witness to the history of maritime education in Jimei School Village. The fifteen-story Nanxun Tower is a landmark on the coast of the Jimei Peninsula. When Tan Kah Kee built it, it was also intended to protect fishery production and provide directions and the time for fishers traveling at night [59]. Jimei School Village is a collection of fishing villages, sailing education and leaders, and other elements, leaving a special educational landscape on the Jimei Peninsula.

3.1.4. Governance Landscape

This study overlaid onto each other the 1936–2023 maps for the Jimei Peninsula, which showed that in the past 90 years land reclamation has expanded the Jimei Peninsula’s land area by 42.54% (Figure 2). The area of tidal flats in the coastal zone has also been reduced and artificialized.

From 1955 to 1965 alone, the reclamation area of Xinglin Bay was as high as 2000 hm² ([10]) [60]. During this period, Jimei built the Gaooji and Jixing seawalls, with the main purpose of making Jimei a transportation hub connecting the island with the outside world. From 1966 to 1968, large-scale reclamation was carried out in Xinglin Bay. The main purpose at this time was aquaculture [61]. However, although land reclamation has improved the economy, it has led to a reduction in the area of tidal flats. In the late 1970s, it also caused the number of oysters in a large area to decrease [45]. The year 1984 was a turning point in Xiamen’s reclamation activities. Before that, the reclaimed areas were mainly used for aquaculture, but after 1984 the reclamation projects were mainly used for port construction, industry, commerce, trade, and urban construction [62]. After the 1990s, a large number of tidal flats in Jimei were developed and built, but the area of tidal flats continued to shrink. The east side of the Jimei Peninsula now consists almost completely of reclaimed land ([13]).

“Jimei used to be very small, just a small fishing village. The Jiageng Memorial Hall used to be located on the tidal flats. Now the east of Xunjiang Road is filled in by the government” (S1, S2, S3, S6, S7, S9, S10)

Since 1994, Xiamen has implemented coastal management for the surrounding sea areas by regulating the coastline [63–66]. The year 2002 marked a turning point in coastal-zone governance. The “Comprehensive Rehabilitation of Aquaculture in the Western Sea Area” policy, commonly known as the “Coastal Exclusion Policy (CEP)”, was implemented [32]. In 2006, the Jimei Peninsula began to implement the CEP in an attempt to restore the ecology. It banned tidal flat farming and punished fishers who violated the regulations [67]. By the end of May 2020, the Jimei Peninsula had fully completed the work of clearing the sea area for breeding.

The governance landscape of the Jimei Peninsula coastal zone is mainly land reclamation and artificialization, which is in line with the pace of economic development in China as a whole [68]. The Jimei Peninsula is a historical microcosm of the entire southeastern coast of China.

3.1.5. Tourism Landscape

Xiamen city was approved as a scenic tourism city by the central government in 2001 [27]. The subsequent coastal governance measures were all aimed at promoting the development of tourism in line with the development goals of scenic tourism cities [69]. In 2002, Xiamen promulgated a CEP to build coastal tourism facilities on the coast to increase the economic benefits [70]. Beginning in 2006, fishers on the Jimei Peninsula began to withdraw from the coastal zone; the withdrawal was completed in 2020, thereby meeting
The government has also successively proposed projects for the Jimei coastal zone [72], including beautification projects, the planting of mangroves, the construction of sea plank roads and landscape platforms, etc., to cope with the development of tourism [73].

The development of tourism on the Jimei Peninsula has attracted a large number of foreign tourists [74]. The coastline of the peninsula is already dotted with tourist spots (Figure 3), including landscape green belts, bicycle paths, parks, and hotels. These facilities were initially concentrated in the north corner of the southeastern coast of the peninsula before spreading to the entire coastal zone (6). The Dragon King Palace, a cultural fishery landmark, is now a thousand-year-old temple, and the surrounding green belt formed by land reclamation was repackaged into the “Shi Li Chang Di” (which means 10 km-long seawall). The intersection of Gaoji Bridge and Jixing Bridge has also been developed in order to boost the economic vitality of the coastal zone [75] (Figure 3).

Figure 3. Tourism landscape elements.

3.1.6. Ecological Landscape

The tidal flats formed by the Zhejiang and Fujian coastal currents around Xiamen Bay are habitats that nurture coastal ecology [13] and provide important stopover, breeding, and wintering habitats for many endangered water bird species [76]. The creatures and migratory birds on the tidal flats form the ecological landscape of the coastal zone [77]. However, since 1964, land reclamation has expanded the area of the peninsula and the length of the coastline, completely changing the original appearance of the coastal zone. Initially, only the coastline at the southern end of the peninsula had minimal changes [32], but it was completely artificial by the end of 2023.

Over the past few decades, the degree of human-induced artificialization along the coast has increased significantly, with the construction of ports, docks, and bridges, which
occupy a large portion of the coastline, leading to a significant decrease in fishery resources [78,79]. In 1955, after the construction of two seawalls on the east and west sides of the Jimei Peninsula, the natural nurseries in the coastal zone disappeared, resulting in a decrease in shrimp production. The area of the three major fishing grounds nearby also shrank year by year, the currents were not smooth, and the fish and shrimp resources declined [45]. The interviewees also mentioned that land reclamation and the construction of artificial facilities have caused the disappearance of the tidal flats and the native common fish and shellfish on the coast of the Jimei Peninsula (S1, S2, S3, S7, S8).

The western waters of the Jimei Peninsula are a nature reserve for the Chinese white dolphin [13]. However, the habitats of Chinese white dolphins in the sea area overlap extensively with economic development zones and shipping-intensive areas. The degradation and loss of suitable shallow-sea habitats caused by reclamation and other projects have caused the disappearance of Chinese white dolphin habitats [80].

As Xiamen is a pilot city of the United Nations, the governance of its coastal zone must focus on the protection and use of marine resources [63,64,81–83]; for example, the restoration of fishery resources and marine species [84]. However, the interviewees said that the artificialization of the coastal zone has left organisms with no place to hide. Although the water quality is gradually improving, the number of organisms has not increased (S2). The ecological landscape of the Jimei Peninsula has declined due to the prevalence of land reclamation, industry, and fish farming. However, the interviewees (S2, S5, S6, S9) also pointed out that the government’s long-term control has shown signs of easing the degradation trend of the ecological environment [85]. Whether it is an illusion caused by environmental beautification or a true ecological restoration is an issue worthy of continued observation.

3.2. Economic Benefits of Coastal-Zone Management and Tourism Services

In 1994, Xiamen became a demonstration site for coastal-zone governance in China. [71]. Xiamen’s GDP of that year was CNY 18.7 billion [86] and it grew to CNY 780.27 billion in 2022 [87]. Most of this comes from cultural tourism (or tourism service industry) income [88]. In 2006, the Jimei District’s GDP was CNY 14.274 billion, but by 2022 Jimei’s GDP had grown to CNY 95.658 billion, with the service industry accounting for 49.1% [89].

Taking Ao Garden, the main scenic area in Jimei, as an example, the number of tourists increased by 101.5% from 2012 to 2019. Although affected by the COVID-19 epidemic in 2020, the number of tourists in 2023 reached a new high [90–100]. According to recent data, Xiamen has completed its transformation from a commercial port city to a tourist city, and its tourism popularity index and tourist satisfaction have always ranked among the top in China [101].

After the implementation of the CEP on the Jimei Peninsula, the coastal zone has transformed from traditional fishery to tourism service industry [102]; among the sites, “Shi Li Chang Di” and Dashe Fishing Village are the most representative.

In 1955, two seawalls were built to connect the Jimei Peninsula to the land on the east and west sides, with a total length of 5032 m, collectively known as the “Xiamen Seawall”. Half a century later, both seawalls have been transformed into cross-sea bridges connecting the coast. The strip is nicknamed the “Shi Li Chang Di” and was promoted as a tourist attraction by coastal-zone governance.

The “Shi Li Chang Di” was built around the Dragon King’s Palace pier site. It is one of the most popular tourist attractions on the Jimei Peninsula. Now, the coastal zone has been occupied by various consumer and leisure spaces (Figure 4 (left)). At present, the Dragon King’s Palace pier has lost its original function of fishery production and transportation and now serves to promote the economic development of the coastal zone in the form of a tourist attraction [75]. The government manages the surrounding aquaculture facilities and fishing boats [103]. There are only a few fishing boats left (S23).
Dashe Fishing Village (Figure 4 (right)) was originally a fishing village near the sea. Later, due to the reclamation and construction of Ao-Yuan Garden, the fishing village became separated from the sea [104]. Dashe Fishing Village is the ancestral home of the Tan Kah Kee clan. Therefore, with the help of the Jimei District Government and universities, it has been transformed into a cultural and creative village that promotes Kah Kee’s spirit. Now, various shops extend outward from the Jimei Ancestral Hall. The fishing village industry has been transformed into the tourism service industry. Currently, only one or two households in Dashe are still engaged in fishery production (S5, S7).

3.3. Changes in Coastal Consumption Patterns

From 2010 to 2021, the Jimei Peninsula carried out reclamation and marketization of sea area resources in the coastal zone, outsourcing sea area-use rights through bidding, auctions, listings, etc. In 2021, regulations began to formally transform the coastline of the Jimei Peninsula into a tourist and recreational area [32]. After decades of changes in the coastal zone of the Jimei Peninsula, the consumption theme has changed from the traditional agriculture and fishery economy to the tourism economy.

The ferry terminal next to Ao Garden is the main space for Dashe residents to cross to Xiamen Island. Before the end of 2020, the area around the ferry was full of stalls selling fish and processed local products, serving tourists and residents. However, at the end of 2020, except for those selling local specialties in their own stores, all other vendors were asked to leave. On the west side of the peninsula, the fish trading activity centered on Dragon King’s Palace pier has disappeared, and the management of the “Shi Li Chang Di” has been entrusted to outsourcing companies, for unified management [105]. Irregular events and stalls are set up in response to tourists, as well as consumption activities including parking lots, vendor markets, open-air concerts, retail stores, etc. There are often small vendors gathering at the entrance (without paying stall fees) and on the left side of the entrance to the “Shi Li Chang Di” stall spots (vendors here must pay stall fees to the venue manager), mainly selling food and drinks. Bands of all sizes perform on the lawn of Shi Li Chang Di; open-air concerts are mostly held online (Online fans reward tips.) and offline (free), attracting many tourists. Tourists on the lawn can rent canopies from businesses to enjoy the sea view (Supplementary Table S2).

The consumption behavior in the coastal zone is no longer purely physical buying and selling behavior. More consumption comes from experiential services, such as renting canopies and barbecue equipment, and renting charging equipment; another type of cloud consumption is the benefit from Internet-celebrity live broadcasts. Take the bouquet sales on the Jimei Peninsula as an example. The raw materials come from Kunming, Yunnan (the largest fresh-cut flower trading market in Asia), which is 2000 km away. All procurement
processes are cloud consumption (Douyin live broadcast room, Huawu app). There are sales around the “Shi Li Chang Di”, and tourists come from all over the country.

The transformation of the coastal zone has resulted in the disappearance of space/resources, such as salt farms, breeding ponds, and tidal flats. The coastal-zone space in the production landscape period was an open and wide area, but the characteristic of the consumption landscape is the fragmentation of space due to consumption.

4. Discussion

4.1. The Embeddedness of Heterogeneous Spaces

Before 1920, the elements on the Jimei Peninsula were fishery production landscapes for gathering, fishing, and hunting [106]. In the process of fishery development, various fishing cultures emerged, mostly based on maritime safety and praying for smooth sailing at sea [48]. For example, the Tianfei Palace (Mazu), which protects the living, and the Dragon King Palace, which protects the dead, are major cultural landscape elements, respectively protecting fishers who go to sea on the Jimei Peninsula and those who cannot return.

After 1920, education was embedded into the Jimei Peninsula, creating the intellectual landscape of coastal-zone production technology. From 1949 to 1966, policy factors led to the reclamation of the landscape, with the purpose of expanding the oyster production area. Although this was the most significant land-use change on the peninsula, the landscape essentially remained centered on fishery production. Among the changes, Ao Garden, which was built on reclaimed land in 1960 [107], was integrated into the cultural landscape of the Jimei Peninsula on the former site of Tianfei Palace. It was not until 1984 that the government reclaimed the sea in order to expand the new urban area [44]. Thus, the nature of the area that was originally focused on fishing began to change. Because the purpose of the new space was to accommodate the growing population of the special economic zone, the new urban area included residential areas and hotels (9, 13); it became a heterogeneous space with different fishery landscapes embedded in the governance landscapes. Although land reclamation is a local or regional change, once it is linked to global issues it may lead to effects in the socio-economic system [108,109].

The spatial location of the new urban area also separates the fishing village from the sea. In 2006, due to the implementation of the CEP, a large number of fishers lost their access to the sea, which also led to a change in the spatial layout of the fishing village. The effect of the tourist city increased the demand for the service industry; due to loss of access to the sea, fishers filled these professions. The old fishers who lost their livelihoods had to rent out their houses to outsiders. The middle-aged people worked as security guards and the women worked as cleaning staff [32]. The fishing village no longer relied on fishing, but on sea-related consumer services instead.

Young tourists from various provinces in China and local fishermen have created a parallel space–society relationship in the horizontal society of the coastal zone, just like the heterogeneity of consumption and production in space [110]. On the other hand, the loss of vertical intersection and transmission between groups is also a problem and a dilemma that must be faced in the future.

There are heterogeneous elements embedded in the Jimei Peninsula, and they have become part of coastal tourism products (Figure 5). Due to the shift caused by policies, the fishing villages and fishing landscapes on the coast have become pure consumption spaces after being separated from the sea.
Figure 5. Spatial distribution map of heterogeneous landscapes.

4.2. Loss of Fishery Services

Post-structural geographer Murdoch [111], who focuses on heterogeneous spatial combinations, proposed that one of the core features of post-structural geography is that space and place are intersected by processes and operations originating from internal or external factors. We may infer that the current Jimei Peninsula is also a post-structural space. This is because, from a geographical perspective, the changes in land use have caused the fragmentation of spaces, whether it is internally generated (such as Jimei School Village) or due to outside factors (such as the Shi li Chang Di). Post-structural space may be attractive in the context of globalization, but from the perspective of coastal zone protection, the results are not optimistic.

After 2014, the attention on coastal zones shifted to humanistic aspects [112]; for example, correlations between land use and socioeconomic changes along the Atlantic coast have been used to assess ecosystem services. However, the results showed that land use changes and income and population growth negatively affect ecosystem services [113]. This study, using the Jimei Peninsula in the Pacific as an example, also showed the continued decline of cultural ecosystems after land-use changes. Fishing culture is the main axis of the Jimei Peninsula’s cultural ecosystem services. The highly productive tidal flats provide fishing villages with a stable food supply. The gods located on the east and west coasts provide spiritual comfort for fishers who go to sea and their families at home. The knowledge transfer of navigation technology also contributes to the conservation of marine fishery resources. Of course, the proper provision of tourism and entertainment activities can also effectively maintain the function of ecosystem services. However, if external operations are too harmful, they may be counterproductive.

The tidal flats formed by the coastal currents in Zhejiang and Fujian are the basis of the Jimei Peninsula ecosystem services. However, the policy-led spatial expansion was all in response to managing the population growth. Although the spatial pressure was alleviated, it still brought socioeconomic risks [108]. In addition to reducing the area of the tidal flats, land reclamation also affected the productivity of the coastal zone. More importantly,
the method of land reclamation affected the ecosystem service functions provided by the coastal zone, which is mainly reflected in the blocking of the connection of the fishing villages to the sea and the irreversibility of destroying natural nurseries and salt fields. The economy of the coastal zone and the consumption power brought by tourism have replaced the productivity of the tidal flats.

Hein, van Koppen [114] proposed that when fishery spaces are transformed into leisure and entertainment spaces the scale of the ecosystem service space also changes accordingly, diverging from the region to the country. However, on the Jimei Peninsula, a by-product of the transformation from a production to a service industry is the disruption to the fishery knowledge chain that had been passed down from generation to generation within the fishing village. That is, the fishery knowledge that relies on observing tides, wind directions, climate, astrology, and ocean currents, and acting according to the solar signs, will be completely lost. The embeddedness of heterogeneous landscapes on the Jimei Peninsula is the main cause of the spatial fragmentation of the coastal zone, and the ecosystem services of the fishing culture are also lost with the changes in land uses.

However, changes in land use, increases in demand [113], and lengthening of time scales [115], will lead to damage to ecosystem services. At present, the Jimei Peninsula seems not to have considered the long-term impact of cultural and ecological loss on the next generation. Even if the scale is different, there can be eco-economic practices, such as on the UK’s coast [116], the Swedish coastal zone [117], Satoumi in Japan [118], and so on. Multi-generational participation in sea activities can stabilize social relations and promote the dialogue of experience and cultural inheritance [119]. Wilson, Acheson [120] pointed out that after the environmental integration on a complex scale, those with environmental knowledge can develop a strong social structure, and the traditional fishery economic action is easier to continue. This study holds the view that the cooperation between coastal zone and local residents is the best way to maintain cultural ecosystem services.

4.3. Commodity Chains, Circuits, and Networks

The productivity of the coastal zone involves shellfish harvesting on tidal flats; the shellfish are sold as seafood for consumption. However, the commodity chain is limited by time and transportation costs; thus, the producers are the fishers, and the consumers are local residents.

The COVID-19 pandemic has affect coastal planning and management [121] all over the world. The Jimei Peninsula was extremely depressed during the epidemic, and the residents near the coast now have increased demands for healthcare after the pandemic [122]. However, the coastal zone took advantage of the government’s strategic tourism promotion to strengthen its tourism image after the pandemic. The heterogeneous landscape embedded in the coastal zone brought in many outsiders. The scenery of the coastal zone is a commodity; the outsourced management company used it and organized activities, especially the purchase of “invisible goods” in the cloud, such as live-streaming rewards, live-streaming goods, etc. However, every “moment” of consumption between consumers, sellers, products, and origins forms a product circuit with no starting point and no end point. These moments are mediated through different apps to create a product circuit in the coastal zone. Everyone can follow the products and the different tourist experiences through links. In this way, certain moments of prioritization in the flow of goods are eliminated [36]; there is no end-consumer or production end, because every moment of the product is connected to people’s activities in the coastal zone [123]. In recent years, part of Fujian Provence coastal zone has been actively transformed into a tourism complex [29,66,124]. The consumption circuit with the coast as the background is spreading in China. For example, the fishing village of Xunpu, which is two hours’ drive from Xiamen, connects each consumption moment with a trip shoot (a trip with a photographer), which collages the image of “a girl who is a daily fisher” [125], and transforms the fishing village into a space dominated by consumption.
Bouquets are a luxury product. Behind the product is a product network constructed by retailers [36]. In the Jimei Peninsula coastal zone there are a large number of bouquet vendors, and business is booming. It is also the only product that can be seen carried by consumers, and is widely disseminated as images by social apps. Its luxury characteristics are very different from the original landscape characteristics of the coastal zone, such as production, culture, navigation, and ecology. The consumption landscape represented by bouquet retail is a blooming flower grafted onto the transformation of the coastal-zone-governance landscape. The spatial embeddedness of luxury goods symbolizes the complete qualitative change in the coastal zone towards a consumption landscape.

This is the cumulative effect of the CEP and tourist cities. In the long run, the consumption pattern formed after the transformation of the coastal zone will prove to be more influential on urban development.

4.4. The Changing Nature of the Coastal Zone

In the 19th century, the coastal zone provided happiness and health to humans, with its value surpassing its economic output [125]. Therefore, since the 19th century, the coastal zone has seemingly become synonymous with holidays and leisure.

Since 1994, to adapt to the needs of the governance of the western sea area and the development of tourism, the Jimei Peninsula has used the CEP to promote the peninsula’s function as more consumer-oriented, thereby realizing the transformation of the urban economy. The urgency of coastal-space governance has attracted governance, power, and mobile capital, as well as flowing capital; this move is no different from the city of Paris’ use of urban renewal to increase the flow of people and money in the consumer space [126]. The coast of contemporary China is similar to the Paris Avenue, becoming an important public display center and promoting the circulation of goods, money, and people. The transformation of governance caused the coastal landscape to become like merchandise in a department store window.

This study found that the governance landscape in the coastal zone is the key to transforming consumption practices. Luxury consumption appeared through the promotion of social apps, connecting all moments of cloud consumption and creating another invisible environment. In addition, in the process of landscape construction, the control of coastal tourism landscapes still needs to be discussed, because all forms of production and consumption are remotely governed, incorporated, and disciplined based on performance, and extending the possibility of consumption politics, which is another possible direction for discussion.

5. Conclusions

This study identified the heterogeneous elements and their effects on the functional changes in the Jimei Peninsula’s coastal zone through time and space and explored the changing patterns of the coastal zone under rapid economic development. The results showed that the Jimei coastal zone has transformed its functions following the needs of urban development, and the embeddedness of heterogeneous spaces has fragmented the coastal landscape. Tourism-oriented governance of the landscape is a radical approach that breaks with the past. The transformation of coastal-zone functions has led to the loss of traditional fishery knowledge and skills, along with the disintegration of its related cultural ecosystem services. Coastal-one consumption has developed from a short and narrow commodity chain into a commodity network shaped by moments. This invisible network is the nature of the coastal-zone-consumption landscape. The transformation model of fishing villages in the southeastern coastal areas of China can use the case of the Jimei Peninsula as a reference.

The Jimei Peninsula belongs to the Xiamen Special Economic Zone, and its coastal-zone governance and economic transformation have important significance for other coastal areas. The results of this study can encourage local governments to respect ecology and culture while carrying out economic construction and give priority to protecting the coastal
ecosystem to develop a healthy blue economy. Although we collected as many documents as we could and used triangulation to confirm the correctness of the data, this study was still limited by a lack of cultural and historical materials and the loss of first-hand knowledge due to aging. For example, the spatial structure of the Jimei Peninsula still needs more documents for more precise spatial localization. In addition, whether the transformation of the Dashe settlement into a cultural and creative settlement in recent years will promote the revival of fishery literature and art is a topic worthy of continued attention in the future.

Supplementary Materials: The following supporting information can be downloaded at: https://www.mdpi.com/article/10.3390/w16060913/s1, Table S1: Interview summary; Table S2: Changes in Coastal Consumption Patterns.

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