Tracing the Chinese Settlement in Pekalongan: Reading Changes in the Past for Concepting Future Development

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Abstract. As a city in the north coast of Java, Pekalongan was once a port city for Chinese traders who then settled there and built a settlement. This settlement today has been progressed to a certain point where it shows different characteristics from its original situation. However, this paper examines how and what changes have occurred in Chinese settlement in Pekalongan only from 2012 to 2018. From the identification of changes, ideas are built on how its future development should be. By using a comparative study, the research shows that besides minor changes on demography, the Chinese settlement area has been underdeveloped for some years. Thus, this area requires a concept or development guideline for its sustainable future. One of which could be carried out by utilizing its economic potential as a Batik city.

1. Introduction

The progression and changes in urban area are noticeably fast. In areas where trade, commercial, and services are centered, those changes are acceptable and even necessary. However, problems emerge when those changes also occur in historical or heritage area. As evidence has shown, Chinese settlement in Indonesia has mostly developed into a business center where changes are inevitable. This phenomenon is interesting because generally, Chinese houses have a more permanent form and space.

In Pekalongan City, the Chinatown area is an area that is inseparable from the history of the city. This area began to grow around the 18th century when traders from China came to Nusantara. These traders then stopped around the Loji River and settled in the surrounding empty lands to form their settlements. With the increase in trading activity there, other traders from China began arriving. The Chinatown area extended and gave rise to various types of buildings, including courtyard houses, row houses, shrines, and shophouses [8]. Chinatowns in Pekalongan City are currently experiencing many changes. In the residential area, houses have become vacant and abandoned buildings.

Meanwhile, in the trading area, shophouses become shops or turn into modern buildings far from the character of the context. These changes have an impact not only on the building but also on the character of the environment. Changes involving demolition certainly require a large amount of money, while abandoning them can lead to abandoned areas that are even at risk of becoming slums that have social impacts on the city. The purpose of this study was to understand how the changes have occurred in the Chinatown in Pekalongan, what factors may have encouraged those changes, and how should the future development manage the changes.
2. Literature Review
The Nara Seminar [2] identified some major issues faced today in the conservation of historic cities in Asia as:

a. Degradation in the quality of life of the inhabitants as a result of excessive pressures due to rapid urbanization;
b. Depopulation of small and secondary cities weakening their social and economic viability;
c. Change in the way of life which has led to new requirements in housing and services which adversely affect the conservation and maintenance of the historic fabric;
d. Focus on the conservation of single monuments, without due consideration of the sites, areas and other elements of the historic environment, and their settings, which together go to make up the distinctive character of the city;
e. Over-emphasis on catering for the demands of tourism rather than reinforcing the cultural identity of the city and maintaining, and where necessary providing, local services for the inhabitants;
f. Neglect of the inter-relationships between the historic areas, the broader urban context, and the rural hinterland.

Another issue regarding problems in historic cities was mentioned by [9] who argued that by the 1970s, the desire for "modernization" by governments in most developing countries often led them to favor new and modern housing instead of old or traditional ones. The phenomenon led the old housing in the historic area to a state of physical deterioration. Besides, changes were also caused by the rapid growth in the size of most cities and the rapid transformation of their city economics. These changes came in the form of a whole different spatial pattern of land uses and activities. Inner cities became valuable for land uses other than housing, and economic pressures led to further elimination of the older housing stock.

According to [3] change is inevitable, and the nature and speed of change continue to increase, especially with technological developments. Building adaptation is basically about how a building can respond to changing needs. Thus, adaptation is an action associated with regulating and controlling change in the context of physical functions and properties in a building. Such changes can be divided into 3 (three) scales, namely:

a. Small scale: low-level changes that usually include only minor repairs to building facades, improving furniture quality, and small-scale expansion, for example: replacing tiles, doors, adding terraces/balconies, etc.
b. Medium scale: adaptations carried out include changes in building functions, significant changes to the surface and building elements, renewal of utilities, and modification of structures, for example, vertical expansion of buildings, changes from houses to offices or vice versa, removal/addition of walls, etc.
c. Large scale: drastic changes including remodeling work, reconstruction of new buildings behind the main wall, to large-scale changes in building structures to expand/reduce the area of the building concerning its capacity or function, for example, ruins restoration, strengthening facades.

In terms of changes to buildings, Douglas also divided building changes into several categories: changes in function, changes in size, and changes in performance. Duffy [3] mentions that building adaptation is a process carried out in response to historical, temporal, and physical contexts.

Transformation and change are ways that a building can survive [6]. The environment of the building is always changing. Even buildings that look permanent will experience changes by adjusting to the needs of its users. The user will make necessary transformations based on his preferences, ensuring that those changes will suit his choice. From the user's point of view, using buildings means training several controls. In this case, "use" is not a static or passive thing. Usability signifies the beginning and end of each transformation action. Understanding the intrinsic capacity of a building to adapt and transform is the key to the sustainability of the building.
One of the critical issues in sustainability is the development of a design strategy that will transform non-flexible building structures into dynamic and flexible structures, in which parts will be easily disassembled for later reuse or recycle. Decomposed structures are characterized by the three dimensions of transformation, namely: spatial transformation, structural transformation, and material transformation [4]. In this research, changes and transformations observed were focused on the neighborhood and building level. On the neighborhood level, they are observed through spatial programming and use. Meanwhile, changes in building level were observed from its use and visible physical alterations.

3. Research Methodology

This research is in intersubjective paradigm [5] Qualitative research was chosen to gain an understanding of what changes have occurred in 6 years and what may cause them. Since the research is taking a specific case to be studied, it is also categorized as qualitative case study.

3.1. Case Study

Qualitative case study research as a type of research that has shared qualities with other qualitative research, such as the search for meanings and understanding, the researcher as the primary instrument of data collection and analysis, an inductive investigative strategy, and the end product being richly descriptive [7]. The difference, however, is in the qualities that case study itself is an in-depth description and analysis of a bounded system. The emphasis lies on the bounded system where researcher fence what were studied and in what aspects as well as whatnots. This research limits the object on Chinese settlement in Pekalongan within 2012-2018 with the studied aspect mentioned previously.

3.2. Sampling

This research used purposive sampling by creating some criteria beforehand. The samples taken were based on the considerations regarding the location, the availability of Chinese houses and buildings, the observability, and its existence during the observed period. The site of this research took place in Chinese settlement in Pekalongan. The chosen area are two corridors, namely Jalan Belimbing and Jalan Hasanudin. The blue line shows the whole Chinese settlement area, and the red line shows the observed corridors (Figure 1).

![Figure 1](image.png)

The observed area has two types of buildings as a characteristic of each. In Jalan Belimbing, the dominant one is residential building (house, detached and semi-detached) while in Jalan Hasanudin, the shophouse type is commonly found. From an early observation in 2017, it is found that Jalan Belimbing has more vacant and unused buildings than Jalan Hasanudin. It is not unexpected since Jalan Hasanudin is an active trade and business area while Jalan Belimbing is a residential one. However, things seemingly change when the primary market caught on fire in early February 2018. The market traders and their activities have been temporarily relocated to Jalan Belimbing until an undetermined time.

3.3. Data sources and collection
This research used both primary and secondary data. The primary ones were all direct observation of the neighborhood and buildings in 2012, 2017, and 2018, including photographs, interviews, and field observation. The secondary data included the statistics and demographic information collected from the related bureaus.

3.4. Data analysis
The data were analyzed by making description of each comparison to find the changes, alterations, or transformations on the neighborhood and the building. Factors and backgrounds related to those changes were described, then interpreted accordingly.

4. Results and Findings

4.1. The social, cultural, and economic condition in Pekalongan today
Social, cultural, and economic background in Pekalongan served as a background of the phenomena that occurred in the studied area. Based on data collected from the Statistic Bureau (BPS), the density in Pekalongan from 2006 to 2015 has increased each year. In 2006, the density was 5933 people/km² while in 2015 it reached 6554 people/km² (Figure 2).

![Figure 2 Density in Pekalongan 2006-2015](image)

The population density data above shows that Pekalongan is not an abandoned city because the population keeps increasing. This phenomenon is also supported by data showing that the population in each sub-district in Pekalongan City (Figure 3). However, this is paradoxical when compared to the facts found in the field which show the neglect of the Chinatown area to become an abandoned area and have uninhibited vacant buildings.

![Figure 3 Population growth in Pekalongan per sub-district](image)
The graph above also shows Kecamatan Pekalongan Timur, where the study location is experiencing an increase in the population in the range of 2014-2016, although the increase is not as many as other sub-districts. Of the two data relating to this population density, it can be said that the population is not a factor behind the neglect of the Chinese settlement area in Pekalongan. One factor that can affect a region is the economic activities that take place in it. In Pekalongan, the processing industry is the second largest business sector after large and retail trade, which is 32.64% of all business sectors (BPS, 2016). From this processing industry, the largest industrial sub-category is the textile and apparel industry, reaching 77% of the entire processing industry. This data supports the image of Pekalongan as batik city. Analysis of the 2016 Economic Census Listing Results also mentioned the textile industry in Pekalongan is dominated by the manufacture of batik cloth with its center in South Pekalongan sub-district and West Pekalongan sub-district. The apparel industry, which is included in this subcategory also deals with batik. Industrial activities in this sub-category include sewing batik cloth into hem, blouses, pajamas, and so on (Figure 4).

4.2. The current condition of the neighborhood
The sudden change from residential street to market has caused some problems in the environment in Jalan Belimbing. This area was not prepared for such activity. Thus, the local water channel has begun to stink, the waste from the market activity was not handled appropriately, and the activity itself has caused some traffic. Those changes may bring some concern about the change in privacy and practices of everyday life of the dwellers.

4.3. Changes and transformations

a. Neighborhood
In 2012, the neighborhood in Jalan Belimbing was considered as an area with low activity. This area had been more active in 2017 when several street hawkers and food stalls opened although the activities were still considered as low. There were small activities besides these businesses. In 2018, however, after the fire that affected the central market, this area has become vigorous since early morning until the afternoon because the trading activities moved to this area altogether (Figure 5).

Figure 4 Processing industry and its sub-category in Pekalongan

Figure 5 The neighborhood condition in Jalan Belimbing on three different observation period
The changes occurred in 2018 was considered by some inhabitants, mostly the seniors, as a good thing. Before the market moved to this area, they feel the lack of liveliness and social connections, and as a result, they tend to stay inside their house. Since the moving, they began to have a reason to go outside, take a seat, and talk to someone who opens a stall in front of their house or their porch. Some inhabitants did not share the same feelings. Although they agreed that more liveliness was pleasant to this area, they also recollected that there were intrusion and interference for their privacy as well as inconveniences on their daily life.

A different situation was observed in Jalan Hasanudin. As the primary business corridor in Pekalongan City, this area never lost its vigor. It was also less affected by the fire than Jalan Belimbing. From the interviews with the buildings’ users/owners, the changes in this corridor were mostly related to the users. Most buildings have been used or owned by generations of a family. However, some vacant buildings which were not inhabited by the owner tend to have a different tenant who only rent the building for a short period. Thus, the building function was also adjusted to the tenant. It is possible for a building in Jalan Hasanudin to change from a shop into a house, then into a warehouse, and changed back to a house. This phenomenon shows that in an area where changes are fast, a building should be more flexible to be adjusted and adapted.

b. Buildings

Buildings in the Chinatown were depended on the use and function defined by their users. Whenever the user/owner require to fulfill a function, an alteration will take place. Houses can change into shop or restaurants. A previously neglected warehouse or vacant building can be redeveloped into a house. A once inhabited building may lose its user and be sold or divided into two buildings with different functions. Minor changes can also occur, such as on the exterior color, the window and door type, the gate, the materials, etc.

Changes in function are not necessarily followed by changes in building forms, vice versa. A new function and use can occupy the present form when the requirement and the needs are fulfilled. Changes in building forms sometimes occur when the user believes that some improvement must be made (reconditioning, style update, etc.) (Table 1).
| Location       | 2012                                               | 2017 and/or 2018 |
|----------------|----------------------------------------------------|------------------|
| Jalan Belimbing | ![Image](image1.png)                                 | ![Image](image2.png) |
|                | This building is a house. It has no noticeable   |                  |
|                | changes in its function or form during the       |                  |
|                | observations in 2012-2018.                       |                  |
| Jalan Belimbing | ![Image](image3.png)                                 | ![Image](image4.png) |
|                | In 2012, this building was vacant. It was        |                  |
|                | unclear whether it was used as a warehouse or    |                  |
|                | remained empty. However, in 2017 it has been     |                  |
|                | renovated, and the condition was the same in     |                  |
|                | 2018.                                             |                  |
| Jalan Belimbing | ![Image](image5.png)                                 | ![Image](image6.png) |
|                | This building was a house in 2012. Since 2017,    |                  |
|                | this has been used as a storage for the food     |                  |
|                | stall at the front, and no further change was    |                  |
|                | observed in 2018. The building form itself had   |                  |
|                | no visible change regarding its new function.   |                  |
| Location         | 2012                                                                 | 2017 and/or 2018 |
|------------------|----------------------------------------------------------------------|------------------|
| Jalan Belimbing  | In 2012 this building was a house with a shop. In 2017, this building was divided into two. One part was sold while the other was used as a food stall. | ![Image](image1)   |
|                  | (2017)                                                               | (2018)           |
| Jalan Hasanudin  | This shophouse had no visible changes in its façade and form. It was still used as a house. | ![Image](image2)   |
|                  | (2017)                                                               | (2018)           |
| Jalan Hasanudin  | This shophouse had no visible changes in its façade and form. It was still used as a shop. However, it was unclear whether the shop was still operating or not. | ![Image](image3)   |
|                  | (2018)                                                               |                  |
| Jalan Hasanudin  | This shophouse had no visible changes in its façade and form. The building on the left remained vacant while the right one has the same function and user from 2012 to 2018. | ![Image](image4)   |
|                  | (2017)                                                               | (2018)           |
5. Discussion
Learning from the statistics on the demography of Pekalongan, the population can be ruled out from the causal factor of this area inactivity and vacancy. In several cases, depopulation caused an old settlement neglected and obsolete. In this case, the number of populations in the sub-district where the research area is located is increasing, but the area is as vacant (if not more vacant) as six years ago. There should be a determining factor in how an old settlement area can be neglected and underutilized. Another probability is the rigid form and structure of the buildings itself. It may take a lot of virtue to have a good building adaptation that suits the current need of the owner/user.

It is commonly said that a good question is half an answer. In Pekalongan case, a good problem is probably half an answer regarding its adaptation. From the findings during the fieldwork, at least two issues, as well as potential, has been identified.

5.1. Buildings and its surrounding should be adapted to enhance economic activities in Pekalongan
Economic activity has long believed to be the leading accelerator to urban renewal. Pekalongan has already had its branding as City of Batik that can be used as a starting point. In terms of open building, the re-planning may start from the most collective level (land-use level) to the more individual level (infill level). Rethinking an old settlement area as a new center of batik making activity may require changes in land use regulation. In tissue level, an adjustment in the public area may also change when a new activity is being introduced. For the support level, adapted buildings should be classified in terms of its typology, its building part, and its versatility. It is necessary because this level is possibly the most affected one [1].

5.2. The area should be able to serve as a flexible space
A city rarely has mitigation space flexible enough for such accidental events as fire, disaster, etc. As mentioned previously, fire in the central market of Pekalongan has caused changes in the Chinese settlement area. The area was unprepared to be used as a trade area: the road is not wide enough it caused traffic, the drainage is not ready for additional volume, the waste management is not prepared it causes a trash pile in some spots. If we rethink this case in open building terms, this area can be adapted and planned as a flexible space by utilizing unoccupied buildings or some part of the building. When there’s no unexpected event, it is a private space where the owner has freedom on using their space. However, when needed, space is ready to be used as something else. Openness in design is an integral part of planning such places.

6. Conclusion
The findings in the field survey indicate that the building changed to survive. Changes that appear in these buildings include changes in physical form and function. As mentioned in the literature study, a historic area that experienced physical degradation resulted from changes in lifestyle and needs that could no longer be fulfilled. In the end, buildings were adapted to meet new requirements and uses. Changes made to buildings in the Chinatown area tend to be in the medium to large scale, which is marked by changes in facades, modification of structures, the addition of walls, division of buildings, and changes in function.

Regarding the causes of the physical degradation of the Chinatown environment, from the field survey and secondary data collection that has been carried out, it is known that the population is ruled out as a factor. Therefore, in the development of an area with an open building approach, the factors that will influence are the reading of the potential of the region and buildings in the future. One of them is by considering the developing economic potential in Pekalongan. Also, the fact that Pekalongan does not have space that can be utilized to anticipate such an event as market fires also show that a city needs more flexible spaces.

In the aspect of buildings in Chinatown, a common form of change made by building owners and users is to transform the building from residential to commercial buildings and vice versa. Adaptation carried out is generally related to the facade of the building while the main structures or roof are retained.
Even so, several buildings have undergone a total change and lost their distinctiveness as Chinese-style houses.

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