A Post-Occupancy Evaluation Study of Traditional Shopping Street Reconstruction and Renovation — A Case Study of Sanfong Central Street in Kaohsiung, Taiwan

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Abstract: San Feng Zhong Jie (Sanfong Central Street) is located at the area between the north of Jianguo 3rd Road and the south of Trunk Railway Line in Taiwan. In order to let the whole Sanfong Central Street have a more systematic management, Kaohsiung City Government and Sanfong Business Promotion Association promoted a reconstruction and renovation project of the business district. One of the measures was to apply from the Ministry of Economic Affairs for professional operation techniques for Sanfong Central Street. Through professional counseling, the management system of the stores on the old street was strengthened; the street space was improved; drainage system was well-planned; sun and rain canopy was built; more exquisite and consistent signboards of stores were hung; and the street was paved with beautiful granite. As a result, and overall image of the business district was established. Furthermore, the quality of consumption was improved. Today Sanfong Central Street has become a commercial street with both cultural heritage and tourism value, which have increased the general business opportunities of the street. Several years after the renovation, just like any other plans, a gap is found between the integrated development and practical utilization of the street. There must be reexamination and evaluation made for subsequent utilization and re-positioning of the street. As for the effects appeared after renovation and the unexpected gap created after utilization upon completion of the original renovation plan, we should evaluate and explore the improvement methods, and after confirmation, reevaluate the substantial benefits. All these issues are the research area of the paper.

Key words: integrated development, evaluation of utilization

Introduction
Located in Kaohsiung City, Sanfong Central Street is a collection and distribution center of large-scale purchases and sales of dried food, mainly wholesale and retail of a great variety of dried food. Ever since December 1999, Sanfong Central Street started accepting “Guidance for Business District Reconstruction and Renovation” offered by Department of Commerce, Ministry of Economic Affairs. In the aspect of hardware improvement, paving of ground, erection of entrance image, construction of rain canopy, light arrangement, and unified and exquisite signboards of stores were completed in 2000. After operation and utilization for over a decade, the facilities appeared to be damaged and old, and the environment became a little bit messy, planning and evaluation have to be done. Meanwhile, when the aspect of software is considered in times of evaluation, renovation also has to be made and supplemented to achieve reconstruction of the environment. Furthermore, through this study
and evaluation, the environment can become improved, and commercial behaviors can be more prosperous.

**Research methods and procedure**

**Questionnaire survey method**

Regarding the research method of the study, questionnaire survey and statistical analysis are employed:

**Interviews of store owners:** Understand the current utilization of stores before promotion of the Reconstruction Project and their environmental needs. Synthesize the actual environmental improvement items of store managers and store owners before the Project.

**Questionnaire survey:** Collect survey information of the degree of store and consumer satisfaction with the improved environmental facilities, and make quantitative statistics and analysis of different data.

**Design of questionnaire:** The questionnaire is divided into three parts. Part 1 is about satisfaction with façade system, building’s environment and public facilities. Part 2 is about viewpoints of stores before and after change of the environment. Part 3 is about the basic information of interviewees, which are divided into stores and consumers.
**Field observation**

<table>
<thead>
<tr>
<th>Before improvement</th>
<th>After improvement</th>
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1. Elements of the street were messy and disordered.
2. Environmental quality of the shopping street was poor

1. Beautiful street scene, and pleasant shopping environment.
2. Continuous arch-shaped roof frame extended forward, increasing the fun of shopping and effect of direction guiding.

6. The space of shopping street was improved. The sun and rain canopy was in transparent structure, improving the dark feeling the street gave, making the street space look taller, and increasing a pleasant feeling during shopping.
1. Store products needed to be shielded from sun and rain, so that store owners stretched their canopies without limit, making the environment look dark and low.

2. The product display occupied road surface and lowered consumers’ pleasant feeling during shopping.

1. The messy installation of canopies was improved, making the street space look taller, and increasing a pleasant feeling during shopping and walking.

2. The product display area is fixed by facilities, making the shopping route widened, more pleasant and tidier, and increasing the capacity for visitors.

### Issue of Reconstruction and Renovation Needs from the Stores of Sanfong Central Street

<table>
<thead>
<tr>
<th>Rearranged contents of the issue of needs for store reconstruction and renovation on Sanfong Central Street</th>
<th>Main improvement for issue of needs</th>
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<tbody>
<tr>
<td>1 The facade of shopping street has to be built with an effect of landmark for the business district. The logo of shopping street has to possess characteristics of the shopping street.</td>
<td>Image of the entrance archway, effect of landmark</td>
</tr>
<tr>
<td>2 For the sake of easier inspection, reparation and maintenance, the canopy materials should be practical and durable.</td>
<td>Durable, practical, easy for maintenance</td>
</tr>
<tr>
<td>3 Integrating the lighting of shopping street and the environmental images of the street district.</td>
<td>Creation of shopping atmosphere</td>
</tr>
<tr>
<td>4 Paving of ground should meet the requirements of slip resistance, beauty, safety of walking and flatness.</td>
<td>Slip-resistant stone materials, matched colors</td>
</tr>
<tr>
<td>5 Outlook design, advertisements and signboards of stores should be unified, and meet the style of sopping street.</td>
<td>Exquisite and refined work</td>
</tr>
<tr>
<td>6 Establishment of facilities for good-image advertisements of shopping street</td>
<td>Leave space for advertisements</td>
</tr>
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<td>7 Street extension around the shopping street should match with the images nearby.</td>
<td>Street extension effect</td>
</tr>
<tr>
<td>8 Build Mass Rapid Transit station, car park, bus stop and shuttle bus lines in the places around shopping street.</td>
<td>Solution of car parking problem</td>
</tr>
<tr>
<td>9 Hold marketing advertisements and promotion activities to attract more visitors.</td>
<td>Attraction of visitors</td>
</tr>
</tbody>
</table>
Method of interview

The method of interview reflects the situation of the shopping street. The record of interview is made as follows:

Gradual decline of traditional shopping street: Due to successive appearance of large-size shopping malls, such as hypermarkets, fresh food supermarkets … all of which were of similar nature, consumers gradually did not go shopping at traditional sales market, but changed to go shopping at large shopping malls with more pleasant environment and better facilities. And Sanfong Central Street, due to its messy environment, narrowness of street, and occupation of road area by some store owners for product display, gradually lost the shopping street’s advantage of “attractive to customer.”

The store owners expressed in the interviews that the maintenance, parking space, signboards and advertisements, characteristics of shopping street, and ventilation had to be strengthened or further reconstructed after improvement. Some store owners thought that under the circumstances that large shopping malls were established everywhere, the shopping street needed not only reconstruction, but also further aggressive actions. In the interviews with consumers, most of them thought that although the effects of reconstruction were not bad, there was insufficiency to be strengthened; and some consumers thought that they were dissatisfied with the reconstruction, but their dissatisfaction was at an acceptable extent, and believed that the cleanliness, characteristics and safety should be further strengthened and improved.

In the process of interviews, it was known that the store owners were dissatisfied with the signboards after improvement because they were mounted at wrong places, making consumers find the wrong stores when searching. Therefore, many store owners hoped that signboards could be further strengthened and improved.

Problem of “night lighting” was found from the field observation. Regarding the main effect of “bright, warm and pleasant lighting at night” out of night lighting facilities, the
degree of satisfaction was higher than the issue of needs by 0.5, and other items of the related needs also obviously appeared to have satisfactory effect. Therefore, through field observation, it was known that night lighting achieved a certain effect in both creation of atmosphere and beautification of environment. But in practical use, the foldable sun canopy was not folded up at night after daytime use, creating a destructive element to the lighting effect at night, obstructing the visual effect of the beautiful dome-shaped roof, and decreasing an opportunity for the environmental atmosphere to promote. Over this problem, several store owners were asked about the situation of the use. They expressed that it was very inconvenient for them to fold up and out the canopy.

Although “night lighting” has a rather high satisfaction, and its components and the facility itself are of no problem at all, only the use of the foldable sun canopy has weakened the night lighting effect. Therefore, users not only should know the importance of facility improvement, but also should fulfill their responsibilities in maintenance and management of facilities. Only with their cooperation can quality of the environment be completely enhanced

Conclusions and suggestions

The overall statistical results are divided into two aspects: stores and consumers. And the aspect of stores is also divided into degree of satisfaction with environmental improvement and suggestion of outlook change; and so is the aspect of consumers. Focusing on the aspect of stores, the degree of satisfaction with environmental improvement is 6.5 in average. As to the degree of satisfaction with outlook change in future (Figure 3-3-1 ~ Figure 3-3-3), there are more diverse opinions among store owners. Anyway they all agree that the change of outlook and environment can increase economic effects. But they have no clear opinions on the messy, congested and bustling conditions of the shopping street. As long as there are measures that can facilitate economic effects and commercial activities, all the store owners support and agree to them.

According to the interviews at the site and the questionnaire results, it is known that both stores and consumers are satisfied with the paving of ground and unification of signboards. But there appear two extremes in their viewpoints on canopy. From the viewpoints of consumers, the average degree of their satisfaction with the overall environment is up to 60%. Of course consumers hope to see a bright, plain, safe and pleasant shopping environment. Currently, the degree of consumer satisfaction almost reaches 60%. But from the effective statistical data, we can still feel that consumers hope to see a brighter, more pleasant and safer shopping environment. Just because of this, consumers hold an optimistic attitude towards the change of the environment in future. Such an attitude of consumers towards the change of outlook and environment can be clearly seen from the statistical chart. Although Sanfong Central Street has undergone an overall reconstruction and change, and created a featured business district, both store owners and consumers expect that an adjustment or change for one more time can further provide the original shopping street with more convenient, brighter,
safer and more pleasant shopping environment. Meanwhile, they hope that some shortcomings appeared in the reconstruction for the first time can be improved, and want to see a more perfect shopping environment on Sanfong Central Street.

In the Reconstruction Project, the ground paving system will be flat, durable, and attached with water drainage facility. For the items with high expectation and low satisfaction, there appears a gap between supply and demand over the space utilization expected by the stores and the improvement measures proposed by the government departments. Right now there is still not a sound restriction standard and mechanism for facility utilization, maintenance and management on the shopping street. All facility problems are eliminated or collectively repaired by store owners themselves or shopping street managers.

Suggestions
Consumers’ suggestions for improvement of the messy and congested environment and the narrow passage are readjusted to serve as the main purposes of this study. According to the statistical data shown in, poor lighting and insufficient activities at the entrance should also be improved and strengthened again. As to the part of stores, it can be clearly seen from that sun canopy and walking route of pedestrians have to be further improved. As found in the interviews at the site and field observation, the problems of sun canopy are its poor ventilation and heat dissipation, creating sultriness in the air and unpleasant feeling to people there. In addition, rainwater comes in from both sides of the sun canopy, which totally has no effect of shield from rainwater. Therefore, it is suggested that the sun canopy’s effect of shield from rain has to be reevaluated, and the overall ventilation of the shopping street has to be improved.