

Transformation and upgrade of chinese commercial specialty streets study based on consumption demand multi-factor analysis

ZHANGYUE², HAN MINGQING³, YING LIANXING⁴

Abstract. Under the background of Chinese cities' rapid internationalization and strong impact of Internet commerce, China's commercial specialty streets needs transformation and upgrade urgently for further development. Through benchmarking the successful experiences of well-known foreign commercial streets, this article proposed a transformation and upgrade strategy using multi-factor analysis, focused on differential market positioning, open business format and creating multi-space from fours aspects of infrastructures, transportation convenience, multi-business format and space and environment characteristics to maintain commercial streets' vitality and charm for the consumers.

Key words. Internationalization, Internet, Commercial Specialty Streets, Transformation and Upgrading, Strategies.

1. Questions put forward

Throughout the world, big cities in many countries have one or several famous commercial streets. These streets are the display windows of the city images, as well as city centers for recreation, shopping, entertainment and spending for both local residents and tourists. Moreover, they are the symbols of vigor representing the economic development of the city. Commercial specialty streets are derived from commercial streets, from which the function, space and business format are expanded

¹Acknowledgement - This article summaries the work of the project of Hangzhou Science and Technology Bureau of soft science, "The research of transformation and upgrade-work countermeasure of specialty commercial streets in Hangzhou" (No20140834M42). The authors would like to thank Chen Wei, deputy secretary of Hangzhou government for her guidance.

²Workshop 1 - Zhejiang University City College; e-mail: zhangyue@zucc.edu.cn

³Workshop 2 - Zhejiang University City College; Corresponding author, e-mail: hanmq@zucc.edu.cn

⁴Workshop 3 - Hangzhou Formulation center of urban palnning; e-mail: 939027044@qq.com

and extended. When the proportion of dominant businesses such as market, service, recreation or cultural function is above 40%, the commercial characteristic street blocks can meet the diverse needs of urban residents and tourists such as shopping, leisure, catering and communication, so as to form distinct characteristic theme street blocks. Therefore, commercial specialty streets are prosperous commercial streets made up with numerous shops, restaurants and service shops laying out under a certain structure and proportion rules. They are the epitome and essence of the urban commerce, and a multi-functional collective body with various business types and forms[1]. In 1995, the first B2C E-commercial company, Amazon, was founded by Jeff Bezos. Since then the E-commerce business model has changed the consumers' spending habit and buying behavior, and at the same time fiercely shocked the traditional commercial specialty streets[2]. According to official data released by Alibaba, by 2016, "double eleven" achieved a turnover of 120 billion 700 million yuan. Fig.1 shows the amazing speed of e-commerce development since 2009. A lot of data has shown the rapid decline of customs and turnover because of their own industrial solidification, obsolete function, orientation lost which even make some of them have difficulty in keeping the business. Hangzhou is the earliest and fastest developing area of electric business. Taking the characteristic commercial district of the city as an example, the business revenue from 11 billion 549 million yuan in 2004 to 84 billion 521 million yuan in 2012, the tax revenue increased from 45 million 400 thousand yuan in 2004 to 1 billion 128 million 170 thousand yuan in 2012. Since 2012, due to the impact of new business formats (e-commerce and so on), the operating income of the characteristic street has declined, and the business income in 2015 is only 69 billion 207 million yuan, and the tax revenue is 1 billion 154 million 270 thousand yuan. (as shown in Fig.2). In a word, how to transform traditional commercial streets has become a global hotspot issue [3-9]. By examining international famous commercial streets which are still vigorous today when E-commerce is widely adopted, some prominent features can be identified:

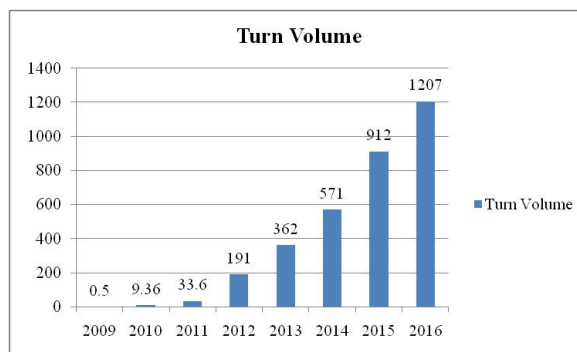


Fig. 1. The turn volume of e-commerce from 2009 to 2015 Data source: Ali Institute "Internet plus" Research Report"

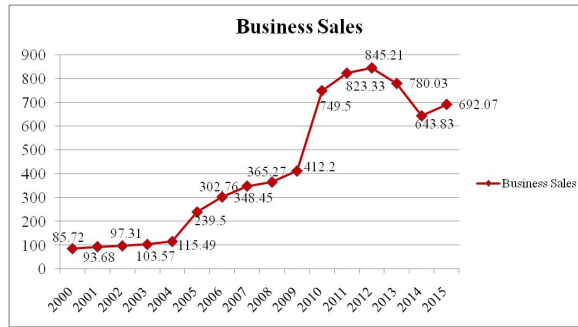


Fig. 2. The business sales of the characteristic commercial district 2000 to 2015 in Hangzhou Data source: Hangzhou City Trade Bureau, Zhejiang Gongshang University "ten years brilliant - Hangzhou commercial characteristic block development report (2001-2011)", 2012

1.1. Unique history and cultural background

All the famous foreign commercial streets have unique history and cultural background as well as historical architecture or special architectural style. They are good at integrating history and culture into modern life and urban activities. This kind of cultural specialty which is profound and pluralistic, is the inherent spirit for the streets' long term development. For example, the Fifth Avenue in New York has the places like Metropolitan Museum of Art, Rockefeller Art Center, New York University, Greenwich Village, etc.. It is called Art Gallery Avenue. Avenue des Champs – Elysées in Paris has well-preserved historical buildings. Commercial buildings on both sides reflect the essence of French classic architecture. It integrates commercial and cultural aspects closely and is called the most beautiful street in the world[3].

1.2. Pluralistic function and business model

A look at the world's famous commercial streets shows that the main businesses are shopping, catering, recreation, entertainment, hotels and services. For example, department store and brand monopoly account for about 55% on the Fifth Avenue in New York and about 64% on Avenue des Champs – Elysées in Paris. The pluralistic structure of business format can both satisfy people's demand for shopping and the demand for spiritual culture and vocation leisure. The streets are both the shopping and touring place for tourists and recreational and entertainment place for local residents. Take Avenue des Champs – Elysées for example, it is 1.9 kilometers long, and divided into functional sections such as cultural block and business tourism block, and has characteristics like function subsection and compounding, which promote clustering effect of the area, and also strengthen the radiation power and influence of the street.

1.3. Accessibility

The success of commercial streets in New York, London and Tokyo comes from the combination of multiple rail transit lines and ground public transit system which can make a vertical traffic transit system to assure good accessibility [9]. It can also bring sufficient custom sources for the prosperous of business. For example, there are 50 buses driving on the Oxford Street per hour with four metro lines connected to 5 bus routes which can foreshadow business prosperity.

1.4. Humanized street design

A specialty commercial street is an open space which is open to the public. The outer-side space is the important part of urban public space system and places in the block that can hold various social activities. The famous foreign commercial streets pay attention to human needs oriented design for streets. For example, Avenue des Champs – Elysées broadened the sidewalk and added outdoor cafe which become the part of main street landscape. Oxford Street in London added pedestrian-first crosses and resting island for tourists which makes the shopping environment more humanized.

1.5. The effect of leading the districts to synergetic development

Development of some famous commercial streets in the world also bring along the synergetic development of the areas around. For example, the branch roads around the Fifth Avenue in New York and Avenue des Champs – Elysées in Paris complemented them in terms of function, which make themselves special and unique streets with characteristics like catering, recreation and entertainment and arts. The back streets of Ginza Avenue in Tokyo centralized worldwide flavor catering, night clubs, bars and cafes.

2. Problems diagnosed within the construction and management of Chinese specialty commercial streets

Commercial streets represent the vigor of urban economic activities. Compared with foreign famous commercial streets, the specialty commercial streets in China went through a process that is from spontaneous to self-conscious, from extensive management to refine guidance and promotion. With the development of Internet, problems and "discomfort" show up:

2.1. From the view of business format

Most of the specialty commercial streets in China are located in the urban center. They are based on the commercial districts that were spontaneous formed in the "bottom to top" way. Then they grew up gradually through urban regeneration in

the "top to bottom" way. Some of them have similar function and single business format. Therefore, the vigor declined day by day, especially in the function of recreation, catering, leisure which brings lots of inconvenience to consumers and tourists, especially for international tourists[9].

2.2. From the view of transportation function and public space

Many commercial streets are based on urban roads, and the branches and alleys in the streets are also the important parts of the block traffic[10]. On one hand, the shortage of the public parking facilities in commercial street area in our country, leading to motor vehicles and non motor vehicles occupied roadside and public space to park which is a serious phenomenon; on the other hand, too many vehicles flowing into the specialty commercial streets can increase the conflict between vehicle and walking activities which can harm the quality of public space. As a result of the lack of pleasant and comfortable stay space and the appropriate rest facilities, the pedestrians and tourists have almost no "standing room" in the whole block, only a passing passer-by.

2.3. From the view of the excavation and exhibition of cultural features

The existing specialty commercial streets take the excavation of local historical culture and folk custom. However, historical and cultural relics are scattered, hidden in the streets. In addition, the integration of various intangible cultural heritage, such as folk arts and crafts, is relatively weak, and has not yet formed a good interactive integrating with the neighborhood environment.

2.4. From the point of view of international standard services and regulatory management

In the face of increasing international tourists, the quality of service personnel, service facilities and standards of urban management need to be connected to international standards. But the foreign language service environment of our country's existing specialty commercial streets need to be strengthened, such as the production of foreign language brochure, the foundation of foreign language website, logo signs, guide map regulation; the foundation of foreign tourists service stations and foreign language training for merchants.

3. Limiting Factor Model Analysis for the Construction and Development of Specialty Commercial Streets

The survey shows that the existing commercial streets in China are commercial agglomeration areas growing along with the development of the city. Most of them are the "bottom-up" business model generated by the agglomeration effect of "shops crowded the market". This pattern of relying on neighborhoods is closer to the lives of

residents, and has more vitality in management and development. With the development of the city and the continuous improvement of people's consumption demand, the commercial street has changed to multiple functions, such as shopping, leisure, entertainment, catering and tourism. In the new round of transforming development process of specialty commercial streets, it is urgently required that relevant government departments need to introduce favorable policies, to build a service platform, and to provide a good policy environment. Even more, they need to pay attention to plan business format space and consumption space during urban organic renewal and neighborhood construction in order to have a better development and retrieve a brilliant commercial street.

The model based on sample survey analysis of 500 questionnaires randomly distributed to consumers in the specialty commercial streets shows that the five major factors affecting the attractiveness of specialty commercial streets are the scale of commercial streets and customer constitution (X1), accessibility (X2), Business diversity (X3), cultural heritage (X4) and environment (X5), which were then analyzed by the method of multivariate factor analysis, as shown in Fig.3.

$$X_i = \sum_{j=1}^n K_j X_{ij} \quad (1)$$

X_i is the i th main factor of consumer concern; X_{ij} is the consumer's scoring of the j sub-factor; K_j is the weight of this sub-item.

3.1. Considerable size and quantity of tourists

There are three parts in the tourist market of the specialty streets, that is, local residents, neighborhoods, business people and tourists from all over the country. According to the survey statistics, a suitable distance of the commercial street for the local customers is within 1 kilometer, which accounts for about 50% of the total; and 90% of which should be willing to shop and spend in the specialty commercial streets.

3.2. Convenient traffic conditions

According to the survey, as shown in Fig.4, the main mode of transportation for customs is by public transportation with the travelling time of 15-30 minutes, which can reach more than 60% of the total passengers. Therefore, to facilitate the customs to quickly and safely arrive at the streets, first of all, the streets should be located in transportation-convenient area with bus stations and metro stations near the entrance of the street which are within the distance of 100 meters. Secondly, we should build a comfortable, safe and casual shopping environment in the neighborhood, and have a network of walking space, so we need to build a safe cross street system to cross the traffic main road.

3.3. There must be diversified business formats

A simple business function has been unable to meet the needs of modern life and consumers. To meet the multi-level needs of consumers and tourists, more emphasis needs to be put on compound function formats and implantation of experience function. Specialty commercial streets should be able to provide food, residence, transportation, tourism, shopping and entertainment, all in one service. In addition to attract customers shopping, leisure, cultural and sports activities and consumption experience can also be held on the street[7].

3.4. To have unique functional positioning and features

The specialty commercial streets must first have a unique functional orientation to satisfy the public unique consumer demand; at the same time, they should reflect their own features and identifiable physical space forms, which gives the public a certain degree of recognition, deep impression and visual perception, which is furthermore conducive to enhance their publicity and influence[8].

3.5. Have the cultural connotation combining tradition with modernity

The construction practice in different places has proved that the integration of traditional culture and modern features is one of the key factors for the success of specialty commercial streets. Integrating the geographical culture experience into streets is particularly critical. Specialty commercial streets, as city life highlights, concentrate the history and culture of the city, which is also a record of the city's bustling and fashion with the integration of traditional and modern specialties of the city.

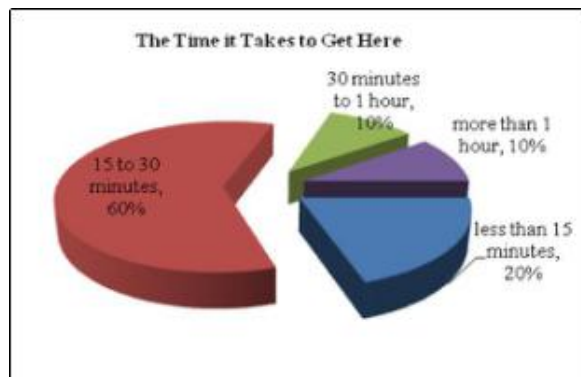


Fig. 3. Survey of appropriate distance of commercial streets

Therefore it can be concluded that specialty commercial street transformation and upgrade should be carried out from the four aspects of infrastructure, accessibility, business diversity and environment.

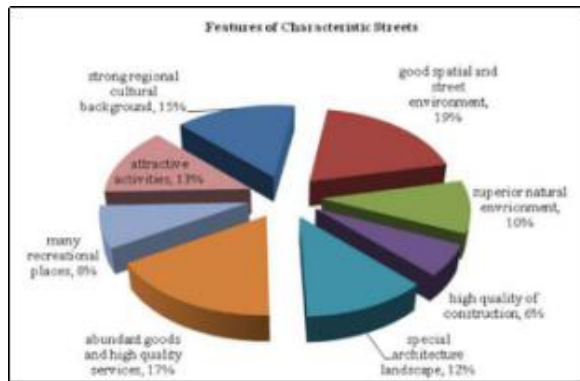


Fig. 4. Survey of feature of characteristic streets

4. Discussion on the ways to promote the transformation and upgrading specialty commercial streets.

How to construct traditional commercial streets under the shock of the internet is a hot topic nowadays for all levels of groups in China. From the perspective of innovation and entrepreneurship needs, we need to introduce the concept of crowd innovation, as well as to integrate the resources and environmental characteristics of the commercial streets, draw lessons from the international metropolis commercial street, innovate working ideas, strengthen development potential, in order to put forth effort to promote the transformation and upgrade of specialty streets.

4.1. Guided by "differentiated market positioning", we should improve the ideas of upgrading specialty commercial streets

Looking at the status and characteristics of various types of street, they need to better meet people's new demand of experiential consumption, especially under the impact of the Internet. Only from the consumer's perspective the needs of consumers can be truly understood.

4.1.1. Precise functional positioning According to foreign famous commercial street experience, it is important to accurately grasp the specialties of existing commercial streets' fitness and strong points, resort the positioning for undistinguished streets. It is also necessary to consider not only the dominant business format, but also the complementary and relevance of the formats, to meet the different levels of consumer demand[11].

4.1.2. Improving the support system In the context of internationalization, tourists from different parts of the city come from different parts of the world, and their consumption needs are different. But one thing in common is that they pay more attention to the experience of consumption and seek personal enjoyment in consumption. First, the use of the two sharing service platforms of data and information is to help

businesses better understand consumers to provide customized services. At the same time, it is important to strengthen the development and application of information technology, such as APP, to provide better service to consumers. Meanwhile, we should strengthen international service and build a language service system without borders. Through the establishment of English website, setting up an "international tourist service" and improving a variety of language signs and guide maps, to provide one-stop and multifunctional services for foreign tourists, making the international tourists will to understand, want to consume, be able to communicate in the specialty streets. Lingering and communicating places need to be added, like outdoor cafes, tea houses, recreational green islands for rest, places to host different types of shows and activities which not only add fun to the pedestrian streets but also promote the prosperity of the district by providing friendly environment[12].

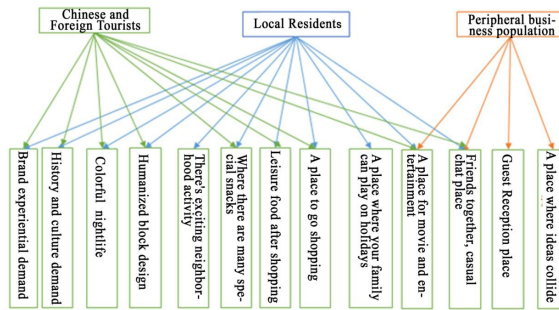


Fig. 5. The relationship between customs and their demand

4.2. Guided by "business model innovation", we should build an open format for upgrading specialty commercial streets

With the development of e-commerce and information technology, consumers have more and more ability to collect commodity price information. Especially when commodity prices become very important factors to consumer's behavior, the difference between online and offline prices will lead to the loss of customer resources and image damage of the physical stores. On the contrary, businesses can use the online retail enterprises do a variety of promotional advertising and promotional activities on the web, making direct consumer oriented the introduction and presentation, to save a huge amount of promotional costs for retailers. Therefore, the focus of the transformation and upgrading of specialty blocks should emphasize on the expansion and innovation of business models and formats as shown in Fig. 6.

4.2.1. "Online and offline integrated" businesses model Actively adopt the online and offline multi integration business model, expand the sales scope and profit margins of the traditional commercial streets, and extend the customer groups to the national scope. Successful cases, such as RT mart and Sunning Appliance, are too numerous to list. With its strong brand advantage, they take the "store + elec-

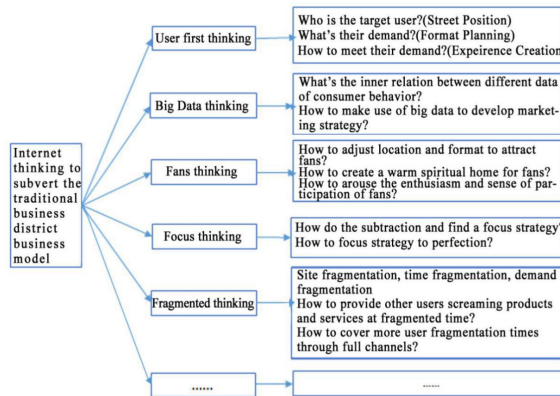


Fig. 6. Structure of the internet thinking

tricity commerce + retail service” mode to promote global purchasing management and technology application, in order to improve the quality of single store operation.

4.2.2. Implementation of the orderly sorting and control of commercial formats

In terms of the serious homogeneity of street business formats, it is necessary to sort out and control the formats in the process of opening up the open format system.

(1) Making use of big data information to formulate business format strategy. Big data technology and cloud computing methods can be tried to look for inherent links of different consumer behavior data, and further finding out and segmentation business formats, in order to meet the diversified needs of consumers.

(2) Set up "admittance threshold". According to the management mode of Oxford Street in London, we should set up industry standards, establish controllable format enter system, and then integrate existing formats to effectively improve the competitiveness of streets.

(3) The format configuration should be accurate docking the "pain point" in consumer demands. Big data analysis can be used to keep abreast of the international market trends and consumer demand, and quickly import new goods, new services, timely introduce experiential brand stores and recreational facilities. At the same time, cultural theme should be strengthened in business format configuration, so that "local taste" and fashion elements can be added to Chinese specialty streets[3].

4.3. Take "local specialty" as the core, strengthen the multi-space construction of specialty district promotion

Foreign famous commercial streets have history and unique cultural heritage, as well as ancient architecture with a long history and distinctive architectural form. They are good at integrating history and culture into people's modern life style and city activities. "National is global". The author believes that the vitality of promoting the development of specialty commercial streets in china should be based

on localization and characterization development.

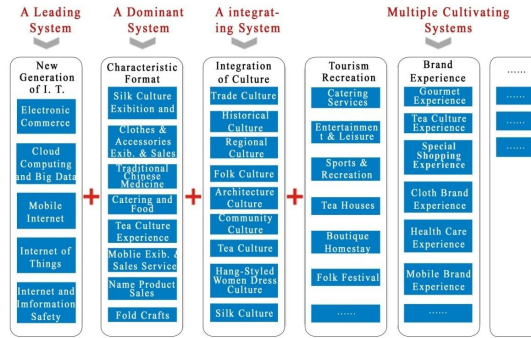


Fig. 7. The open format system of "1+1+1+X"

4.3.1. *Construct the open format system of "1+1+1+X"* From the successful experience of foreign famous commercial streets, the author believes that cultural integration should be emphasized in the transformation and upgrading of specialties streets. China has many historical and cultural relics. Multiple cultural elements, like Chinese unique business culture, history culture, folk culture and regional culture, can be injected into the construction of specialty streets to foster features from inheritance. All kinds of nonmaterial culture cultural heritage such as folk arts and crafts should be integrated into streets to interactive relate to the streets' environment. Therefore, the streets can be the comprehensive carrier of cultural diversity with historical buildings, regional culture, specialty industry and national brand (time-honored), format open system of "1+1+1+X" for specialty commercial streets with new business formats, such as shopping, tourism, leisure, catering, entertainment, brand experiences, as shown in Fig. 7.

4.3.2. *Pay attention to the diversity of district quality space construction* Based on the demand analysis of consumer groups, besides shopping demand, the existing consumer groups in specialty streets also have brand experience demand, tourism leisure demand and so on. Planning should be oriented by the needs of different groups of people, through measures like connecting the street and valley space, opening the inner spaces and rearranging road space to make public space and activity platforms as more as possible for the consumption and recreational activities on the streets and in the blocks. At the same time, by initiatives like designating outdoor dining area and street artists performing areas in public space, the vigor of existing specialty commercial streets can be increased which can also provide consumers with a unique "day tour" consumer experience.

5. Conclusion

Specialty commercial streets are composite and pluralistic spaces integrated with history, culture, economy and tourism. Under double background of internalization and internet, they carry on more laborious function and responsibility. It is necessary to consider not only consumers' shopping needs, but also their leisure requirement; it is necessary to consider not only the needs of daytime consumers, but also the needs of consumers at night; it is necessary to consider the needs of both domestic and international tourists. It has a long way to go to achieve the unity of economic, environmental and social benefits.

Specialty commercial streets can only maintain a long lasting charm and vitality, by reasonable self-positioning with integration of history and culture with modern life, by continuous innovation of business models for both internet and traditional businesses, and by strengthening creation of environmental quality space to provide tourists comfortable and special tourism experience, which allow the tourists visitors fully experience and enjoy "touring, recreating and experiencing in the scene".

References

- [1] Commercial area/Central Business District, Wikipedia.
- [2] J. F. RAYPORT, B. J. JAWORSKI: *Introduction to E-Commerce*. McGraw-Hill (2003).
- [3] Y. W. KANG, J. G. KIM, Y. J. KIM, S. H. OH: *A study on the evaluation and improvement for physical elements of Slow Street in the commercial area*. KSCE Journal of civil engineering 19 (2015), No. 5, 1523-1529.
- [4] G. WILLIAMS, S. BATHO: *Reinforcing commercial competitiveness through city centre renewal, Planning*. Public policy & property market 10 (2008), No. 1, 209-236.
- [5] Y. J. JEONG, J. HEO, C. M. JUNG: *Behind the bustling street: commercial gentrification of gyeongridan*. Seoul, Procedia - social and behavioral sciences 170 (2015), No. 1, 146-154.
- [6] N. HASSEN, P. KAUFMAN: *Examining the role of urban street design in enhancing community engagement: a literature review*. Health & place 41 (2016), No. 9, 119-132.
- [7] A. CORREIA, M. KOZAK: *Tourists' shopping experiences at street markets: cross-country research*. Tourism management 56 (2016), No. 11, 85-95.
- [8] K. W. TSOU, H. T. CHENG: *The effect of multiple urban network structures on retail patterns- a case study in Taipei*. Cities 32 (2013), No. 6, 13-23.
- [9] X. W. ZHANG: *An overview on city shopping street researches*. Commercial research 367 (2007), No. 8, 115-119.
- [10] K. N. RANKIN, H. MCLEAN: *Governing the commercial streets of the city: new terrains of disinvestment and gentrification in Toronto's inner suburbs*. Antipode 47, (2014), No. 1, 216-239.
- [11] C. ZHENG, Y. B. GAO: *Comparative study on traditional commercial block transformation method*. Applied mechanics & materials 584-586 (2014), No. 7, 12-15.
- [12] D. H. LEE, CHEOL. JAE. YOON: *Sequential analysis on the Intensity of store Information to the commercial street-from the viewpoint of pedestrian movement*. Journal of asian architecture and building engineering 14 (2015), No. 3, 617-624.