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PROCEEDINGS OF THE MAIDEN EDITION OF THE CHINA-AFRICA URBAN DEVELOPMENT FORUM (CAUDF)

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URBAN DEVELOPMENT FORUM (CAUDF)

CAPE COAST AND ELMINA, GHANA

20TH - 21ST NOVEMBER, 2017

中非城市发展研究

Editor in Chief : Ishmael Mensah

Hu Liangcai

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CONFUCIUS INSTITUTE
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PREFACE

The maiden edition of the China-Africa Urban Development Forum (CAUDF) took place in Cape Coast and Elmina from the 20th to 21st of November, 2017 under the theme 'Sustainable Urban Development in Contemporary Times'. CAUDF is an international conference that seeks to provide a platform for researchers and practitioners in urban development-related fields to exchange ideas in order to extend the frontiers of urban research and promote sustainable urban development. Relationship between China and Africa has soared in contemporary times. China's relationship with Africa has gone beyond cultural diplomacy to economic diplomacy. There has been massive injection of Chinese capital into African economies coupled with trade and aid. Since 2000, China has become the continent's largest trade partner. China has made a lot of inroads into in the area of urban planning and development whiles many African countries have stories to share about how they are addressing their urban development challenges. It is expected that by linking African researchers to their Chinese counterparts, this will foster exchange of ideas on sustainable urban development.

Urban development issues have become even more relevant today in the face ofrapid urbanization.Today, more than half of the world's population reside in urban areas. It has been projected that by the year 2050, the current 54 per cent of the world's population living in urban areas, will increase to 66 per cent. The situation is even worse in Africa where the rate of urbanization is the highest in the world. The urban population in Africa is projected to grow from 36 percent in 2010 to 50 percent by 2030.

As our cities grow spatially and in terms of population and infrastructure, there is the need to plan the development of our cities in order to address the challenges that come with growth. As more and more people migrate into towns and cities, planning becomes even more imperative. Rapid urbanization offers numerous opportunities including business, improved healthcare, education, employment opportunities and entertainment which oftenresultin economic growth, transformation, and poverty alleviation. However, such opportunities could be negated by challenges such as overload of infrastructure, development of urban sprawl and shanty towns, urban poverty, sanitation problems, crime and inequalities.

It is an undeniable fact that cities have become centres of development. However, they are also the places where economic, social and environmental problems are likely to occur (Conelly, 2007). Increased migration to cities also means a greater pressure on the environment resulting in air, water and noise pollution, waste management challenges, deforestation and resource depletion.
There is therefore a need for the sustainable development of cities. However, addressing urban challenges requires a multidisciplinary approach. For sustainable urban development to be realized, there is the need for collaboration among researchersfrom varied disciplines including planning, geography, architecture, engineering, tourism, health, agriculture, sociology, education, law, media, transportation, arts and culture. There is also the need for researchers to collaborate with policy makers to ensure that research findings feed into urban policies and programmes. Against the backdrop that the urban fabric is a mosaic of activities, infrastructure, people and resources, there can hardly be sustainable urban development if the different dimensions of the urban area are not developed and integrated together.

Sustainable development has been defined by the WCED as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (United Nations General Assembly, 1987, p. 43). Based on the the original concept of sustainable development by the WCED, Hall (1993) defines sustainable urban development as today's shape of development that can ensure the future continuous development of cities and urban communities.

For sustainable urban development to be realised, there is the need to integrate environmental, economic, and social considerations into urban planning and development. There also the need to recognize that cities have multiple and conflicting functions. Thus ideas emanating from diverse disciplines should be integrated into a holistic policy framework for ensuring sustainable urban development.

Papers presented at the CAUDF reflect the broad spectrum of disciplines needed for sustainable urban development. They could be broadly classified into transport, environment, education, culture, risk management, health, communication and livelihoods.
Anopchenko Boeva, Murzin and Temirkanova examine the main problems and risks associated with the Temernik River in Rostov-on-Don, Russia and propose both short-term and long-term measures for improving the basin in order to improve the living conditions of city residents.Jelili and Ogunkan alsoseek to model the informality question in the urbanization process in Africa from the perspective of an urban landuse planner, using the cities ofcities of Ilorin and Ogbomoso in Nigeria as a case study. They conclude that the informality component of urban landuse can be predicted and incorporated into the planning of urban landuse.

Hao Wang, writing on the topic'a prototype of decision support approach to land rezoning/redevelopment in sustainable urban renewal', provides a GIS-based approach for quantitatively assessing the suitability of landuse for land rezoning/redevelopment in urban renewal areas. This paper demonstrates the usefulness of GIS visualization and spatial analysis in land rezoning and land redevelopment in urban renewal.In a related paper, on research on the development of the new-type urbanization in the nodal cities of the Belt and Road, SHI Feng uses the entropy method to calculate the level of *new-type urbanizatio*n in 18 provincial capital cities of the Belt and Road in China. The paper points to the fact that the overall level of urbanization of the "Belt and Road" node city is not high, and the new level of urbanization varies greatly between different routes and cities on the same route.

Ouyang Qianhui examines the impacts of the 21st Guangzhou International Lighting Exhibition (GILE) and Asia LED Exhibition on the city in a paper entitled 'a preliminary exploration on sustainable strategy of city development with MICE:A case study of the 21st Guangzhou International Lighting Exhibition & LED Asia'. QIN Bo on the other hand,reviews the policy efforts of local governments in developing low carbon cities in China, using Beijing as a case study. Based on the results, he advocates for low-carbon spatial planning as an alternative approach to dealing with global climate change.

From a religious perspective, Kojo Okyere draws from the Book of Proverbs to examine the influence of city life on the relational development of young adults in the Ghanaian society. He argues that the appreciation of ancient testimonies about city or urban life could enhance understanding of how modern cities could contribute to sustainable life. Olagunju looks at thegender Implications of credit use on urban catfish production in Lagos State, Nigeria. The study shows that credit is very important in catfish production. She therefore recommends that policies should be put in place in order to encourage women to have access to credit so as to make catfish farming attractive to younger women in particular as a means of livelihood in the urban settings.
Guowu ZHANG introduces a wider and longer perspective to the analyses of the effect of household migration on housing submarket changes, and the extent to which this has affected the growth and decline of housing submarkets.Using Shanghai as a case, he concludes that non-spatial mobility patterns are indicators of housing submarket changes.

Ibraheem, Ajibua and Dominic attempt aquantification of urban Leisure-Time Physical Activity

(LTPA) among university students in South-West, Nigeria. Theirstudy revealed that more than half of urban university students were not meeting the international physical activity guidelines for leisure-time. They therefore recommend among others thatuniversity authorities should provide facilities and equipment for a variety of LTPA that will meet the needs and aspirations of students living in the town.Agyemang in an attempt to answer the question as to whether distance and personal circumstances of trip makers matter to mode choice,conducted a cross-sectional survey of short distance trip makers who reside in various urban communities, namely Kasoa, Teshie, and Madina in the Greater Accra Metropolitan Area of Ghana.He discovered that trip distance and educational status strongly predicted mode choice.Based on the results, he recommends that policy makers should focus attention on encouraging pedestrianisation through the provision of secure and unobstructed walkways in the cities.

Mensah and Gamor explore theperspectives of residents of Cape Coast on the environmental impacts of urban tourism and drawimplications for sustainable tourism development.Results of the study indicate that though residents perceived urban tourism as having some positive environmental impacts,they were concerned about its negative impacts in terms of crowding, traffic congestion, littering, and waste disposal problems. They recommend that city authorities and the Ghana Tourism Authority should capitalize on the perceived positive environmental impacts of tourism by using tourism as a tool for the reinforcement of environmental conservation.Hu Liang Cai explores the invisible source of dynamism for higher education and internationalization using the theory of symbolic interactionism as a framework. He posits that modern urban culture space promotes theoretical growth in studies on the dynamism of higher education internationalization.

Fengjiao Peng analyzes the unique character of Hunan people in relation to the attributes of pepper. It was found that the main character of Hunan people are hot-tempered, enthusiastic, courageous, bold and straightforward, hard-working, patient and unremitting which play an important role in the development of the individual in particular and the society as a whole.Hung-Wei Feng and Yan Wang examine the relationship between emotional control ability and interpersonal relationship of undergraduates from Guizhou University of Finance and Economics. They found out that there was a significant difference in emotional awareness between religious undergraduates and non-religious undergraduates as well asbetween male and female undergraduates.They conclude that establishing good interpersonal relationship through better emotional control will help undergraduates to form and develop healthy personality traits.

Ishmael Mensah
Hu Liang Cai

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Main Contents

Strategic Planning for the Development of Urban Areas Based on an Analysis of Socio-environmental Risks: The Experience of Designing the Rehabilitation of the River Temernik

Tatiana Anopchenko[1], *Ksenia Boeva*[1], *Anton Murzin*[1], *Alla Temirkanova*[1]

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Abstract: This study is an attempt to comprehensively study and summarize the main problems and risks associated with the current state of the Temernik River, based on this, develop a plan of short-term and long-term measures for improving the basin of this natural city street and integrating it into the architectural and landscape carcass of Rostov-On-Don. The aim of the project is to improve the living conditions of city residents based on the transformation of the source of environmental contamination into a recreational park space of citywide importance. The project received the approval of the Governor of the Rostov Region, emphasizing the importance and urgency of resolving the problem of the River Temernik. The Ministry of Natural Resources and Ecology of the Rostov Region initiated the involvement of a wide range of state and municipal employees, scientists and specialists and representatives of public organizations in the discussion of the problem.

Key words: strategic planning, urban development, socio-ecological risk, Rostov-On-Don, Temernik River

Introduction. Historical background

The river Temernik owes its name to one of the most difficult periods in Russian history, defined as the Mongol-Tatar yoke. The name of the river in Turkis means "iron". There is also a version that the river is named after the great Mongolian conqueror, Tamerlane, whose name from the same Turkic translates as "iron lame".

Peter I founded the city at about 1695 by constructing a small shipyard there for repair and equipping ships of the Azov Flotilla. This decision was justified by two factors: the presence of wide and deep backwaters at the confluence of the Temernik and Don rivers, as well as the nearby source of drinking water.

After the defeat of Russia in the Russian-Turkish War and the conclusion of the Prut Peace, the Temernik River became the western border of the state from 1711 with the border and customs garrisons stationed on the site of the former shipyard. It was these settlements that became the stronghold for the construction of the fortress, which laid the foundation for the city.

The subsequent development of the city at an early stage was closely connected to the development of the territory bounded by the left bank of the Temernik River in the west and the Forstadt fortress in the east. At the same time, the active development of the coastal areas of the river and its tributary, the General beam, as natural channels for the discharge of liquid and solid wastes begun.

The first visible symptoms of degradation of these reservoirs were evident in the appearance of unpleasant odors, waterlogging and soil erosion during the same period. The city government was concerned about this and commenced the development of a system of measures for the organization of urban storm sewerage; the first concrete embodiment was the construction of an underground reservoir with a length of 1.7 km under the bombarded General beam.

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This structure was put into operation in 1893, which made it possible to discharge storm and domestic sewage from the entire central part of the city. It is worth noting that due to the reconstruction carried out in 2010, the general collector has been operating successfully till now.

The development of a metropolis in the 20th century was accompanied by a sharp increase in civilizational pressure on the southern part of the Temernik river basin, which was gradually absorbed by new factories and urban areas. As a result, more than half of the entire catchment area of the river was within the boundaries of the city. The anthropogenic impact of the growing metropolis during this period was largely compensated for by two major events that were of cardinal importance in the formation of the habitat.

First, was the creation of a citywide system for the transportation and treatment of wastewater between 1973-1975. By the end of the century, the length of the city's sewerage network was 1,200 km, which allowed the centralized discharge of most of the biologically active domestic wastewaters, which passed through the Temernik River, through a complex of treatment facilities located on the left bank of the Don.

At present, 87% of households are covered by the city's water drainage system. Secondly, the economic crisis in the 1990s contributed to a sharp decline in production in the city. Market transformation in the system of property and land relations served as an incentive for the withdrawal of a large number of enterprises and organizations, whose activities resulted in significant pressure on the ecosystem of the Temernik River Basin.

Sanctioned and unauthorized bridges, crossings, hydraulic structures, artificial reservoirs, land reclamation facilities, ponds and channels for discharging liquid waste from agricultural enterprises have been built. The largest sources of pollution in rural areas are mineral fertilizers and pesticides that enter the river basin, because of surface run-off from the soil, as well as violation of the rules governing the air treatment of crops, regulations for transportation and storage and use of fertilizers and pesticides.

A consequence of this is the eutrophication of the reservoir - an increase in its biological productivity, because of the accumulation of nutrients (nitrogen, phosphorus) in water. The physico-chemical properties of water have deteriorated. It has become turbid, green, has an unpleasant smell and the level of acidity has increased. During the mass extinction of algae, they were decomposed and were accumulated on the river bed. The decomposed algae absorb oxygen from the water, and some became toxic.

All this has a negative impact on the entire river basin, preventing the natural flow of water and the nature of the organization of washing regimes during periods of flooding. There are very visible signs of the degradation of the river everywhere - almost across the entire length of the basin - and expressed in bogging of individual sites, overgrown with weeds and reeds, which is a favourable environment for the reproduction of blood-sucking insects.

Taking into account the absence of a permanent system for monitoring the ecological condition of the Temernik River, the current levels of risks to the inhabitants of the metropolis could be determined through the use of secondary data on geological, biochemical and other aspects affecting the basin by different departments, conducted at different times, to varying degrees (Anopchenko at al., 2015; Bakaeva & Ignatova, 2014; Bakaeva at al., 2015; Drobasheva at al., 2003; Drobasheva & Rastoropov, 2005).

Methodology. Environmental risks

Such risks include the following.

Epidemiological risks

The first systemic measures for epidemiological monitoring of the cholera situation, including laboratory studies of environmental objects, were organized in the late 60's and early 70's in connection with the registration in the territory of Rostov-On-Don on local foci and outbreak of the diseases. During the investigation, it was found that 80% of the cases of infection of the population were due to the use of water for household purposes in Don and its tributaries, including R. Temernik.

The leading role of the water in the transmission of cholera has led to a number of studies on the effect of constituents of water in the ecological system on the life span of properties of cholera vibrios. At the same time, clear interrelationships between the intensity of the isolation of cholera vibrios, the content of ammonium nitrogen in water and synthetic surfactants (SS) on the number of blue-green algae and diatoms have been established.

The results of long-term biological testing data for the Temernik estuary (i.e. between1992-2007) testify that the level of toxicity of the river is in the region of 4-5 classes,

which is classified as extremely toxic, and the ecological status is both poly- and hypertoxic. Analysis of biotesting data, carried out between 2011-2012, showed that the toxicity of waters and sediments of the River Temernik is heterogeneous both in degree and in space. Throughout the investigated section of the river (from the mouth to the sanatorium (Nadezhda), acute toxic effects of the water on the bottom components of the river ecosystem were noted. Individual local toxicity points were also identified.

Modern chemical-analytical laboratory studies of selected samples conducted in 2015, including the determination of the pH level of the water, indicated that the most polluted were the waters in the urban part of the Temernik River. Characteristics of toxic effects based on a number of indicators are presented in Table 1.

Table 1. Composition of pollutants in selected areas in the River Temernik

Defined component	**The multiplicity of MPC excess by sites**		
	Upper reaches of the river (length 12.5 km)	Zone of the Northern Cemetery, (length – 3.6 km)	Within the boundaries of the city limits, length – 4.2 km
Sulfate ion	4.34	2.88	3.29
Ammonium ion	1.61	8.80	3.63
Nitrate ion	0.21	0.79	1.14
Chemical oxygen demand	1.42	3.19	1.78
Biochemical oxygen demand	1.38	0.64	1.17
Cadmium	1.00	3.00	1.00

A number of studies have noted a decrease in the level of toxicity of the reservoir at the site where measures have been put in place to clean the river and remove bottom sediments. At the same time, these and other studies conducted at different points and at different times do not give a complete picture of the biological state of the entire water system of the Temernik River basin. They do not allow an assessment of the dynamics and duration of the associated positive or negative changes.

Risks of sediment accumulation

In order to conduct environmental assessment of water systems, bottom sediments are one of the most important objects of study. An accumulation of the pollution that enters the reservoir for many years (bottom sediments) is an indicator of the ecological condition of the territory, a kind of integral indicator of the level of contamination.

Bottom sediments represent an inseparable unity of a complex of minerals and an aqueous solution that impregnates deposits. This same aqueous solution physically and chemically combines a set of discrete grains, mineral phases and organic residues into an integrated system. A variety of chemical reactions take place in this system, whereby there is a redistribution of the dissolved components. In the aqueous solution and on the surface of the grains live the bottom microflora, which exercises an important influence on the course of chemical processes in the bottom sediments and the vital activity of organisms.

Technogenic deposits and other accumulated pollutants, to some extent, neutralize toxic emissions of technogenesis, especially at the initial stages of pollution. However, the buffer capacity of deposits relative to pollutants is limited. Even with the complete cessation of wastewater discharge into sediment watercourses, sediments are a secondary source of contamination of water mass, biota and floodplain landscapes for a long time. Chemical reactions and microbiological processes that occur in them contribute to the formation of mobile and toxic compounds of many pollutants.

The greatest contamination associated with the accumulation of bottom sediments exposed to the lower part of the Temernik River occurs at where water and solid effluents from the Bezymyannyy Creek, Zmeevskaya Balka and from the adjacent streets and ravines converge. According to estimates by experts, the amount of sediment in this area is about 600,000 cubic meters. Especially severe sanitary and environmental conditions have developed on the river in the vicinity of the zoo and the mouth of the Zmeevka gully, where the river bed is

completely filled with deposits. The depth of sedimentation of silt here exceeds 5-6 meters. On the lower part of the silt, the river bed is also filled.

The presence of a significant number of unauthorized releases of untreated and non-disinfected domestic wastewater, mainly from private households located on non-localized territories, leads not only to microbial, but also parasitic pollution of the water and the accumulation of bottom sediments. According to the results of laboratory tests carried out by FBUZ Centre for Hygiene and Epidemiology in the Rostov Region in November 2013, eggs of helminths found in sludge in samples taken from the bottom sediments from the river Temernik in the Zoo and below the dam of the Lower reservoir were classified as “extremely dangerous” in the epidemic context.

Risks of flooding of vast territories

Flooding is a sharp increase in the water level in a river. Regardless of the reasons for the occurrence, the phenomenon was different from normal flood due to its short duration and suddenness. When the river after a rain or the sudden melting of snow comes out of the coast, there is flooding. The meaning of the word rather accurately determines the essence of the process.

Several events precede this phenomenon and become the main causes. Firstly, there is a long pouring of rain resulting in the pond overflowing its banks; Secondly, the intense melting of the snow in the winter-spring season. The period of high water level after intense precipitation is usually very short and lasts for several hours. However, because of its rapidity, even such a short-lived phenomenon causes serious damage (Burima & Makushchenko, 2015). In case of repeated downpours in the same territory, there are sometimes multi-peak floods. This event is characterized by periodic flooding of reservoirs and nearby territories.

The loss of the capacity of the Temernik River due to the high degree of channel silting, as well as the technical imperfection and wear of some of the hydraulic structures, renders the city territory prone to flooding even with very minimal rainfalls (Chan et al., 2012).

According to information compiled based on recorded facts and observations by the Department for Prevention and Elimination of Emergencies of the city of Rostov-On-Don, in 2009, in the flood zone of the river Temernik, floods could occur in about 10 to 25% of large urban areas, a total area of 360 hectares (Table 2).

Table 2. Volumes of possible flooding in case of floods 10-25% of availability

Flood flooding facilities	Area, hectares
Residential houses and infrastructure	19.60
Industrial and municipal enterprises, facilities and facilities	0.02
Communications, engineering and other structures	26.00
Plows, gardens, incl. Residential houses in horticultural associations	314.20
Total	359.2

Findings/Results: Strategy for the rehabilitation of the Temernik River

Obviously, the overwhelming majority of residents of the city, regardless of age, gender, political or religious beliefs, are interested in ecological rehabilitation of the Temernik River. At the same time, effective measures in this direction will inevitably encounter the resistance of some households and enterprises whose activities contribute to the pollution of the river and its tributaries. Therefore, one of the main tasks of such a project is the coordination of the activities of conflicting interests. The development of a mission is the starting point for any improvement of the management system, since it allows a determination of the main objective of the project and to outline short-term and long-term action plans.

Based on generalized data and international experience, the mission statement, the purpose and objectives of the project proposed are as follows:

Mission: in order to ensure harmony with nature and the laws of the development of society, we seek to provide a new quality of the urban environment through the ecological rehabilitation of the Temernik River basin and the transformation of a contaminated environment into a public recreational park.

The goal of the project is to create a linear landscape ecological park in the urban part of the Temernik river basin after implementing a set of measures to prevent

further anthropogenic pollution and restore the viability of the river. To achieve this goal, three tasks are to be carried out (Figure 1):

1. To carry out a full inventory of the river basin in order to identify all sources of pollution, identify the causes, study and provide technical certification of all authorized and unauthorized hydraulic structures and bridges and enter all the information received into a GIS model of the river basin of the river Temernik.

It is also necessary to carry out a set of measures to ensure the ecological monitoring of the state of the river basin. The composition and frequency of studies should be determined and an electronic data bank should be created and integrated with the geo-information model of the river network.

An indicator of the fulfilment of this task will be the production of a working multi-layer geoinformation model (Figure 2) of the Temernik River basin, which allows monitoring and analysis of the current state of the river in real-time for a number of selected indicators, as well as changes that are taking place.

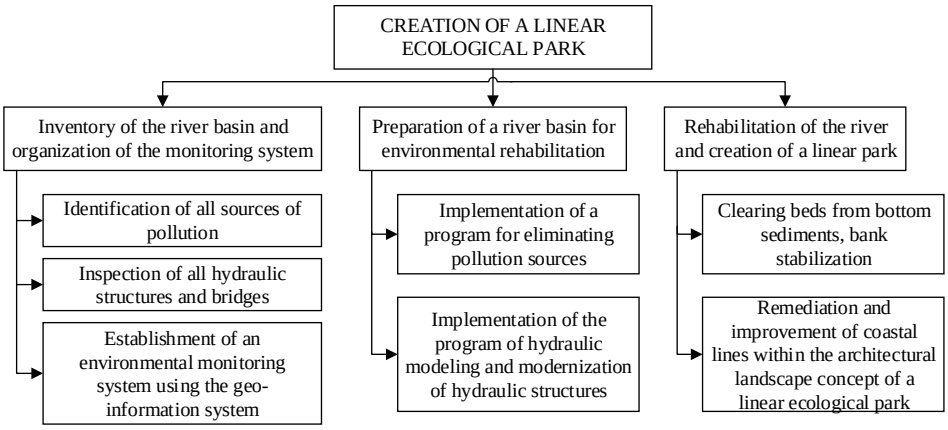

Figure 1. Hierarchy of the goals and objectives of the project

Source: authors

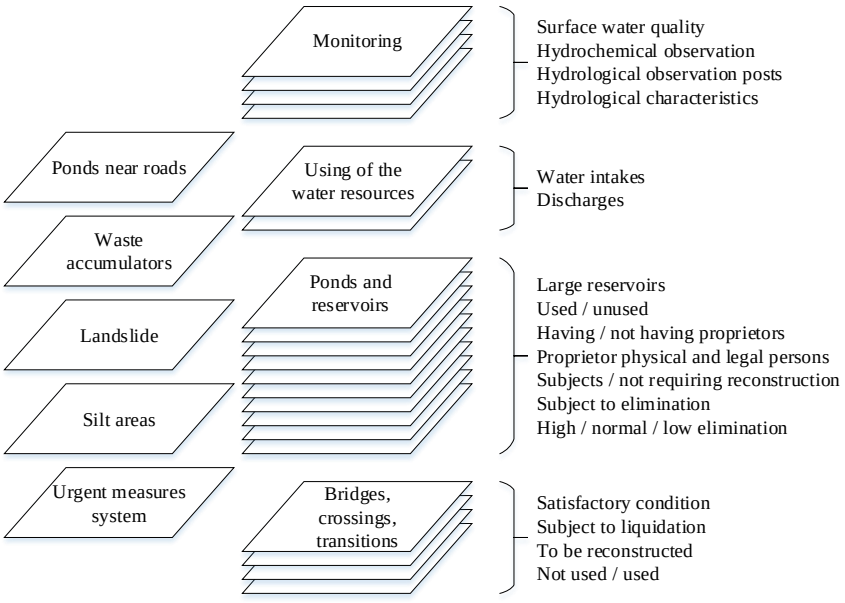

Figure 2. Structure of the multi-layer geoinformation system of the basin of the arm Temernik

Source: authors

Environmental monitoring should be carried out within the framework of a single system of state environmental monitoring and the system of its indicators should be adapted to the relevant practice of state

monitoring.

An important direction of activity at this stage will be the development of the project of planning and surveying the linear space (Castán Broto, 2017). This will determine the boundaries and ways of using coastal areas, create an image of a citywide ecological park and offer architectural landscape concepts for the urban and rural parts of the Temernik river basin.

2. The preparation of the river basin for environmental rehabilitation includes a set of measures aimed at establishing and formalizing the boundaries of the guard zone of the future linear park within the framework of territorial planning of all three municipalities.

Much work remains to be done to eliminate sources of anthropogenic pollution, including compensatory and administrative measures in relation to households, enterprises and organizations whose activities result in the discharge of waste into the river basin. A separate direction will be the provision of a centralized household and storm sewerage system for a number of households, horticultural cooperatives, enterprises and organizations. Such programmes implemented in the river basin must be integrated into the programmes of social and economic development of all three municipalities and be reflected in regional and federal target programs, investment programs of communal organizations and plans for integrated development of territories.

Simultaneously, within the framework of solving a common task, it is necessary to carry out geological and hydraulic engineering surveys to create a hydraulic model of the Temernik river basin, based on accurate knowledge of the potential of surface, underground and other sources, which allows to optimize the process of hydro-technical regulation of its watercourse. Based on this model, the entire hydraulic control system must be modernized in order to eliminate the risks of flooding of territories and man-made accidents (Douglas et al., 2010).

Obviously, it takes a long time to fully implement this task. Objective indicators that allow the monitoring of the dynamics of positive changes in this direction will be objective monitoring data obtained from the current geoinformation model of the river network.

3. Clearing of the river and organization of a linear ecological park in the urban part of its basin.

Realization of the two described tasks in full will allow the commencement of real work on the rehabilitation of the river basin. At the same time, all developed measures, including clearing of bottom sediments, expansion of channels, strengthening of coastal lines and subsequent improvement, should be formalized in the form of an architectural and landscape concept in accordance with the idea of a linear park.

To realize the task in full, the concept of landscape design of the Temernik river basin should also include architectural and planning solutions for suburban sections of coastlines in the Myasnikovsky and Aksay districts.

Discussion: Strategic plan for project implementation

The proposed project implementation strategy consists of three areas:

1) management strategy;

2) communication strategy;

3) investment strategy.

The management strategy implies the delegation of a number of functions related to the monitoring and rehabilitation of the Temernik river basin to a special agency in the form of a non-profit association (NGO). This structure allows for the accumulation of budgetary and extra-budgetary sources of funding for solving project tasks. It also provides sufficient flexibility in implementing inter-agency communications and ensuring independence.

Given that the river basin borders are located in three municipalities, the river basin management should be implemented at the oblast level by the Ministry of Natural Resources and Ecology whiles all functions related to the transformation of coastal spaces into a linear ecological park are transferred to the NGO. To implement such a management strategy, it is proposed that the law of the Rostov region dated 11 March 2003 N 316-3C “On environmental protection in Rostov Region” is amended to include a section on defining the status of NGOs as well as the procedure for entering into a contract by the state for the creation of a linear ecological park in the Temernik river basin in the Rostov Region. It should also make provision for creating and attracting investments for the implementation of monitoring and environmental rehabilitation programs.

Communication strategy should be aimed at achieving the necessary level of trust on the part of society. One of the main tasks of NGOs at the first stage will be the formation of an information system that provides broad access to all the documents created during the implementation of the project as well as a reliable feedback system.

The main directions of the NGO's work on the implementation of the communication strategy could be as follows:

1) the formation of a favourable public opinion on the need for a state, integrated, systematic, scientifically grounded approach to addressing the issue of environmental safety in the Temernik River basin;

2) involvement of the media with a view to popularizing the issue of ensuring ecological balance in the urbanized areas, in general, in the city of Rostov-On-Don in particular;

3) formation of a broad public discussion and political agenda with the involvement of young scientists and politicians, as well as people's deputies of all levels;

4) participation in scientific and educational activities involving undergraduate and post-graduate students of technical universities and research organizations for research and development;

5) formation of an information database of scientific research and innovative ideas in the field of technological and technical, architectural and planning solutions to ensure the environmental sustainability of urbanized territories and water bodies;

6) formulation of proposals to public authorities on the planning and implementation of activities aimed at ensuring environmental balance and nature development in urbanized areas;

7) public control of the ecological situation and the formation of communities in social networks on the ecology of urbanized territories and water bodies;

8) ensuring interregional and international cooperation and information exchanges on ensuring the ecological balance of urbanized territories and water bodies.

The investment strategy includes a set of measures to ensure justification and application for federal support through state targeted programmes, international loans and grants, and the organization of partnership projects to attract private investment.

Given the complex and multilevel set of tasks to be accomplished, the horizon for long-term planning of project implementation activities is proposed to adopt the corresponding general development plans of the city and districts, i.e. until 2025 (Table 3).

Table 3. Timetable for the implementation of the Temernik River rehabilitation project

Tasks	2015	2016	2018	2021	2022	2023	2024	2025
Definition and introduction in the general development plans until 2025 of the city								
creation of boundaries of coastal lines of linear park areas								
Creation of the basin structure of project management								
Inventory of the river basin								
Preparation of the river basin for rehabilitation								
Creation of a continuous linear fleet								

Source: authors

The proposed sequence of actions consists of five main stages:

1. The initial stage (2015-2016). Formalization of linear park zones in documents on territorial planning to specify the boundaries of management impact associated with the implementation of the project. Development of the project on the water protection zone of the Temernik River. To implement the idea of creating a continuous park space throughout Russia Temernik, it is required that this functional zone be established in the master plan, as well as land use rules on the development of the city of Rostov-On-Don, the general planning schemes for Myasnikovskaya and Aksai districts, along with other areas of parks, squares and other “green” spaces that make up the natural and landscape framework of the city and rural settlements.

2. Organizational stage (2015-2016). At this stage, there should be the formation of the concept, legal and content design of the river basin management structure. There should also be amendments to the regional legislation, development and implementation of the procedure for competitive selection of NGOs and conclusion of a contract with the selected NGO. This stage also includes the development, public discussion and approval of the Strategic Management Plan for the river basin for 2016-2025.

3. Research (2016-2018). Work on the inventory of the river basin with the identification of all sources of

pollution, as well as inspection and certification of hydraulic structures and bridges, creation of a multi-layer GSI system that allows real-time monitoring of the river basin and monitoring changes associated with the implementation of certain stages of the environmental rehabilitation project, should be carried out at this stage. The creation of such a system represents the basis for the creation of projects to attract investment from budgetary and extra-budgetary sources for the provision of funding for various activities.

4. Preparatory (2018-2022). At this stage, there should be a conscious attempt to streamline multidimensional, complex and conflicting work in order to eliminate all sources of pollution. This involves interrelated practical measures at all levels of government, enterprises and households. A hydrodynamic model of the river should be developed to serve as the basis for which the entire complex of hydraulic structures and bridges are modernized. At the final stage of the preparatory phase, when the environmental monitoring data unequivocally point to the effectiveness of the measures taken, the process of preparing specific architectural and landscape solutions for the coastlines and the development of design estimates for work on the clearing of sediments in the river and the arrangement of park areas should commence.

5. The stage of practical implementation (2023-2025). This involves implementation of contract works with the development of park areas.

Conclusions

The proposed river basin rehabilitation project is a development targeted ecological program for the rehabilitation of the Temernik River, which is currently under way. The implementation of this project will allow a higher level of relations between the urban community and the river. The task of overcoming the negative impact of the river on the city, if carried out, will ensure the transformation and integration of the river basin into the architectural and landscape framework of the city - the image of a citywide ecological park.

Project initiators understand that the achievement of the project's goal is impossible without the support of all levels of government and the regional society as a whole. Therefore, ensuring transparency and professionalism at all stages of the project is considered to be the main components of the implementation strategy.

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Urbanization and Informal Land Use in Nigeria, Africa

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Abstract: Against the background that land use and urbanization in Africa is informal in nature, this paper attempts to model the informality question in the African urbanization process from an urban (land use) planner's perspective. It starts by exploring the construct of informal land use (ILU) and various dimensions of informality as essential ingredients of understanding informal urbanization process on the continent. With primary data on land use, socioeconomic, and related variables from selected capital and noncapital cities of Ilorin and Ogbomoso (Nigeria) respectively, as a case study. A model for predicting the incidence of ILU to be generated, given certain neighbourhood conditions was developed and used for necessary simulation. The paper concludes that ILU or informality component of urban land use and development can be understood, predicted, formalized and incorporated into the planning of urban land uses, development and/or urbanization process. It, however, recommends further similar empirical research endeavours to cover other parts of Nigeria and Africa, as well as more inclusive policy measures in favour of informality, which is rapidly becoming the mainstream of the average African economy.

Key words: Informal Land Use, Urban Development Planning, Integration Framework

Introduction

Urbanization is one of the most dramatic global social transformations of the 21st century. Currently, over half (54%) of the world's population reside in cities. This urbanization trend is expected to continue and about two-thirds (66%) of the world's population is expected to live in cities by 2050 (UN-HABITAT, 2010, 2016). Evidences in the extant literature have proved that Africa is urbanizing rapidly. Its rate increased from 15% in 1960 to 40% in 2010, approximately 42% in 2012 and is projected to reach 55-60% in 2050 (UNESA, 2014). It has experienced the highest urban growth rate during the last two decades at 3.5% per year (ADBG, 2015).

These regularly and widely circulated human population and urbanization data for African countries by such sources as World Bank and UN-Habitat may, though, be a subject of debate (Potts, 2012); the increasing urbanization of African communities is an established phenomenon. That this absolute increase in human population and its attendant increasing urbanization level shall be more in magnitude and more devastating in consequence in developing economies, particularly African countries, than in the developed world, is also an established phenomenon in the literature (Pieterse, 2010; Jelili, 2012). One of the most challenging issues is the fact that, rather than serving as engines of growth, cities in Africa, and perhaps other developing economies, are sights of all forms of nuisance, resulting from such problems as environmental management, urban pollution, poor sanitation, inadequate and substandard housing, inefficient transportation systems, overstressed infrastructure, and urban crimes, among several others, all of which are directly or indirectly related to the level, type or lack of planning and management of urban development. A particular feature, which has made the planning and management of development activities in most African communities difficult, is informal urbanism, while the process may be described as informal urbanization. This perhaps informed the decision of the Association of African Planning Schools (AAPS) in 2010 and UN-habitat-established network, Habitat University Network Initiative (UNI) at its Global Meeting at the University of South Florida, Tampa, USA in 2013, to prioritize "Informality" and "Informal Urbanization" respectively as one of the thematic areas, to which members of the international association and network are encouraged to direct their research attention (AAPS, 2010

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and HPUI, 2013).

It was against this background that this study, which was informed by these two different institutional initiatives, attempted to investigate issues surrounding informal urbanization, more importantly, how to incorporate informality question into formal land use and urban development planning process. With a particular emphasis on Nigeria situation, the study took off with an exploration of informal urbanization issues, including theoretical perspectives and dimensions of informality and attempted a case study approach to analysing the issues surrounding informal land use and/or human activities in two Nigerian cities. This shall be part of efforts towards achieving sustainable development goals 1,2,3, and 8 which talk about eradication of poverty, hunger (which may be the reason for the spread of informal activities and/or land use) as well as issues pertaining to healthy living, sustained, inclusive and sustainable economic growth, in African region.

Literature Review

Informality in African cities and the urbanization process is assuming a phenomenal dimension and fast expanding. It is now gaining the attention of researchers, development analysts, government officials and international agencies and associations, as well as prompting a massive profusion of literature (ILO, 2002, Chen, 2007). However, most of these studies and efforts were hinged on the controversial conception of informality as envisioned by Hart (1973) principally to describe a variety of forms of employment or economic activities mainly on the fringes of the organised or 'modern' part of the economy and sometimes technically illegal. Therefore, whenever the phrase 'informality' comes up in the literature, it is often linked to businesses not amenable to official regulation. As a result, most studies on informality in Africa have a myopic conception of informality as solely an economic phenomenon. Such studies focussed only on the economic dimension (Ademu, 2006; Akintoye, 2008; Arimah, 2001; Ogunkan et al, 2015), but ignored other aspects of informality, particularly land use.

Although, some other studies have attempted to go beyond the purview of economic dimension of informality to include other properties of informality such as informal housing and settlements (Agbola and Jinadu, 1997; Ikejiofor, 2006; Egbu et al, 2008; Ogunkan and Adeboyejo, 2015), informal transportation, informal waste management (Agunwamba, 1998; Adama, 2007; Afon, 2007) among other sub-categories of informality. However, the recommendations that emanated from these studies were atomistic. There is, therefore, an obvious need for holistic research on African informality to cover a wide range of informality elements that will provide the feedbacks necessary to avert a slide of informality research into "ritual academic blind alleys" (Flyvbjerg, 2004). Such studies must view informality as "much more than an economic sector", but also a mode of production of space (Roy, 2003). It is, therefore, opposite to talk of informality in Africa as a "system of informality" (Roy, 2003), which is best captured according to Watson's (2009) conceptualisation of informality as encompassing "forms of income generation, forms of settlement and housing, and forms of negotiating life in the city". All these may be spatially expressed as informal land use, which is an emerging concept in the literature of urban planning, urban studies, urban management and related fields. There have not been adequate empirical studies to reaffirm relevant postulates and inform policy directions in this regard. This has been a research gap in urban studies for some time now. Notable in the extant literature in this area is the work of Onyebueke and Geyer (2011), but their analysis and recommendations were based on article synthesis rather than empirical analysis of the phenomenon. Such empirical studies, which are being exemplified here, may be geared towards providing answers to such questions as: what are the magnitude and various dimensions of informality in Africa communities? What are the factors affecting informality and/or informal urbanization in Africa? How do we integrate informality issue into urban land use planning? These, among others, constituted the focus of this study, which culminated into what is described here as an urban planner's model of integrating informality or informal land use into the formal land use and development planning.

Theoretical and Conceptual Perspectives

Theoretical Perspectives of Informality

The informality literature is vast. There is a multitude of conceptualisations and definitions (Guha-Khasnobis, et al, 2006). This perhaps has sparked off many theoretical perspectives on the causes, nature and composition of informality. However, four contrasting frames dominate the current discussion of informality. As such, the debate on informality has crystallized into four dominant schools of thought. These include the dualist, structuralist, legalist and voluntarist schools of thought.

The dualist perspective views the formal and informal sectors as having almost no links with each other, in theory, represent almost two opposite parts of the economy (Ndhlovu, 2011).The Dualists subscribe to the notion that informal units and activities have a few (if any) linkages to the formal economy but, rather, operate as a distinct separate sector of the economy and that the informal workforce-assumed to be largely self-employed—comprise the less advantaged sector of a dualistic or segmented labour market (Chen, 2012). This school of thought links the persistence of informal activities to insufficient formal job opportunities as a result of a slow rate of economic development and a faster rate of urbanization (Tokman 1978). Therefore, the theorists working within this, The Dualist school, sees the informal sector of the economy as comprising marginal activities—distinct from and not related to the formal sector—that provide income for the poor and a safety net in times of crisis (Hart 1973; ILO 1972; Sethuraman 1976; Tokman 1978). They argue that informal operators are excluded from modern economic opportunities due to imbalances between the growth rates of the population and of modern industrial employment, and a mismatch between people's skills and the structure of modern economic opportunities.

In a swift response to the dualists' sentiment, there emerged the structuralist understanding of informality. The structuralists' view is at variance with the dualism argument of the economic system and emphasises the way in which forms of production, productive units, technologies, and workers are integrated into various parts of the economy (Rakowski 1994: 503). Based on their units of analysis, the structuralists assert that both the formal and informal economies are intrinsically linked. They argue that there are evidences of informality in formal enterprises. For instance, several formal enterprises employ wage workers under informal employment, such as part time workers, temporary workers and home workers, who were employed in formal enterprises through contracting or sub-contracting arrangements. The structuralists argue that the nature of capitalism/capitalist growth drives informality. Specifically, the attempts by formal firms to reduce labour costs and increase competitiveness and the reaction of formal firms to the power of organized labour, state regulation of the economy (notably, taxes and social legislation); to global competition; and to the process of industrialization (notably, off-shore industries, subcontracting chains, and flexible specialization) (Chen, 2012). They see both informal enterprises and informal wage workers as subordinated to the interests of capitalist development, providing cheap goods and services (Moser, 1978; Portes et al, 1989). They are of the opinion that governments should address the unequal relationship between "big businesses" and subordinated producers and workers by regulating both commercial and employment relationships (Chen, 2012)

The legalist school of thought on informality was led by economist Hernando De Soto, who focuses on entrepreneurs and institutional constraints that make informality a rational economic strategy. The legalists attribute the growth of informal enterprises to the strict rules and regulation, taxes, time and effort involved in complying with formal state procedures (De Soto, 1989). The legalist school sees the informal sector as comprising "plucky" micro-entrepreneurs, who choose to operate informally in order to avoid the costs, time and effort of formal registration and who need property rights to convert their assets into legally recognized assets (De Soto 1989, 2000). They, therefore, blame the rise of informality phenomenon to excessive state regulation and not to the dynamics of labour market. The legalists see informality as radical breaking of legal barrier, a natural response to real market forces, and not to the rise in unemployment and the need for jobs. The legalists focus on informal enterprises and the formal regulatory environment to the relative neglect of informal wage workers and the formal economy per se. Even at this, they acknowledge that formal firms — what De Soto calls "mercantilist" interests — collude with government to set the bureaucratic "rules of the game" (De Soto 1989). They argue that governments should introduce simplified bureaucratic procedures to encourage informal enterprises to register and extend legal property rights for

the assets held by informal operators in order to unleash their productive potential and convert their assets into real capital.

Both the legalists and the voluntarists share, somewhat, related opinion in that informal entrepreneurs deliberately seek to avoid regulations and taxation but, unlike the legalist, the voluntarists do not blame the cumbersome registration procedures. Rather, the voluntarists argue that informal operators choose to operate informally—after weighing the costs-benefits of informality relative to formality (Chen, 2012). Yet, unlike the structuralist school, the voluntarists pay relatively little attention to the economic linkages between informal enterprises and formal firms, but subscribe to the notion that informal enterprises create unfair competition for formal enterprises, because they avoid formal regulations, taxes, and other costs of production. They argue that informal enterprises should be brought under the formal regulatory environment in order to increase the tax base and reduce the unfair competition to formal businesses.

Be that as it may, the exclusion of the informal operators in the scheme of things may lead to their looking for a less acceptable form of eking out a living, and the negative implication for environmental sustainability, which calls for the concern of different categories of stakeholders in urban management. More so, all the views above (dualist, structuralist, legalist and voluntarist) have one thing in common – they all express economic perspective of informality. In other words, they all see informality in the context of informal economy or informal sector activities. While the views help in understanding the factors of informality, balancing the analysis with the spatial expression and other dimensions of the phenomenon will help a lot in devising ways of integrating the phenomenon into the formal urban economy, land use and development planning. This is a gap that needs be filled in the existing body of knowledge that can inform appropriate policy decisions, and it has necessitated the conceptual clarification in the following section.

Conceptual Framework

The concept of informality is not so popular in the literature, even though it is usually used unconsciously to refer to illegality, 'unofficiality', lack of planning, irregularity, inconsistency, state of not covered by legislation, state of not being accounted for, state of not following any laid down rules, etc. In other words, informal events, activities, or spaces are easier identified than defined. However, the general usage and issues surrounding informality suggest such terminologies as: informal land use, informal housing, settlement or urbanization, and informal economy, which are not so mutually exclusive, but interwoven.

Informal Land Use: The informal land use is a construct used to capture all human activities, including petty trading, mini-market, restaurant, beer parlour and related commercial activities, cottage industries, like blacksmithing, cassava flour processing, carpentry/ furniture works, grain milling, shoe mending, cloth weaving, road-side printing, and soap-making, and service industries, like road-side mechanics, panel-beating, welding/metal works, tailoring, vulcanizing, barbering and indiscriminate commercial motor-cycle parks, among others, in the less organized private sector. Informal land use refers to all land use activities that "thrive in their thousands in the cities of the less developed countries, transforming them into beehives of minuscule enterprises all of which are pitched in stiff competition for dwindling space and patronage" (UNDP,1996). While each of these activities may belong to one or other category of traditional land uses – residential, commercial, and industrial, among others – the conventional land use planning rarely accommodates them to co-exist with similar uses in harmony.

Informal Housing/Settlement: Informal housing refers to any form of housing that evades all or one form of control and documentation or the other, including physical development, title registration, taxation, etc. It also includes unauthorized buildings, makeshifts and other forms of squatter settlements. While most of the rural housing are informal, the term informal settlement is usually used to describe an urban neighbourhood with a larger percentage of such informal housing than the formal one. The informal settlement is thus homes of the poverty-ridden, unemployed or underemployed urban dwellers, particularly migrants who provide cheap, unskilled and semi-skilled labour, most of whom are 'faceless' and very mobile urban dwellers, who have little or no value for cultural ties.

Informal Economy: Informal economy is a terminology used to capture all economic activities outside the formally recognized or registered and properly controlled sectors of the economy, which are not captured in such economic measures as taxation and gross domestic product (GDP). The spatial dimension of their activities is

described as informal land use. Because of its evolving popularity in political economics, issues surrounding informal economy have generated arguments and counter arguments of different schools of thought examined earlier.

Informal Urbanization: Urbanization is described basically as increasing agglomeration of human population and/or activities in a growing settlement. Informal urbanization, therefore refers to the process of increasing human population, activities and uncontrolled spatial expansion of settlement, triggered and characterised basically by increasing number and quantum of less regulated physical development, economic and industrial activities.

It is important to note that there are a lot of interconnections between the various dimensions highlighted above. While the informal economy refers to the various activities of the informal sector of the economy, the factor of poverty, which necessitates the springing up of the activities, where they are, and the poor mobility of the operators encourages the emergence of informal housing or squatter settlements. The spatial expression of them all is conceptualised here as informal land use, while the process of increasing magnitude of the entire phenomenon is called informal urbanization.

Methodology

The study was designed to be a quantitative analysis of the problem of informality. It analysed the situation of informal land use in Nigeria with a case study of two cities (a capital and a non-capital city) where an in-depth study of the land use and how to integrate same into formal land use planning process was established. The choice of the two cities was informed by the need to capture the capital-noncapital, north-south, and well-and-moderately-urban dichotomies represented by Ilorin and Ogbomoso respectively.

Data Sources and Collection Techniques

Apart from the secondary data, which included human population, urbanization levels and rates, among others, the study benefitted mainly from primary data. The primary data were of two main categories. The first category was land use data obtained from observations and recordings (using a recording format prepared for the purpose) by trained research assistants along transport corridors selected purposively across different segments, residential and other land use areas of the two cities of Ilorin (capital) and Ogbomoso (non-capital), Nigeria. The recording format is a table with the first column indicating the number of investigating units, with each unit covering a distance between one electric pole and the third one, and the other columns for land use variables as indicated below.

The other category was socio-economic-cum-cultural characteristics data, obtained through questionnaire administration, using random systematic sampling (along same transport corridors as for land use data) in which a total of 400 respondents, who were household heads (202 and 198 from Ilorin and Ogbomoso respectively), were covered.

The survey adopted the distance between one electric pole and the third one as a unit of investigation at which pieces of information on such variables as: (1) informal land use component, (2) the predominant land use type, (3) land use mix, and (4) land use intensity, among others, were (measured as shown 4.2 below) obtained to cover not less than a half of both sides of the two selected roads, which cut across different segments of the cities. With this, a total of 301 investigating units (136 and 165 in Ogbomoso and Ilorin respectively) were covered.

Treatment/ Operationalization of Variables

The informal land use was made to cover all space-occupying business activities in the sector (as discussed earlier). This was measured through a surrogate measure or index - incidence of informal land use (IILU). The index is a land use variable, which is obtained by assigning weight scores of 5 to a floor, 3 to a plot not built on but used for informal activity(ies), 2 to a shop, 1 to a kiosk, and ½ to a counter or a related structure, depending on the number of the floor(s), plot(s), shop(s) and kiosk(s), etc. at each investigating unit. That is, the IILU is the sum of the products of the weight scores of the different activity-spaces and their numbers at each investigating unit. This gave rise to a ratio data, which was amenable to both parametric and non-parametric tests.

Land use intensity (LUI) is a density index, which measures the quantum of physical development per plot of about 450 square metres. It was measured by assigning weights of 5 to a floor, 3 to a shop/container, 2 to a kiosk and 1 to a counter or similar structure. That is, the LUI is the sum of products of the weight scores assigned to different forms of physical development and their numbers at each investigating unit. This also gave rise to a ratio data, which was amenable to both parametric and non-parametric tests.

Land use mix is defined as the mixture or combination of uses that co-exist either legally or illegally within each investigating unit. It was measured simply by considering the number of uses identifiable within each investigating unit. This was also a ratio data.

The predominant land use type is that which occupies the largest proportion of space, as adjudged by the expert observer. It should be noted that this is a nominal independent variable whose relationship with the dependent ratio variable IILU is analysed with ANOVA.

Socio-economic and other related variables used include: (1) level of participation in informal activities (defined as the percentage of people who are engaged in the informal activity as their major occupations divided by the percentage of those whose major occupations are not in the informal sector), (2) age, (3) income, (4) major occupation, (5) gender, (6) nativity, (7) employment status, (8) education, and (9) length of residency , all were measured directly as interval/ratio data, where possible, or converted to percentages or other ratios and means in some cases, to make them ratio data and amenable to parametric model of linear regression analysis detailed below.

Data Analysis

The land use and socio-cultural variables were first factor-analysed (using principal component variant) to reduce the long list of sixteen variables into an understandable set of five components as dependent variables or factors, which were later fed into a multiple regression model with the incidence of informal land use IILU as dependent variable. This was used to explain the effects of certain land use and socio-economic-cum-cultural variables on the incidence of informal land use (IILU) in a neighbourhood, and also used to make cases for the spatial performances of informal land use given certain conditions of other land use and socio-cultural parameters, through some simulation processes.

The regression model is presented mathematically as:

$$\mathbf{y = a + b_1x_1 + b_2x_2 + b_3x_3 + \ldots\ldots + b_5x_5 + e}$$

Where:

y = Incidence of Informal Land Use, IILU (Dependent variable), $x_1 - x_5$ = componet1, component 2 component 3, component 4 and component 5

The data were appropriate for regression analysis in that: (1) the dependent variable, y, was measured as ratio data, while the independent variables, x_1 - x_5, were standardized to make them usable as ratio data; (2) the number of cases involved was large enough (400) to possess the characteristics similar to those of the normal distribution; and (3) the relationship between the dependent variable and the emerged components (independent variables) is linear (R = 0.878); and (4) multico-llinearity was prevented as the emerged components were truly independent as there was no case of a significant relationship between any two of them.

The model was, in addition to analysis of variance (F-test) and Chi-square, were necessary to test some relationships between and involving certain nominal variables.

Findings and Discussion

This section attempts to analyse the contributions of certain land use types to IISLU and takes a step further to developing a model capable of explaining the process of integrating the informal land use to the formal land use planning in Nigerian and similar other cities in Africa.

Types and Distribution of Informal Land Use (ILU)

Five broad categories of ILU were identified. These include trading of different kinds, small-scale services, automobile artisans, cottage industries, and others that are difficult to put under any of the categories. Overall, trading constitutes the majority (59.5%) of the ILU. With 59.4% and 59.6% of the category in Ilorin and Ogbomoso respectively, the situation is about the same in the two cities. This is followed by small-scale services, automobile artisans and cottage industries in that order with a proportion each of 25.3%, 7.8% and 3.5% respectively. There are, however, significant inter-city variations in the distribution of these three categories of ILU. For example, while the proportions for service providers and artisans in Ilorin are 19.3 and 10.9 respectively, the proportions for the same categories of the activities in Ogbomoso are 31.3 and 4.5 respectively. This accounts for the significant inter-city variation observed in the chi-square result of 16.24 and its p-value of 0.003 (less than 0.01). This implies that the type of ILU found in urban centre depends on the urban nature, and perhaps its function. All these need to be put into consideration while trying to put a structure in place towards integrating the sector into the formal land use planning. Meanwhile, the question now is: how is the generated Incidence of Informal land use (IILU) distributed among the various conventional land uses?

Table 1 shows the distribution of IILU among other urban land uses (excluding transportation):

Table 1: Incidence of Informal Land Use (IILU) within Other Land uses

Land Use	IILU	%	Rank	Remark	F-value	P-value
Residential	30.06	22.01	2nd	High		
Commercial	31.51	37.84	1st	High		
Industrial	29.25	21.49	3rd	High		
Public/Semi-public	10.32	7.58	4th	Low	18.4	0.000
Recreation	6.25	4.59	5th	Low		
Agriculture	6.00	4.41	6th	Low		
Others	2.75	2.02	7th	Low		
Total	136.14	100				

Source: Authors' survey, 2015.

It is revealed from Table 1 that, with the IILU proportions of 37.84, 22.01 and 21.49 percent, commercial, residential and industrial land uses respectively, and in that order, are highest generators/attractors of ILU, while public/semi-public, recreation, and urban agriculture with 7.58, 4.59, and 4.41 percent respectively are low generators/attractors of ILU. With f-value of 18.4 and p-value of approximately 0.00, such differences are statistically significant. That is, incidence of informal sector land use in an urban space depends on the predominant land use. This is an improvement on the earlier knowledge and findings, which emphasize the close relationship between incidence of informal sector activities and residential land use only (Jelili & Adedibu, 2006; Okeke, 2000; Onyebueke, 2000). It is established here that, while acknowledging the relationship between the ILU and residential land use (as a second highest generator/ attractor), the relationships between IILU and commercial and industrial land uses are significantly high.

It is important to mention that identification of such broad categories of urban land use only provides the relative importance of each broad land use category in the springing up of ILU. The analysis does not give us what amount of a given land use or land use mix with certain socio-cultural background will generate as IILU. This can only be done by analysing land use categories not in isolation of other determining factors of IILU. Such factors as density, formality/organization, non-conforming land use and socio-cultural variables (itemized under methodology), when blended with other land use variables (here, factor-analysed) provides a structure, which is more meaningful and helps (when subjected to a predictive model) in explaining the process of integrating the ILU. This is the concern of the next section. Before then, however, it is necessary to examine the basic socioeconomic-cum-cultural characteristics of the informal operators briefly.

It is observed that the mean age, monthly income, length of stay, and level of participation in the sector are 33.74, N28040.40, 21.29 and 33.67 respectively for Ilorin, while the figures are 32.65, N19038.64, 21.47 and 55.27 for the same variables in Ogbomoso. Also, the percentages of female, native people, self-employed, and of those with less than secondary education are 39.1, 48.7, 69.8 and 22.95 respectively for operators in Ilorin, while observations on the same set of variables for those in Ogbomoso are 43.4, 64.6, 79.33 and 32.56 respectively. Comparing and testing the observations for the two cities, the results show that with p-values of 0.033 and 0.001, it is only observations on monthly income and nativity that vary significantly with city (in favour of Ilorin with a more average monthly income and more heterogeneous population).

The Emerged Structure in the Land Use and Socio-Cultural Variables Analysis

The sixteen independent land use and socio-cultural variables were collapsed into six components, which were named after and defined according to the variables that loaded highly (either positively or negatively) on each. All the variables were distributed to the appropriate components by considering the highest absolute loading for each. This gives a structure that produces an identity for each component.

Table 2 shows that component 1, with 23.68 percent of the variance, has age, length of residency, little or no formal education, nativity and self-employment loading highly with it, as a result, described as 'less heterogeneous, indigenous neighbourhood', because such variables are characteristics of aged, indigenous urban neighbourhoods. Component 2, on the other hand, has such variables as

major occupation in the informal sector and level of participation in the sector loading highly with it, as a result, described as 'level of participation'. The component accounts for 17.6 percent of the total variance.

Table 2: Grouping of Variables and Labels for the Emerged Components

Component	Label (Description)	% of Variance	Variables defining each
1	Indigenous less heterogeneous neighbourhood	23.68	Age, length of residency, little or no education, nativity, self-employment
2	Level of Participation in the sector	17.16	Major occupation in the sector, level of participation in the sector
3	High density commercial land use	14.60	Land use intensity, commercial land use
4	Residential Land use complexity	11.63	Land use mix, residential land use
5	Female Dominated self-employment	10.06	Income, % of female, self-employment
6	Residual factor	9.16	Income

Source: Author's Computation (2015)

Component 3 is described as 'high-density commercial land use' to reflect such variables as land use intensity and commercial land use, which load highly with it. It accounts for 14.6 percent of the variance. The 4th component, which accounts for 11.63 percent of the variance, has such variables as land use mix and residential land use loading highly with it, as a result, labelled 'residential land use complex'.

Accounting for about 10.06 percent of the variance is component 5. It has the variables of income, percentage of female and self-employment loading highly with it, as a result, christened 'female-dominated self-employment'. The sixth component, on the other hand, is regarded as a residual component, not only because of its unclear nature, but also, and more importantly, because it accounts for less than 10 percent of the variance.

The set of scores of the five components, which are composites of their respective variables, were fed into a regression model as independent variables (factors) with IILU as dependent variable. The result shows that, with a p-value of 0.000, the relationship between IILU and the five factors jointly (R) is 0.878, while the coefficient of determination (R square) is 0.771. This implies that 77.1 percent of a change in IILU is explained by the five factors jointly. However, the nature and magnitude of the relationship between each of the factors and IILU separately vary. It is observed that, with a p-value of approximately 0.000 (i.e. less than 0.01) and t-value of 0.8114, only factor 3 has a significant and highest relationship with the IILU, which is a confirmation of the earlier result that commercial land use is the highest generator/attractor of ILU.

Nonetheless, the contributions of all the factors to the IILU are explained in the calibrated model, using the regression coefficients.

From the results, a = nil (for standardized coefficients), $b_1 = -0.025$, $b_2 = -0.125$, $b_3 = 0.847$, $b_4 = 0.049$ and $b_5 = -0.189$, while y = IILU Therefore, the regression model is given as:

$$\mathbf{y = b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5}$$

That is: $y = -0.025x_1 - 0.125x_2 + 0.847x_3 + 0.049x_4 - 0.189x_5$

Model Simulation and Discussion

From the model (equation) above, it is inferred that a unit change in:

(i) component 1 would result in about 0.025 change in IILU

(ii) component 2 would result in about 0.125 change in IILU

(iii) component 3 would result in about 0.847 change in IILU

(iv) component 4 would result in about 0.049 change in IILU

(v) component 5 would result in about 0.189 change in IILU

The sign (negative or positive) indicates whether the relationship is direct or inverse. In other words, when it is positive, it implies that as the factor increases so does the IILU, and vice-versa.

Supposing we take each of the components as a land area of one hectare for: (1) indigenous, less heterogeneous sub-population, (2) people (a socio-economic class) whose major occupation are in the informal sector, (3) high-density commercial area, (4) urban residents other than those captured in the other components/categories here, and (5) participants in female-dominated self-businesses, respectively (as suggested by the model), the five (5) hectares of land will have in it an amount of informal land

use (IILU) given as:

IISLU = - 0.025(1) – 0.125(1) + 0.847(1) + 0.049(1) – 0.189(1)

= - 0.025 – 0.125 + 0.847 + 0.049 – 0.189

= 0.557 hectare

This is a hypothetical case; a given urban neighbourhood will have a given size with appropriate land areas for different uses. The sizes of land areas specified for different land uses of the neighbourhood shall be used in the formula to get the appropriate amount of land to be developed as informal land use within and among land uses.

Note, however, that in the emerged structure not all land use categories fed into the model become conspicuous. Majority of them are subsumed in the other conspicuous components or land use categories, not because they are less important, but because of the scale and nature of such land uses, more importantly, because of the degree of planlessness in Nigerian and maybe in other similar African countries' cities. Nevertheless, all the land uses are taken care of in explaining or predicting the IILU to be anticipated given a unit form of physical development. How does it happen?

If we refer back to our hypothetical case of 5 hectares of land area, the 0.557 hectare of land to be produced as the IILU is distributed among all the existing traditional land use categories based on the expected proportion to be contributed by each, as revealed earlier in Table 1.

Note also that the model has directly or indirectly taken care of all classes of people. For example, while component 1 captures indigenous people who may wish to stay together as a community, irrespective of whether or not they participate in the informal sector activities, component 2 is all about major participants in the sector, whether or not they are native of the town. Component 3, on the other hand, does not talk on class of people. Component 4 is about residential areas for different socio-economic groups outside those mentioned in other components, while component 5 captures participants in female-dominated businesses.

This implies that, for any urban neighbourhood of any known size and configuration, in terms of overall spatial extent, land area for each conspicuous land use and class of people to be occupying the neighbourhood, the model is adoptable and adaptable, and hereby recommended for use in integrating the informal land use into formal land use planning, and for test for cities of similar configurations in Africa.

Conclusion and Recommendation

From urban planner's perspective, this study has established and concluded that incidence and pattern of informal land use are predictable for urban neighbourhoods in African countries with similar urbanization drivers with the sampled Nigerian cities of Ilorin and Ogbomoso. While incidence of informal land use to be generated or attracted by each of the other formal and/or traditional land use categories may be predetermined, the land use complex for a given urban neighbourhood with certain anticipated socio-economic-cum-cultural characteristics may be established. A model for achieving this, which may be adopted or adapted, is hereby recommended for consideration.

It is also concluded that, given the observed diverse factors accounting for the growth of informality in African towns and cities, such as inadequate formal jobs, poor planning, and poverty, among others, policy measures should be directed towards the affected operators of informal activities in a way to capture them in economic development planning process. Appropriate documentation of such activities should be done, but with a pro-poor tax or registration policy, which may encourage their 'parading themselves' as drivers of the informal economy.

It is also recommended that more research efforts be directed at unfolding other areas such as the linkages between the formal and informal land use, and on similar areas of study to cover other Nigerian and African cities for more robust comparison, inferences and paths to sustainable integration of the informal with the formal components of urbanization process in Africa.

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A Prototype of Decision Support Approach to Land Rezoning/Redevelopment in Sustainable Urban Renewal

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Abstract: Urban renewal has become an unavoidable phenomenon in many developed countries and regions. How to redevelop a piece of land with an appropriate use, which is compatible with current land uses in the surrounding area, is a big challenge encountered by urban planners and decision-makers. This paper provides a prototype of GIS-based approach, which can quantitatively assess land-use suitability for land rezoning/redevelopment in urban renewal areas. Specifically, this approach consists of a model for land-use suitability analysis and a land information database affiliated by providing required data and information for the suitability analysis. In addition, five types of land use are considered in this model: residential, commercial, industrial, G/IC (government/institution and community) and open space. Research methods such as expert interview, focus group discussion and case study are applied, and several advanced techniques such as GIS data processing and spatial analysis, multi-criterion analysis, AHP method are used for building this model and database. As demonstrated in the case study, people can be assisted in making decisions for land redevelopment and the planning process can be supported by using this approach to assess urban land-use suitability for site reuse in sustainable urban renewal.

Key words: Land rezoning, land redevelopment, urban renewal, GIS-based, decision support approach

Introduction

Urban renewal is an imminent issue faced by many developed cities all over the world (Shen et al., 2014). As cities are getting older, central developed areas on which a large number of buildings are dilapidated and deteriorating usually cannot accommodate the changing needs of urban sustainable development. As a result, urban renewal projects increasingly take place in central cities, during which land rezoning and redevelopment is the main task and goal (Wang et al., 2013). However, land rezoning/redevelopment is not a routine job, and it is much complicated due to the complex decision-making conditions. Current land use in urban renewal areas is mostly mixed, and population density within these areas is always high (Zheng et al., 2014). Since stakeholders with various aspirations from different sectors are highly involved in the decision-making process, land rezoning/redevelopment often takes longer time than expectation. Therefore, how to facilitate the decision-making process of land rezoning/redevelopment is a long-lasting problem encountered by planning practitioners, and a tool or solution to supporting the complex process of land-use decision-making is highly needed.

This paper introduces an approach to supporting the decision-making process of land rezoning and redevelopment in urban renewal, using GIS techniques. First, an overview of land rezoning/redevelopment in urban renewal is given based on a comprehensive literature review. Second, the development process of the GIS-based approach is described. Third, a case study in Hong Kong is conducted to show the applicability of the approach. Finally, strengths and limitations of the approach are discussed and conclusions of the paper are drawn in the end.

An Overview of Land Rezoning/Redevelopment in Urban Renewal

Land Redevelopment as A Tool for Sustainable Urban Renewal

Urban renewal aims to deal with urban decay and change deteriorated built environment to meet current demand or better usage. The term “renewal” can be replaced by “regeneration” or “revitalization” with the same meaning (Roberts & Sykes, 2000). Urban renewal areas refer to built-up areas/districts where infrastructure such as road, water and electricity supply, and other service facilities have been established within the city boundaries. These areas usually situate in the central city or the

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downtown of cities, on which, probably, many old buildings need to be redeveloped or revitalized due to deterioration and lack of maintenance.

Urban renewal is regarded as a process involving "physical change, or change in the intensity of use of land and buildings" stemming from the "social, economic and environmental forces" imposed on the urban areas (Couch, 1990). It is a useful tool to cope with changing urban environment, aiming at meeting various social and economic objectives through regenerating the existing built environment. During the process of renewal design, design guidance and development control, including both physical criteria and visual criteria, regulate the implementation of the design to ensure a more livable and ecological urban space. Today's urban renewal is people-oriented and the outcomes of renewal projects serve mainly for living condition improvement. Population characteristics, household structures, community and neighbourhood changes, and social needs of certain vulnerable groups should be considered to measure the social impacts of urban renewal. Internal mechanism and dynamics of urban space re-allocation can be examined based on economic concerns, such as the economic life of a building and the timing of redevelopment, and the economics of urban regeneration. Therefore, urban renewal can be successfully achieved only if the three elements of sustainable development, namely social, economic, and environmental concerns, are fully considered.

Land redevelopment is one way of resource re-use intrinsically reflecting the concept of sustainable development (Wang et al., 2014). In pace with urban development and increasing demands for a better living environment, the target of urban renewal has moved from the oversimplified clearance of large-scale slums to the improvement and rehabilitation of older areas (Couch, 1990). For instance, land redevelopment for housing improvement became the core of urban renewal policy several decades ago for the sake of improving the sustainability of urban services development.

Factors Affecting Decision-making of Land Rezoning/Redevelopment

In terms of sustainability indicators for urban development, Ambiente Italia (2003) identified ten indicator groups of common local sustainability by integrating local actions into sustainability measurements, such as Citizen satisfaction with the local community, Local mobility and passenger transportation, Availability of local public open areas and services, Quality of local air, Noise pollution, and Sustainable land use. Practically, the interpretation of sustainability at the local level (street/site scale) is quite different from the large-scale sustainability analysis. For local communities, the emphasis and difficulty is to measure and relate social attributes (e.g. local population density), environmental concerns (e.g. local air quality), and abstract perceptions, like aesthetics, to the concept of sustainability.

Land rezoning, in essence, is a type of land use planning at the site level, which is called site planning. Site planning focuses on the smallest scale of controlled urban development. Since a renewal project normally covers one or two sites/lots, land redevelopment for urban renewal is mainly a process of site planning in central cities. During the planning, neighbourhood development is highly related to planning implementation. According to the Leadership Energy Efficiency Design (LEED) rating system for neighbourhood development (USGBC, 2009), indicators for assessing the sustainability of neighbourhood development are identified from five specific aspects: Smart location and linkage, Neighbourhood pattern and design, Green infrastructure and buildings, Innovation and design process, and Regional priority credit.

Decision-making of land rezoning/redevelopment includes a process of land-use suitability assessment (LUSA), which is an appropriate means of quantifying constraints and opportunities of land redevelopment, and is able to support the decision-making process. Land-use suitability assessment is essentially a process involving multi-criteria decision analysis (MCDA). In other words, LUSA is an evaluation/decision problem with multiple factors, and these factors, indeed, affect the decision results. LUSA studies initially focused on agricultural land or meadowland in rural areas. For example, Bojorquez-tapia et al. (2001) presented a GIS-based multivariate approach for land suitability assessment with a public participation base and identified nine environmental criteria for suitability assessment, including Brackish water, Distance to major roads, Distance to agriculture and cattle ranching land, Coastal lagoons, Mangrove, Deciduous forest and scrubland, Soil type, Flood prone zones and Riparian zones. Burnside et al. (2002) developed a GIS-based habitat suitability model to support strategic landscape evaluation and to provide a method of identifying target (most suitable) sites for grassland restoration, in which three topographic variables – Elevation, Slope and Aspect - were

assessed. Jafari and Zaredar (2010) adopted a spatial AHP method to determine the most suitable areas for rangelands, which involved 14 criteria, namely Erosion, Soil hydrology, Soil depth, Soil structure, Soil texture, Vegetation type, Vegetation density, Rainfall, Temperature, Slope, Elevation, Land use, Distance from population centres and Distance from surface water.

In addition, LUSA studies, particularly on urban land, have been conducted over the last few years and some common factors affecting land-use decisions were identified. For instance, Dai et al. (2001) illustrated a GIS-aided geo-environmental evaluation for urban land use planning from the viewpoint of geological features of land. Thirteen factors for suitability evaluation - Slope, Elevation, Surficial geology, Formation combination, Lithology of bearing layer, Depth to groundwater table, Corrosive potential of groundwater, Groundwater rise, Distance to debris flow, Distance to landsliding, Liquefaction potential and Distance to fault-

were selected for high-rise buildings, multi-storey buildings, low-rise buildings, waste disposal and natural conservation urban land use categories. Gomes and Lins (2002) applied a method integrating GIS and MCDA to aiding spatial decisions for municipal district evaluation in respect to quality of urban life. They defined 14 exclusion criteria for measuring the quality of urban life from the aspects of infrastructure, education, security, health and work. Aly et al. (2005) considered suitability assessment for urban development from the perspective of engineering geology, by developing a GIS-based model that incorporates suitability factors, such as land use/cover, types of soil, Karst feature distribution, fracture densities, slopes, distances to major faults, streams and road network, and city boundaries.

Specifically, different sets of affecting factors were categorized in accordance to various land uses. Joerin et al. (2001) described a decision support method for land use suitability assessment for housing by combining MCDA with GIS, identifying eight significant criteria. Yang et al. (2008) incorporated remote sensing, landscape ecological analysis and GIS into their land suitability modeling to develop a spatial analysis system for evaluating the suitability of urban expansion land. Eight factors were used, comprising Surface water parameter, Normalized difference vegetation index (NDVI), Soil penetrability, Soil fertility, Slope, Foundation capacity, Resident land use information and Landscape value. Dai et al. (2008) evaluated the suitability of industrial land use in land use planning of industrial cities on the basis of ecological suitability evaluation, identifying seven factors: Current land use, Slope, Distance to river, Density of green surface, Distribution of pollutant sources, Distance to road network and Distance to residential areas. Wu et al. (2009) investigated urban land use patterns by modeling the spatial autocorrelation of land use types, with the purpose of deriving better spatial land use pattern on the basis of terrain characteristics and infrastructural conditions. In their study, the land uses were divided into four types - cultivated land, forest land, construction land and virgin land - and 12 driving factors, including distance to town, distance to river, distance to road, population density, digital elevation model (DEM), slope and aspect to represent the geophysical and socio-economic conditions involved. In particular, Wang et al. (2014) developed a framework of factors, which affect decision-making process of land use planning for urban renewal projects, and seven - factor categories, including environmental, social, economic, political, locational, cultural, and physical factors, were identified.

A Prototype of Decision Support Approach

Decision Support Model

The development of the model includes criterion identification, weighting assignment, and rating standard determination.

Criterion Identification

Identifying the criteria for LUSA in sustainable urban renewal is the first step in model development. Basically, one criterion can be regarded as one affecting factor considered in the decision-making process. Factors/criteria play an important role in the measurement and quantitative analysis in the planning practice, and the relationship between planning theory, measurement and policy-making is described as a tangled triangle, which means that the measurement should be guided by theories and the factors are developed to achieve the quantitative or qualitative measurement for facilitating policy-making. Therefore, the criteria should be identified based not only on relevant literature from planning theories, but also on expert opinions from planning practice.

Based on the planning factors normally considered in site analysis and land rezoning/redevelopment, a general list of criteria for land-use decision-making in urban renewal can be identified to assess land-use suitability and

measure the sustainability of land-use reallocation.

Weighting Assignment

Weightings of each criterion are determined by using the AHP method, and importance scores (the weightings) are automatically calculated in a software toolkit developed on the principle of AHP theory. AHP is a powerful and commonly used tool for decision-making in land-use suitability issues, involving social, environmental and economic factors (Jafari & Zaredar, 2010). In combination with GIS technology, the Spatial AHP (SAHP) method was introduced for spatial multi-criterion analysis and has become a new feature in LUSA. AHP has several advantages over conventional LUSA techniques. Firstly, it relies less on the completeness of data, and more on expert opinions/preferences concerning the factors of land suitability. Secondly, it allows both planners and the other stakeholders to express their views in making land-use suitability measurements. Without the AHP method, the land suitability mapping technique cannot incorporate the preferences and considerations of different stakeholders. Thirdly, it is more transparent and more likely to be accepted, especially when the results of LUSA serve as a reference for land use decisions in practice.

To achieve this process, a focus group meeting (like a charrette) is conducted to collect the opinions of decision-makers. The focus group consists of six to ten stakeholders of land rezoning (e.g. urban planners, land developers, and surrounding residents). During the meeting, the comparison matrices used in the AHP process are filled up according to the views of the focus group rather than individual participants of the group. This process reflects and improves collaborative/participatory planning by involving different stakeholders in decision-making.

Rating Standard Determination

Even though criteria and their weightings are ready, a complete assessment cannot be achieved without rating standards. In this model, the rating standards are formulated on the basis of planning standards, land development regulations and expert opinions, and are verified by the focus group of stakeholders in the decision-making of land rezoning. The approach of multi-criterion evaluation/decision analysis (MCE/MCDA) is applied in the whole process of LUSA.

Land Information Database

During the development of decision support model, base data/information associated with the criterion categories in the model are collected and prepared prior to the comprehensive analysis. Here, the database is digitally built in GIS software “ArcGIS” with the form of “Geodatabase”.

How Is Information Involved?

As the information collected during planning processes is the basis of decision-making and actions, full processing of information, which complements and supports decision-making of land rezoning, includes three phases: collection, storage and retrieval, and analysis. The first step is to collect all kinds of information required. One important issue in this stage is to make sure that all collected information can be translated into a comprehensible, transmissible and transferable form. This is because one most adapted form/format of collected information needs to be chosen when the information is linked and coordinated with the others as well as the other phases of data processing. The second step is to establish an environment to store and retrieve information. To efficiently make use of information, it must be kept with a ready accessibility. A database is usually used to keep such information with the aid of computer technology. Even though too much information is involved in planning tasks, in particular, every piece of information can still be identified and retrieved in a quick response. The third step is to analyse and interpret information for providing references for decision-making. Information is gathered ultimately for assisting and advancing people’s understanding on certain problems/ issues.

Three steps of data processing in the development of the database are as follows: specifying data required, associating the data with specific methods of data processing, and evaluating the practicability and applicability of the database. The three sequential steps seem to be simple and uncomplicated; however, the steps are intercrossed by each other, and each step may be adjusted at any time due to the complex and dynamic urban system.

What Is Information Involved?

Specifying required information for land rezoning is the first stage of the database development. At this stage, crucial information generally considered in urban/land use planning is identified and defined first. For example, statistics of local population refer to current and projected demographic information such as population, employment, number of households. Financial conditions of people and government include income characteristics of the population, property values, GDP, etc. Physical conditions

of the land/location stand for the topographic and spatial information of the land such as slope, terrain, and soil. Urban internal structure and functional relationships are the most complex information required in the planning, which are a series of considerations and criteria in terms of internal accessibility and functional distribution for identifying particular uses for each piece of land according to its size, value and location.

Land rezoning can be a type of site planning on existing developed land, which aims to organize the redevelopment of each single piece of land by determining specific land uses (i.e. locating buildings and facilities) on the site, arranging for roads, water, and other inside infrastructure, and developing detailed plans for grading, landscaping, and other site improvements. During the process of site planning/design, in many cases, site analysis is the first and the most important step as it aims to collect information related to the site, assess the land-use suitability of the site and the compatibility with the proposed land use and surrounding environment, and understand the administrative requirements of the on-site project(s), such as building permits and other approvals. Russ (2002) gave a checklist of information involved in site analysis, including site condition, land development regulations, utilities (access distance), topography, vegetation/wildlife, historic/cultural/community features, and environmental concerns.

The relationship between GIS mapping and land use (site) suitability analysis is that the inventory maps of land rezoning containing site information will be synthesized to generate land-use suitability maps for site analysis. Based on the existing literature and site planning standards, a tentative list of information/data included in the database associated with the decision support model can be provided.

The data involved in the decision-making process are complex and in a huge amount. To improve the efficiency of data processing and management, database is a good way to storing, converting and managing the large volumes of data. GIS mapping becomes an indispensable and popular tool for base data gathering and analysis throughout the dynamic planning process. With the capability in geographic statistics and visualization, it can be used to provide a comprehensive picture of an existing community in terms of terrain, landscape, transportation, energy consumption, housing types, demographics, air quality, and other measures.

Pilot Study: Preliminary Application of the Approach

Study Area

Yau Tsim Mong is one of the older districts of Hong Kong, having been developed over one hundred years (Wang et al., 2013). It is located in the Kowloon peninsula - one of Hong Kong's metropolitan areas - spanning over 114° 09' – 114° 11' E and 22° 17' – 22° 19' N. The area covers 7 km2 and with a current population of 304, 900. The land in this district is highly developed and infrastructure, such as roads, railways, and main service facilities, are already provided. Therefore, the study area serves as a good case for the application because of its location and development level.

Currently, many older buildings located in the area are too old to maintain their original function and need to be redeveloped for future use. Urban renewal is a major contemporary issue in Hong Kong. Until 2016, 69 redevelopment projects have been launched by the Urban Renewal Authority (URA) of Hong Kong, the issue of land use decisions for redevelopment projects has become an increasing problem for town planners from the perspective of sustainable urban renewal. Thus, this area is most appropriate for an empirical study of land rezoning in urban renewal and can reflect the characteristics and merits of the proposed approach.

Decision Support Model

According to general procedures for developing the approach described in the above section, decision support model, consisting of three parts i.e. criteria of LUSA for land rezoning, weightings of the criteria, and rating standards of the criteria, was practically developed for the case study.

LUSA Criteria Identified in Hong Kong

Based on literature review and findings of the interviews conducted in Hong Kong, LUSA criteria for land rezoning/redevelopment in Hong Kong were identified, as shown in Table 1.

These 20 criteria of LUSA for land rezoning were classified into five categories, namely physical/inherent, locational (accessibility/compatibility), social, economic and environmental attributes. Physical/inherent attributes refer to the physical or existing conditions of land lots, such as slope, elevation and current land use. These restrict land use in the perspective of inherent conditions of the land sites. Locational attributes represent spatial accessibility and compatibility, and they are currently

regarded as the most important factors affecting land use decisions in urban renewal projects. Ten of the twenty suitability criteria were locational criteria, such as distance to MTR, distance to open space, and distance to historic sites. The distance was measured based on factual road network and automatically calculated by using GIS network analysis. And the road distance can also be converted to time distance through estimating average speed. For example, the average speed of walking is about 5 km/h (84 m/min), and for driving in urban areas is around 50 km/h (840 m/min). In addition, social, economic, and environmental attributes were identified to reflect the sustainability of land use. Six criteria were chosen for the three attributes, with each category having two criteria. The six criteria, including population density, property average price, and traffic noise, covered the main issues of land use sustainability, and suggested a more effective and convenient way to quantifying land use sustainability.

Table 1: LUSA criteria in the pilot study

Criterion type	**No.**	**Criterion name**
. Physical/Inherent attributes	1	Current land use
	2	Slope
	3	Elevation (relative)
	4	Vegetation
. Locational attributes (Accessibility/compatibility)	5	Distance to CBD/BCCs
	6	Distance to airport
	7	Distance to railway/MTR stations
	8	Distance to bus terminus
	9	Distance to ocean/streams
	10	Distance to historic sites (Preservation)
	11	Distance to nearest hospital
	12	Distance to nearest primary/high school
	13	Distance to open space
	14	Distance to trunk roads
. Social attributes	15	Population density
	16	Employment density
. Economic attributes	17	Unit price of land sale
	18	Property average price/rent
. Environmental attributes	19	Air quality
	20	Traffic noise

Weightings of The LUSA Criteria

A focus group meeting was conducted to determine weightings of the criteria identified in the pilot study and verify the rating standards of each criterion. The focus group was comprised of 8 participants (rezoning stakeholders in the specific case), who were 4 town planners working in the Planning Department and URA, 2 developers working in local companies and 2 residents living in the study area. The involvement of the participants from the Planning Department, URA, and the public contributes to participatory planning with different stakeholders and public engagement in the planning practice. The meeting, consisting of four sessions, lasted about two hours. Two tasks were included: the first was weighting determination with an AHP process and the second was the verification of rating standards.

The first objective of the focus group meeting was to determine the weightings of LUSA criteria based on the views of decision-makers/stakeholders. Focus group is a good means to achieve a consensus/agreement among different stakeholders when making decisions in land rezoning. In fact, different criteria may be applicable to different land uses; in other words, land use decisions are made according to different sets of criteria when specific land uses are varied. For example, the criterion of traffic noise is sensitive to residential use but not to commercial use. In this study, five types of land use, which were residential, commercial, industrial, G/IC, and open space, were defined and considered for LUSA. Therefore, the specific sets of criteria, which actually affect decision-making for the five different land uses, were identified before determining the weightings of each

criterion. Based on the 20 criteria shown in Table 1, the participants of the focus group were asked to discuss and select the specific criteria for five particular land uses in the beginning, and five sets of criteria were selected from the 20 available criteria according to the group opinions (refer to Table 2).

When using AHP method to compare the relative importance of every two criteria, some criteria cannot be directly compared, since they were not in the same attribute. For instance, 'Slope' in physical attribute cannot be simply compared with 'Distance to MTR' in locational attribute to distinguish which is more important for land use decisions. Therefore, the criteria must be put into different categories, and at least two levels (hierarchy structure) were formed according to the criteria and their attributes so that their importance was only compared within each level. Figure 1 shows the hierarchy structure of LUSA criteria for commercial land use as an example.

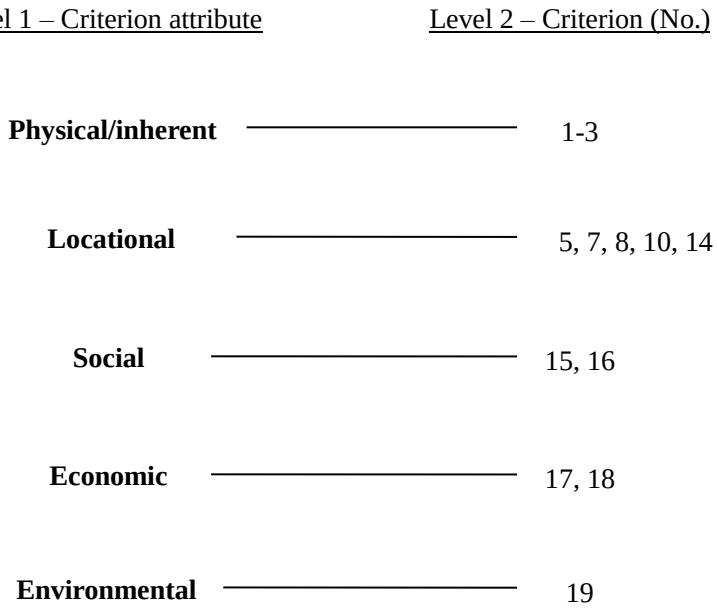

Figure 1: Hierarchy of LUSA criteria for commercial land use

The matrices of importance comparison were formed in accordance with two levels: criterion attributes and the criteria. Taking commercial land use as an example, the first matrix was tabulated at Level 1 (Table 2) and then other matrices were formed within each criterion attribute at Level 2. Table 3 illustrates the matrix for locational criteria, indicating that the importance weighting of locational attribute included the weightings of eight specific criteria. By filling up these matrices based on the views of the focus group, the weightings of each criterion were calculated and the total of all criteria applied in each land use was 1.0.

Table 2: Matrix for criterion attributes

Criterion attributes Aj / Ai	A1 (Physical/inherent)	A2 (Locational)	A3 (Social)	A4 (Economic)	A5 (Environmental)
A1	1				
A2		1			
A3			1		
A4				1	
A5					1

Note: the blank cells are filled following 1-9 scale AHP method

By using AHP software, 'Expert Choice' the weightings of five sets of criteria were calculated based on the comparison matrices presented above, and the five sets of weightings for different land uses were obtained.

Rating Standards of The LUSA Criteria

The second objective of the focus group meeting was to adjust and verify the rating standards for LUSA. A tentative set of rating standards was formed based on Hong Kong planning standards and guidelines, general regulations of land development and design requirements of urban renewal before the meeting. During the second half of the meeting, eight participants were asked to discuss the applicability of the tentative rating standards and make some adjustments, if necessary. This session of group discussion lasted for about 40 minutes, to allow the focus group to verify the rating standards. After combining the views of the focus group, the rating standards were finalized. An example of rating standards for criterion "current land use" is shown in Table 4.

Table 3: Matrix for locational criteria

Criteria (Locational)*Cj* / *Ci*	C5	C7	C8	C10	C14
C5	1				
C7		1			
C8			1		
C10				1	
C14					1

Note: the blank cells are filled following 1-9 scale AHP method

Table 4: Suitability classification and rating standards of criterion "current land use"

Criterion	**Land uses**	**Rating standards**			
		Highly suitable	Suitable	Unsuitable	Very unsuitable
		3	*2*	*1*	*0*
Current land use	Residential	R	C, G/IC, V/O	I	O
	Commercial	C	R, G/IC, I, V/O	O	-
	Industrial	I	G/IC, V/O	R, C	O
	G/IC	G/IC	C, I, R, V/O	O	-
	Open space	O, V/O	I, R, G/IC	C	-

Note: R – Residential, C – Commercial, I – Industrial, O – Open space, V/O – Vacant/Under Construction/Others

To achieve land-use suitability assessment in the study, criteria standardization, weighting and composite scoring were done with the help of MCE. This model provided a quantitative approach to the assessment, including the classification of land use suitability, rating of criterion values, and scoring for multi-criterion analysis. Firstly, land use suitability was classified into four levels - very unsuitable, unsuitable, suitable and highly suitable classes - and integers ranging from 0 to 3 were assigned accordingly (refer to Table 8). Secondly, the value of each criterion was obtained from the land information database, and each criterion was correspondingly assigned a certain suitability level according to the rating standards. These ratings standards are a crucial part of the model and were determined by referring to the literature, Hong Kong planning standards and guidelines, and the views of the decision-makers for land rezoning in urban renewal projects. Thirdly, a linear scoring formula was used, in the form of

$$S_i = \sum_{j=1}^{n} R_i(j) \times W(j)$$

where *Si* denotes the land use suitability of land site *i*, *i* is the number of land sites; *j*=1, 2, …, n is the number of criteria; *Ri(j)* refers to the rating of criterion j of the land site *i*; and *W(j)* is the weighting of criterion j. By overlaying map layers of the selected criteria with their respective weightings, the final scores of each land site are calculated. The suitability grade of each land site is also divided into four levels according to the final scores: very unsuitable (0-0.75), unsuitable (0.75-1.5), suitable (1.5-2.25) and highly suitable (2.25-3).

Land Information Database

Database Environment Setting

The process of the database development is described as follows. Firstly, raw data were collected in accordance with the criteria considered in the model. Secondly, the collected data were processed through digitization, format conversion, and spatial analysis to prepare usable input data for the model. Finally, the directly usable data were stored in the database with the form of map layers.

The database was built in the environment of "ArcGIS" – a powerful GIS toolkit. The collected data were processed in one module of the software – ArcMap (ArcInfo) - and the database was created with the form of File Geodatabase in another module of the software – ArcCatalog - and all data were stored in the File Geodatabase. The interface of the database created as a File Geodatabase in "ArcGIS" is displayed in Figure 2.

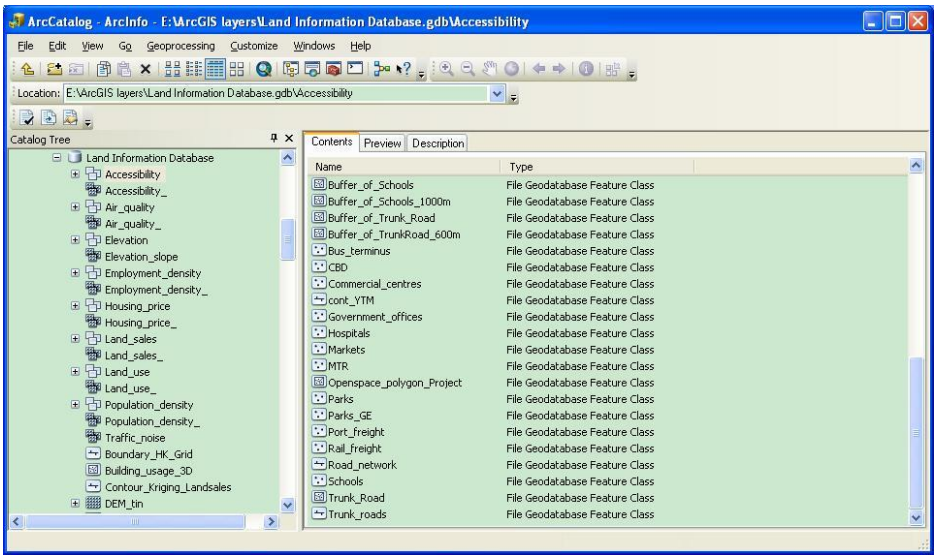

Figure 2: A screenshot of the database in "ArcGIS"

Data Collection

Before data collection, the required data/information was identified in accordance to the criteria for LUSA given in the decision support model. To provide the information needed for LUSA in the model, volumes of raw spatial data, such as digital topographic maps, aerial photos, and land utilization map as well as many non-spatial data, such as statistical tables recording the information of population, employments, and housing price, were collected for this database. Some of the raw data could be obtained from the governmental websites, for example, Outline Zoning Plan (OZP), traffic noise distribution, population distribution, API, and some needed to be purchased from government offices or relevant institutions, such as topographic maps, aerial photos, and transaction records of housing prices. The assembly of raw data is the foundation of decision support, and it can provide sufficient information for decision-making in land rezoning with geospatial visualization.

The quality of data collection restricts the completeness of criteria considered for LUSA in the pilot study, and the validity of the collected data (e.g. accuracy, data update) influences the results of LUSA. Data collection is a very important step of the database development, and the quality of raw data and the data sources must be verified during the collection process.

Data Processing

The raw data cannot be directly used in the model, and they must be processed to fit the model. The data processing included two steps: (1) GIS digitization and format conversion, and (2) spatial analysis for criterion-value generation.

In the first step, some raw data, which were not in GIS digital, format, were digitized in "ArcGIS". During the process of digitization, several kinds of jobs may be involved: hardcopy scan, statistics input to the computer, and digitization in "ArcGIS". For instance, a hardcopy of map needs to be scanned to be a digital map, and be further digitized into GIS format with appropriate geographic coordinates. Statistical data, such as records of housing

price, need to be input to a table (e.g. Excel file) on the computer, and be linked to certain map layers in "ArcGIS". In terms of format conversion, all digital data stored on the computer with whatever original format need to be converted into the file format of File Geodatabase in "ArcGIS". After that, all raw data were digitized and/or converted into the storage format of File Geodatabase.

In the second step, the GIS digitized data were further processed through GIS spatial analysis in "ArcGIS" to provide criterion values for the model. During this step, many tools integrated in the ArcToolbox of ArcInfo for all kinds of spatial analyses, such as Create TIN, Slope, and Kriging, were used to generate the desired input data for the model. A Geoprocessing model was created, using ModelBuilder in "ArcGIS", to automatically generate the values of the 20 examined criteria (i.e. the 20 map layers). The ModelBuilder is an application used to create, edit and manage Geoprocessing models for spatial data analysis.

Results of LUSA by Using the Approach

Land-use suitability maps for five land uses were generated based on the LUSA criteria. For each type of land use, every land site located in the study area was classified into four suitability grades, as described in Table 4. Eighty-four land sites were assessed and classified into three different levels for residential use – highly suitable, suitable and unsuitable, two levels for commercial use and open space – highly suitable and suitable, two levels for industrial use - suitable and unsuitable, and only one level for G/IC use – suitable. The different suitability levels were categorized on the basis of the integrative consideration of the multiple attributes of each land site, such as physical conditions, locational (accessibility/ compatibility), economic, and traffic noise assessment. These results of the LUSA indicated that, in the study area, almost all land sites were suitable for residential, commercial, G/IC use and open space, and part of the land sites were unsuitable for industrial use. By using this GIS-based approach, the specific land sites can be easily found and located on the maps.

Based on the final scores of land-use suitability calculated by the model, the most recommended land use was assigned to each site (i.e. land use with the highest score was considered as the most recommended type). Figure 3 shows the most recommended land-use pattern in the study area, which can be used as a reference for decision-makers in the process of land rezoning/redevelopment (Residential – orange diagonal, Commercial – yellow diagonal, G/IC – green circle, Open space – blue curve).

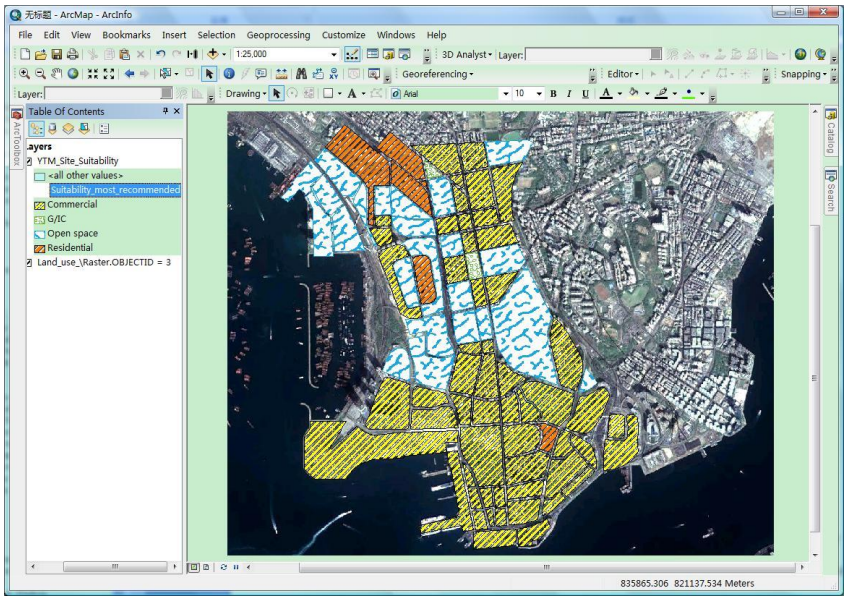

Figure 3: The most recommended land use for land rezoning

Discussions

In the pilot study, 86 land sites with five urban land uses were investigated based on the required information provided by the database. Although the results of suitability analysis may not be comprehensive, they could illustrate the potential outcomes of using this approach. In addition, the results also quantified the land-use suitability

based on the LUSA criteria, and they could serve as a reference for land-use decision-making through combining more considerations on other factors, which were not included this time.

The main contributions of this paper are highlighted as follows. Firstly, this paper has identified general criteria for land-use decision-making in land rezoning (including sustainability criteria) and the sources of the associated data/information. Secondly, this paper has developed a quantitative approach to assessing land-use suitability for land redevelopment (i.e. the decision support model) and a standard measure of providing usable data for the model (i.e. the land information database). Thirdly, this paper has demonstrated the usefulness of GIS visualization and spatial analysis in land rezoning, in particular, land redevelopment in urban renewal, and expanded GIS applications to the planning practice.

Conclusions

Land rezoning/redevelopment in urban renewal is a complex and necessary means for sustainable urban development. In order to facilitate the decision-making process of land rezoning, this paper develops a GIS-based approach, consisting of decision support model and land information database, to support land rezoning in sustainable urban renewal. The details of the development and application of the approach, including the model and database, were illustrated through a case study to show the viability of the approach. Although the land-use suitability was analyzed on the basis of incomplete criteria so far, the land-use suitability maps were still generated based on the criteria considered in the study to demonstrate the potential and validity of the approach. The successful case study reflects the good applicability of the approach, and implies that the same methodology can be applied to other places in the similar context of urban renewal. In the future, the results of LUSA based on complete criteria identified in the study could be generated to fully demonstrate the effectiveness of the approach. The further work should include special studies on certain criteria (i.e. input data for the model) and qualitative criterion quantification, such as feeling-based cultural concerns.

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Research on the Development of the New-Type Urbanization in the Nodal Cities of the Belt and Road

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Abstract: This paper constructs the evaluation system of the new-type urbanization and uses the entropy method to calculate the level of new-type urbanization in 18 provincial capital cities of the Belt and Road in China. The findings of the study show clearly that the new-type urbanization level of the nodal cities is not high and the new-type urbanization level in the different lines and the same line of different cities is uneven. Results of the study also show that the development of many aspects of the nodal cities is different but, at the same time, the short board effect exists in all lines and nodal cities. Therefore, in order to boost the Belt and Road initiative, this paper puts forward a series of concrete measures, such as the combination of playing the strong advantage as well as making up the short board, promoting the new-type urbanization level of the nodal cities and the development of urban agglomeration.

Key words: China, Belt and Road, nodal cities, urbanization, new-type urbanization

Introduction

In the face of sluggish recovery of the global economic situation coupled with the complicated international situation, in a new era of peace, development and cooperation, President Xi Jin-ping has proposed a strategy of “the Belt and Road” to achieve common development, common prosperity, cooperation and win-win for countries along the line. The strategy aims to strengthen interconnectivity among countries along the line, and build a comprehensive, multi-level and complex interconnection network. The nodal cities of the economic belt are the core parts of “the Belt and Road”. Cities are the basic unit for participating in economic activities. Driven by economic globalization and information technology revolution, urban development will become an important engine for regional and national development. Therefore, with the development of China's new-type urbanization, cities that are growing and rising are playing a more important role in ‘opening up’ and international trade. China’s current construction of a new-type urbanization will be the core support system of “the Belt and Road”. However, at present, the nodal cities along the Belt and Road in China have uneven level of development with a low level of social modernization in urban and rural areas. A long history of regional cultural tradition has seriously affected the implementation of the strategy of “the Belt and Road” in China. Therefore, the research on the development of new-type urbanization in the nodal cities of the Belt and Road is of great practical significance to the promotion and implementation of “the Belt and Road” strategy. In view of this, this paper samples 18 nodal cities along the “the Belt and Road” and conducts an evaluation system of the new-type urbanization as well as analyses the new-type urbanization level of the nodal cities.

Literature Review

The concept of urbanization was first proposed by A. Serda, who was a Spanish urban planner, in the book *basic theory of urbanization* written in 1867. With the continuous development of urbanization, the problem of urbanization has been of great concern. At present, domestic and foreign academic researches on urbanization mainly focus on the connotation, evaluation system and measure method of urbanization.

The early scholars defined urbanization mainly from the aspects of population, region, life style and employment structure (Gilbert, 1982; Blackmar & Harvey, 1987). Urbanization is the process of transferring rural population from rural areas to urban areas (SHANG Xiao-qing, 2010). Ming Lu and Zhao Chen (2004) proposed that urbanization is the result of the expansion of urban areas from a geographical point of view. Zhao YanJing (2001) put forward his view from the perspective of employment structure that urbanization is the process of shifting the employment of rural population from the first industry to the second and third industries. With the advancement of urbanization, urban problems are

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becoming more and more prominent. Many scholars begin to understand the urbanization from a new perspective and think that the concept of urbanization is a complex system, which includes not only urban population, urban area, but also the way of life, urban public services, urban civilization, urban ecology and urban sustainable development, namely a new type of urbanization. Compared with traditional urbanization, new-type urbanization has new connotations and characteristics. For example, while expanding the size of cities and towns, the government should promote the equalization of basic public services and improve the quality of urbanization. Economic development cannot be solely determined by GDP growth. It should promote the coordinated development of urbanization, industrialization and agricultural modernization. In addition, the new type of urbanization should pay attention to the development of ecological civilization and social security systems. Therefore, the new-type urbanization is people-cantered urbanization, which pays more attention to the improvement of people's living standard, the promotion of urban functions, the coordinated development of urban and rural integration and the achievement of economic, social, ecological and comprehensive coordinated development.

Index system of urbanization measurement

Urbanization is a concept of rich connotation, which should be analyzed from multiple dimensions when measuring the level of urbanization. The most representative is the City Development Index (CDI) and the guidelines for urban indicators (UIG) proposed by United Nations Centre for Human Settlements, which include economic, social, environmental and other aspects. Since the 21st century, Chinese scholars have conducted many quantitative researches on urbanization. Ye yumin (2001) proposed a total of 12 indicators of population, economy and infrastructure to evaluate urbanization. With the deepening of understanding of urbanization, many scholars have integrated eco-environment and sustainable development into the evaluation system of urbanization. According to the connotation of urbanization, they have developed a comprehensive evaluation index of urbanization, which includes aspects of population, economy, society and ecology (WANG, 2014; Mingxing, 2015; Lang, 2017). By measuring the level of urbanization from many aspects, they have enriched the evaluation system of urbanization to some extent. However, it is worth noting that most studies do not fully consider the connotation of the new-type urbanization, which is a healthy urbanization, because it pays more attention to urban and rural development as well as the improvement of the quality of urbanization. This causes some scholars to construct the urbanization quality index system from the perspective of urban and rural development. Therefore, the evaluation index system of urbanization is being constantly enriched and improved with in-depth research.

Measurement method of urbanization level

There are many ways to measure the level of urbanization. Common methods include principal component analysis, factor analysis, neural network method, expert weighting method, combinatorial weighting method, quadrant graph classification identification method and entropy method. There have been many studies on the level of urbanization in the literature, and good progress has been made, but there are still some shortcomings. On the one hand, due to the lack of authoritative national planning as the evaluation basis, scholars have focused on the understanding of the new-type urbanization and the standards of the evaluation system are different, which make the comparability of each research results poorer. On the other hand, existing empirical studies are mainly concentrated in provinces and cities and research on the measurement of the new-type urbanization level in the nodal cities of the Belt and Road is rare. Therefore, in the light of the National New-type Urbanization Plan (2014-2020), based on the existing research results, this article develops an evaluation index system of the new-type urbanization and measures the new-type urbanization level of the nodal cities of the Belt and Road.

Measurement of the development of the new-type urbanization in the nodal cities of the Belt and Road

The new-type urbanization, as the main space carrier plays an important role in promoting the construction of the Belt and Road.

The selection of sample cities

The Nodal cities are selected in order to "Promote the Construction of Silk Road Economic Belt" and in accordance with "the Vision and Action of Twenty-first Century Maritime Silk Road". These cities include capital cities, inland nodal cities and port cities. This paper selects 18 nodal cities, which are all in China. China has initiated the Silk Road Economic Belt and the 21st Century Maritime Silk Road. The Belt and Road Initiative runs

through the continents of Asia, Europe and Africa, with an active eastern Asian economic circle and a developed European economic circle with huge economic potential in the vast hinterland. The Silk Road economic belt has been delineated and includes Xinjiang, Chongqing, Shanxi, Gansu, Ningxia, Qinghai, Inner Mongolia, Heilongjiang, Jilin, Liaoning, Guangxi, Yunnan and Tibet, which are a total of 13 provinces (municipality directly under the central government). The 21st Century Maritime Silk Road is delineated, mainly to include Shanghai, Fujian, Guangdong, Zhejiang and Hainan, which are 5 provinces. The selected cities are Urumqi, Chongqing, Xi'an, Lanzhou, Yinchuan, Xining, Hohhot, Harbin, Changchun, Shenyang, Nanning, Kunming, Lhasa, Shanghai, Fuzhou, Guangzhou, Hangzhou and Haikou, a total of 18 cities.

The selection of indexes

In accordance with the requirement of National New-type Urbanization Plan (2014-2020) on the construction of a green city, smart city and cultural city, this paper follows the systematic, scientific and accessible principles in the selection of indicators. This paper develops an index system to measure the levels of development of the new-type urbanization. The index system includes six comprehensive indexes, including economic development, population development, public infrastructure, ecological environment, urban and rural structure and technological innovation.

Economic development is the direct driving force of the new urbanization. Generally speaking, in the economically developed areas, the level of new urbanization is relatively high. The indicators selected include per capita GDP, the proportion of second and third industries, per capita investment in fixed assets, the amount of foreign investment per capita, and per capita utilization of foreign capital and per capita public finance income.

The indicators selected for population include the density of population, the number of registered urban unemployed personnel, average wage of the workers, the balance of savings per capita, the number of urban workers' basic retirement security and the number of basic medical insurance for urban residents.

In terms of public infrastructure, the selected indicators are the number of landline telephones and mobile telephones, the expenditure on unban maintenance and construction fund, the year-end urban road area, passenger capacity, the number of theatres and cinemas, the number of hospital beds and health-centres, a collection of books of the public library per 100 people.

The indicators of ecological environment are mainly industrial wastewater emissions, the emissions of industrial sulphur dioxide, the comprehensive utilization rate of industrial solid waste, treatment rate of sewage treatment plants, harmless treatment rate of living garbage, the amount of industrial smoke (powder) removed, the emissions of industrial smoke (powder), green coverage ratio of built-up areas and the per capita green area.

In terms of urban and rural structure, the indicators include the rate of urbanization, disposable income ratio of urban and rural residents and consumption expenditure ratio of urban and rural residents.

The indicators of technological innovation include the amount of patent applications, R&D funds, R&D personnel and technical market turnover.

Data sources

The data used in this paper were mainly derived from the statistical yearbook of Chinese cities in 2016 and the statistical yearbook of Chinese provinces.

Measurement methods of the new-type urbanization

With regard to the evaluation methodology of the new-type urbanization development, there are many qualitative and quantitative methods. Each method has its advantages and disadvantages. In general, qualitative evaluation methods are too subjective and arbitrary. This paper, therefore, uses the entropy method to measure the level of development of the new-type urbanization in the nodal cities of the Belt and Road. The calculation procedure of the entropy method is as follows:

The first step is the construction of the original index data matrix. If there are 'm' cities and 'n' evaluation indexes, the original index data matrix is:

$$X = (\mathrm{x}_{ij})_{m\times \mathrm{n}} (i = 1,2\cdots m;\ j = 1,2\cdots n) \quad (1)$$

In the formula, X_{ij} is *j* index of *i* city.

The second step is to standardize the data. In this case, the positive and negative indicators are processed as follows.

$$X_{ij} = \frac{X_{ij} - X_j^{\min}}{X_j^{\max} - X_j^{\min}} \quad (2)$$

$$X_{ij} = \frac{X_j^{max} - X_{ij}}{X_j^{\max} - X_j^{\min}} \quad (3)$$

X_{ij} is the standardized value. $X_{\mathrm{j}}^{\max}$ and X_{j}^{min} are the maximum and minimum values of j index respectively.

The third step is to calculate the ratio of the index values of *i* cities under *j* index, which is denoted as P_{ij} .

$$P_{ij} = \frac{X_{ij}}{\sum_{i=1}^{m} X_{ij}} \quad (4)$$

The fourth step is to calculate the entropy values of *j* index and be marked as H_j .

$$H_j = -\sum_{i=1}^{m} P_{ij} \ln(P_{ij}); K = 1/\ln(m) \quad (5)$$

The fifth step is to calculate the difference coefficient and be marked as D_j .

$$D_j = 1 - H_j \quad (6)$$

The sixth step is to calculate the weight of each evaluation index and be marked as W_j .

$$W_j = D_j / \sum_{j=1}^{n} D_j \quad (7)$$

The seventh step is to calculate the i city's new-type urbanization level and be marked as NUC_i .

$$NUC_i = \sum_{j=1}^{n} W_j X_{ij} \quad (8)$$

Table1: New-type Urbanization Level Measurement Indicators and Weights

Level Indicators	Weights	Secondary Indicators	Weights	Attributes
Economic Development	25.06	per capita GDP	6.26	+
		the proportion of second and third industries	4.50	+
		per capita investment in fixed assets,	4.87	+
		the amount of foreign investment per capita,	2.72	+
		per capita utilization of foreign capital	5.25	+
		per capita public finance income.	4.96	+
Population Development	24.20	the density of population	1.90	-
		the number of registered urban unemployed personnel	2.61	-
		average wage of the workers	4.57	+
		the balance of savings per capita	6.25	+
		the number of urban workers' basic retirement security	4.13	+
		the number of basic medical insurance for urban residents.	2.40	+
Public Infrastructure	19.48	the number of landline telephone and mobile telephone,	2.34	+
		the expenditure of urban maintenance and construction fund,	3.15	+
		the year-end urban road area,	3.78	+
		passenger capacity	2.21	+
		the number of theatre and cinema	1.69	+
		the number of bed of hospital and health-centre	2.75	+
		a collection of books of the public library per 100 people	5.90	+
Ecological Environment	10.86	industrial wastewater emissions	0.35	-
		the emissions of industrial sulphur dioxide	0.78	-
		the comprehensive utilization rate of industrial solid waste	1.24	+
		treatment rate of sewage treatment plant	0.99	+
		harmless treatment rate of living garbage	1.26	+
		the removal amount of industrial smoke (powder),	1.29	+
		the emissions of industrial smoke (powder)	0.45	+
		green coverage ratio of built-up area and the per capita green area.	5.63	+
Urban and Rural Structure	6.6	urbanization rate	2.09	+
		disposable income ratio of urban and rural residents	1.48	+
		consumption expenditure ratio of urban and rural residents	3.03	+
Technological Innovation	13.26	the amount of patent applications	3.56	+
		R & D funds	2.28	+
		R & D personnel	2.43	+
		technical market turnover.	4.99	+

If NUC_i is larger, the new-type urbanization level is higher.

The calculation of index weight

According to the calculation formula of the index weight, calculate the weight of each index; The calculation results are shown in Table 1.

Measurement and Analysis of the New-type Urbanization in the Belt and a Road Node cities

Based on the level of new-type urbanization, the index score and comprehensive score of nodal cities in the Belt and Road are calculated. The results are shown in Table 2.

Table2: New-type Urbanization Level Sub-component and Composite Score

City	Economic Development	Population Development	Public Infrastructure	Ecological Environment	Urban and Rural Structure	Technological Innovation	Composite Score
Urumqi	5.09	4.81	4.71	5.89	3.89	5.72	30.11
Chongqing	6.21	14.42	1.16	3.53	2.21	4.96	32.49
Xi’an	5.76	5.39	4.61	4.06	2.41	7.50	29.73
Lanzhou	3.28	4.21	2.98	2.78	2.38	5.32	20.95
Yinchuan	3.98	4.33	6.24	3.99	2.62	3.21	24.37
Xining	3.23	3.28	4.35	2.95	3.51	2.69	20.01
Hohhot	6.01	2.35	4.34	2.63	2.58	4.49	22.4
Harbin	3.80	3.51	4.23	3.32	1.96	5.22	22.04
Changchun	5.25	5.38	4.58	4.01	1.88	4.26	25.36
Shenyang	5.98	5.76	5.91	4.35	2.59	6.38	30.97
Nanning	2.99	3.81	3.01	5.81	0.58	4.99	21.19
Kunming	4.96	5.52	5.72	3.36	1.02	6.03	26.61
Lhasa	5.86	5.40	5.02	3.70	1.84	1.89	23.71
Shanghai	10.69	17.41	8.35	5.81	3.69	12.28	58.23
Fuzhou	4.97	5.33	3.95	3.85	2.71	6.01	26.82
Guangzhou	9.01	11.82	6.98	8.08	2.66	12.96	51.51
Hangzhou	8.83	10.26	7.35	3.82	3.99	10.28	44.53
Haikou	4.61	3.63	3.62	4.97	2.35	5.18	24.36

An Overall Analysis of the New-type Urbanization Level in the Cities along the Belt and Road

According to Table 2, the integrated score of new-type urbanization level in 18 node cities is divided into four levels, namely low, normal, strong and stronger, and the node cities in each line are counted according to the grade standard. A composite score of less than 23 points is a low level. Composite score of more than 23 points and less than 30 points is a normal level. Composite score of more than 30 points and less than 40 points is a strong level. Composite score of more than 40 points is a stronger level.

Table 2 shows that the overall level of new-type urbanization in the “Belt and Road” node cities is not high. The average overall composite score of 18 cities was 29.74. The average scores of the 18 cities in the six indicators are 5.58, 6.48, 4.84, 4.27, 2.49 and 6.08 respectively. There are five cities in the new urbanization level of less than 23 composite scores, namely Xining, Lanzhou, Nanning, Harbin and Hohhot. The new urbanization level of the composite score of more than 23 points and less than 30 cities have six, namely Lhasa, Xining. There are six cities in the new-type urbanization level of more than 23 composite scores and less than 30, namely Xi’an, Fuzhou, Kunming, Changchun, Yinchuan and Haikou. There are three cities in the new-type urbanization level of more than 30 composite scores and less than 40, namely Chongqing, Shenyang and Urumqi. There are three cities in the new-type urbanization level of more than 40 composite scores, namely Chongqing, Shenyang and Urumqi. We can also see that the new-type urbanization in eastern China is significantly higher than that in central and western cities.

An analysis of the level of new-type Urbanization Sub-Component Competitiveness in cities along the Belt and Road

Figure 1 shows the score of each index in each node city. Judging from the index of economic development, Shanghai, Guangzhou and Hangzhou score more than 8 points whiles Nanning, Yinchuan, Lanzhou, Harbin and Yinchuan score below 4 points. Other cities score between 4 and 7. We can find that, in the index of economic development, each node city shows obvious spatial and geographical differences.

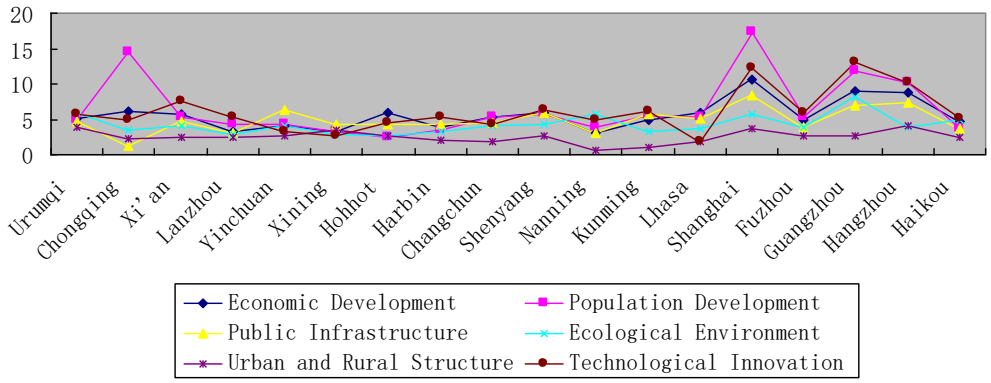

Figure 1: The Score of Each Index in Each Node City

From the index of population development, Shanghai, Guangzhou, Hangzhou and Chongqing score higher. Judging from the other four indicators, all node cities in China show a spatial difference pattern. From the node cities in the Silk Road Economic Belt and the node cities in the Silk Road on the sea, the cities on the Silk Road at sea have scored higher on all indicators than all the node cities in the Silk Road Economic Belt. The gap between each index of cities in the "Silk Road Economic Belt" is relatively large, forming a relatively obvious short board effect. The average score of the 13 cities in the “Silk Road Economic Belt” on the six indicators is 4.80, 5.24, 4.37, 3.88, 2.27 and 4.82 respectively. The average score of the five node cities in the Maritime Silk Road Economic Belt on each of the six indicators is 7.62, 9.69, 6.05, 5.31, 3.08 and 9.34 respectively.

Conclusions and suggestions

This paper samples 18 cities in China to measure their level of new-type urbanization. The results show that the overall urbanization level of the “Belt and Road” node city is not high, and the new urbanization level varies greatly between different routes and between different cities on the same route, which is unfavourable to the overall effect. The new urbanization level of “Silk Road in the Sea” node city is higher than the new urbanization level of “Silk Road Economic Belt” node city.

As the initiating and advocating nation of the Belt and Road strategy, China plays a leading role in the implementation of the strategy. However, the new-type urbanization in the node cities along the Belt and Road in the country is not highly developed and unbalanced, which has seriously affected the radiation driving the capability of node cities and economic belts to influence surrounding areas. Therefore, in order to improve the level of new-type urbanization in node cities and build a network of interconnected nodes in cities, this paper proposes the following countermeasures for achieving win-win benefits between cities and countries through the Belt and Road Initiative.

All node cities along the One Belt and Road have unique long board and short board. While strengthening the advantages of node cities, efforts should be made to eliminate short board and prevent cask effect. The resource base and geographical conditions will guide the rational flow of population and industries in the western region and improve the network of transportation infrastructure. Communications in the urban agglomerations enhance the overall strength of the urban agglomerations in the west and the radiation power of the urban agglomerations in the western regions to neighbouring countries and regions. All regions should seize the opportunity through policies, give full play to their comparative advantages in the region, implement a proactive and open strategy in order to boost

the development of the Belt and Road.

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A Preliminary Exploration on a Sustainable Strategy of City Development with MICE: A Case Study of the 21st Guangzhou International Lighting Exhibition & LED Asia

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Abstract: A city is not merely a centre of population and a cluster of modern industries, but also has intimate relationship with regional economics. The development of a city is conductive to the promotion of the overall prosperity and development of a nation. MICE has widely captured the world's attention for its strong promotion of urban economic development. Large and medium-sized cities in China and around the world have thus made great efforts to develop MICE as an urban brand. However, the rapid development of the MICE industry has brought pressure as well as challenges on urban management and environmental sustainability. This article uses the 21st Guangzhou International Lighting Exhibition (GILE) and Asia LED Exhibition as a case study to undertake a comprehensive analysis of the potential risks of developing cities sustainably with MICE as a brand.

Key words: MICE, Guangzhou, Sustainable Development, image, brand

Urban development and the MICE industry

Since their inception, cities have been regarded as a symbol of human civilization and an inevitable outcome of social and economic development. According to K.J. Barton, a British economist, "a city is a network of interconnected markets of various kinds (housing, labour, land, transport, etc.) situated in confined spaces." You Jian-xin (2006) also asserts that "with the background of economic globalization, the structure and function of cities have evolved into centres of knowledge and information, where the tertiary industry has gathered and become increasingly used for information and knowledge production and Polygamy as well." As a result of the global urbanization process, the city has entered a booming stage. The Meetings, Incentives, Conventions and Exhibitions (MICE) industry comprises of Meetings, Incentives, Conventions and Exhibitions, which are often referred to as the Convention and Exhibition Industry in China. As MICE activities are often concentrated in urban areas, and are a significant part of urban economic development, the development of the MICE industry is, generally, regarded as an urban development strategy (Law, 1993; Murphy, 1997). MICE has become an important industrial sector in the economic structure in some developed western countries, as well as in Japan, Australia, Singapore, Hong Kong, other countries and regions (Zhu Haisen, 2004). At the same time, some professionals believe that the development of MICE tourism can boost the economy of a city, enhance the development of a city's image and appearance, increase urban employment opportunities and accelerate the exchange of technology and information between cities (Cao Xinxiang, 2004). In fact, MICE has become a global industry due to its strong effects on urban economic development. However, there are still some issues, such as central city fragility, economic stagnation and population growth, leading to negative conditions, like a dramatically increased population base, lack of innovative capacity, outdated planned reliance and inefficient ecological management in cities (REECE, 2010). The visible and invisible benefits and risks associated with MICE make "the feasibility of developing cities with a strategy of MICE brand" an important research topic for city managers.

Guangzhou Convention and Exhibition Industry and GILE

Guangzhou is one of the first regions to have had an awareness of developing MICE and it plays an active role in the MICE economy as well. The MICE industry in China started from Guangzhou, and then spread to the whole country. The statistics of the Guangzhou Blue Book: Economic Development in Guangzhou (2016) shows that the number of exhibitions in Guangzhou in 2015 was 197, ranking third in China. The total exhibition area was 10.41 million square meters, the second largest in China; the exhibition area was 57,218 square meters on the average, ranking first in China. In 2016, 538 exhibitions were held

in Guangzhou City and the exhibition area was 8.965 million square meters, which increased by 4% and 11.6% respectively compared with the previous year, thus making Guangzhou the second largest exhibition area in China. The key exhibition venues in Guangzhou held 1,852 international and regional conferences, with more than 100 attendees per each conference, which showed year-on-year growth of 21%. A number of well-known brand exhibitions included the Canton Fair, Guangzhou International Lighting Fair, China Guangzhou International Furniture Fair and China (Guangzhou) International Auto Show, which is also known as "China's First Exhibition", have become the mainstay of Guangzhou's convention and exhibition industry (Fu Lian Ying, 2017). In 2017, the world-class city roster of 2016, released by Globalization and World Cities Research Network (GaWC), the world's most authoritative city research institute, showed that Guangzhou was one of the 49 first-tier cities in the world. It indicates that Guangzhou has not only won trust nationwide, but also gained international recognition.

Guangzhou International Lighting Exhibition (GILE) is the largest lighting industry exhibition in the world. It has not only promoted the development of a high-tech lighting industry in Guangzhou and the construction of an innovative city for Guangzhou, but has also became the major platform for China to promote its high-tech lighting and related lighting products worldwide. GILE contributes to the co-operation between various countries and regions, especially in terms of economic development and technological exchanges. It is reported that the total number of tourists at the 21st GILE in 2017 was 156,898, up by 8% compared with the 20th GILE. Visitors were from 134 different countries and regions with the top ten being Hong Kong, India, South Korea, Taiwan, Singapore, the United States, Russia, Malaysia, Australia and Thailand. Also, the number of exhibitors reached 2,428 in the 21st GILE. In order to accommodate so many people, GILE site covered an area of 180,000 square meters with 17 exhibition halls (Sohu, 2017).

By participating personally in the 21st Guangzhou International Lighting Exhibition (GILE) and Asia LED Exhibition in June 2017, the author examined the sustainable development of convention and exhibition in an urban economy through participant observation. This article uses the exhibition industry sustainability report template introduced by the International Exhibition Industry Association (UFI) in 2013 to conduct a comprehensive economic, social and ecological analysis of GILE. Though the sustainability reporting template for the MICE industry is not a rigorous assessment system, it clearly points to the way for ensuring the sustainability of MICE. The paper further provides some recommendations on how to develop a city sustainably through the strategy of using MICE as its brand.

The impact of GILE on the City and Risk Analysis of Sustainable Development

GILE has economic impacts on Guangzhou. The economic impacts can be divided into direct impacts, indirect impacts and potential impacts.

The direct impacts accrue to exhibitors themselves and the companies they represented (REECE 2010). GILE provides marketing opportunities for the participants where Small and Medium-sized Enterprises [SMEs] (exhibitors) can increase their brand presence in the industry. To a certain extent, it helps small-scale producers to gain competitive advantages and compete with reputable companies in the market, which is of great significance to the vigorous promotion of the Guangzhou market. GILE also has a direct impact on employment in Guangzhou. At GILE, there are a number of positions, which require more human resources and often require additional employment in order to meet the quality of service, thereby increasing employment.

The indirect impacts are always reflected by the number of industries or companies, which are related to the income of GILE exhibitors and organisers (Reece, 2010), such as construction companies, pavilions, hotels, transportation and logistics. Most exhibitors will choose the ideal way to build their booth. Construction companies provide expert advice on building as well as the knowledge, labour allocation, design style and material selection. GILE also contributes to Guangzhou's economy through site leasing. GILE is held in Guangzhou each year, and each exhibiting company and organiser must stay there for about three days. Therefore, GILE creates another revenue source for Guangzhou in the fields of accommodation, restaurants and transportation among others.

The potential impacts are mainly reflected in the direct and indirect benefits that the businesses bring to their workers (Reece, 2010). Some GILE exhibitors in Guangzhou are rewarded through incentive travel from their companies. Some also visit attractions in Guangzhou resulting in a corresponding increase in tourism revenue

and public transport revenue.

GILE also has social impacts on Guangzhou. Firstly, it has enhanced the image of Guangzhou. Hundreds of years ago, Guangzhou was regarded internationally as a multicultural centre. However, the development of other cities such as Shanghai, Hangzhou and Shenzhen has eroded this image, thus Guangzhou faces the challenge of image differentiation. The full name of GILE is “Guangzhou International Lighting Exhibition and LED Asia”, which shows that the exhibition is a global event. GILE, Canton Fair and other brand exhibitions have helped Guangzhou to regain the international image. Secondly, the exhibition creates new occupations for a rapidly growing population. To ensure service quality at GILE, the job allocation should be well planned and subdivided to include event planners, professional receptionists and field controllers. These new jobs help the Guangzhou government to reduce the unemployment pressure. In addition, the diversity of work categories has improved the management structure of GILE and facilitated the distribution of work. Thirdly, GILE has helped to educate customers. Because the theme of GILE is lighting development and business transactions, the exhibition focuses on the production of lighting products, innovation and development trends. For professional buyers, it affords them the opportunity to receive the current prices or name of their ideal products and other market information. For the general visitors, they are able to gain more detailed knowledge about lights from exhibitors. More importantly, those who are “educated” may be potential buyers.

Besides, GILE has impacts on the ecology of Guangzhou. In the rapid development of the city's convention and exhibition economy, the total economic output of Guangzhou is comparatively high in China. However, rapid population growth has resulted in many problems for Guangzhou, such as resource competition with residents, traffic congestion, environmental pollution, and waste disposal. The consequences are the difficulty in urban environmental protection and the worsening of ecological damage. According to the “State of Guangzhou’s Environment in 2016”, the second level of “Ambient Air Quality Standard” (GB3095-2012) among the six major pollutants, the concentration of nitrogen dioxide exceeded 0.15 times and the concentration of PM2.5 exceeded 1 μg / m3; the pH value of precipitation was 5.42, which was 0.18 pH units higher than that of 2015. The quality of the water was 70.0%, According to the national control assessment section of Guangzhou Municipality; the backwaters of fairway in Pearl River in Guangzhou and the Lion water is slightly polluted, Pearl River in Guangzhou Channel West area is also moderately polluted. In addition, Guangzhou's urban management department claims that the average annual production of construction waste in Guangzhou is about 40 million tons. In terms of waste disposal and utilization, the total annual utilization in the city is less than 1 million tons. The main solution to the waste problem is rather traditional; to landfill as garbage. Guangzhou Municipal Solid Waste Disposal Conference announced in 2016 that, in Guangzhou, a total of 688.35 million tons of household garbage is sent to disposal sites, which means 18,800 tons of rubbish has to be dealt with. On the other hand, the total amount of waste, which is recycled, is about 2.45 million tons, while the recycling rate of waste resources in this city is only 35.4%. The data above shows that though the air and water quality in Guangzhou is improving year by year, pollution is still serious, especially acid rain pollution and haze phenomenon.

It is an undeniable fact that GILE assumes some risks to ensure local sustainable development, such as carrying capacity risk, security management risk, seasonal employment risk and professional performance risk. Carrying capacity risk is a kind of risk, which mainly has an impact on the ecology, culture as well as natural environment. All of these issues pose serious challenges to the sustainable development of MICE in Guangzhou. In terms of security management risk, it is always related to the flow of the population. During exhibitions, a large number of people from various places throng the city, resulting in overcrowding and its attendant problems. In order to ensure the safety of participants and avoid potential attacks, everyone should be checked before entering the venue. On the other hand, too many attendees tend to reduce the efficiency of supervision and increase the pressure on security guards. There is also the risk of seasonal employment as the duration of each MICE event usually lasts less than a week. MICE events are seasonal in nature to the extent that many employees face seasonal unemployment. Employment instability can lead to social instability that affects the development of cities. GILE also has a professional performance risk. This is a relatively common problem, which affects cities that want to develop the MICE industry. For example, some facilities and public infrastructure do not meet the national standard, a situation

known as ‘non-professional exhibition’. In the end, an unprofessional MICE will only attract unprofessional exhibitors, thereby hampering the sustainability of conventions in the city.

Conclusions and recommendations

As mentioned above, through the observation and analysis of the achievements made by the MICE industry in Guangzhou and the influence of GILE, it can be foreseen that the MICE industry has the potential of industrialization, collectivization, internationalization, branding and ecology in the future development of the city. With a solid industrial base, developed foreign trade, advanced infrastructure and relatively perfect industrial facilities, there is no doubt that Guangzhou will consistently develop and improve its image through a strategy of developing the MICE industry. One of the ways by which the leading position of the MICE industry could be maintained is to focus on its sustainable development. However, sustainable development requires progress in urban management and urban development. Moreover, it is necessary for cities to change their concept from mechanical development to people-cantered development, which respects the laws of the city. As for the aspect of economic development, there should be a transition from extensive development of high energy consumption to green development. A change in the approach to urban management from simple disorder to the planning of construction and management systems of co-ordinating modes will result in the development of the city. In accordance with the principle of adapting the scale of cities to the carrying capacity of resources and the environment, land and water resources should be conserved as much as possible, while maximizing the use of natural resources as well as building low-carbon cities. Urban development should be in harmony with nature and man. Generally, it is only through sufficient analysis, careful planning, efficient implementation and regular assessment that the city can have a better and more sustainable future.

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Low Carbon Development Policies in China: The Case of Beijing

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Abstract: The article reviews the policy efforts of local governments in developing low carbon cities in China, by taking Beijing as a case study. With a framework developed from carbon flow in a city, the author decomposes the low carbon development policies into five policy areas, which are renewable energy, carbon sink, industrial structure, carbon embedment of buildings, and carbon emission associated with transportation. The content analyses of low carbon policies adopted in Beijing suggest that the low carbon development policies are treated differently among the state, market and society, and exert varied outcomes. Therefore, the author calls for low-carbon spatial planning, an alternative approach to deal with global climate change. The empirical studies at the neighbourhood level of Beijing emphasize the attributes of households, firms, and urban built environment. Data are collected from interviews, policy documents, census publications, and a household survey of 1300 samples. Analysis of the data reveals that carbon emission is a function of economic well-being, often strongly connected to the emerging motorization. The built environment of neighbourhood shows relevance to the volume of carbon emission, indicating that the role of spatial planning is the policy area with immense potential of innovation. In conclusion, low-carbon development policies in China are often used to achieve economic and environmental sustainability, while low-carbon cities are the outcomes of the environmentally conscientious policies.

Keywords: Low Carbon Development Polices, Urbanization, Urban Planning, China, Beijing

Introduction

With the on-going processes of industrialization and globalization, climate change has become a severe threat to the human beings. In the battle of controlling greenhouse gas emissions and relieving global warming, cities become the major concern. Housing more than half of the population and representing enormous economic potentials, cities also contribute up to 70% greenhouse gas emissions (UNDESA 2008). Such high volume of emissions, along with environmental deterioration, has drawn global attention. Collective actions are initiated at global and national levels to deal with this issue, China is not exempted from it.

Since the end of the 1990s, China has begun to implement various policies targeted at lowering the level of GHG emissions. Meanwhile, China continues its high-speed process of urbanization. The urbanization level measured by the share of urban population in total, is expected to grow from 45% in 2010 to 75% by 2050 (Zhang et al., 2011). Thus cities have gradually become the centres of high population density, prosperous economic activities, and GHG emissions in China. Statistical data show that the 35 largest Chinese cities contain about 18% of the country's population and contribute 40% of the country's energy usage and GHG emission (Dhakal, 2013). Given this situation, the idea of "low-carbon" has become one of the core concerns of China's urbanization. As early as 2005, the Ministry of Construction, which was later renamed the Ministry of Housing and Urban-Rural Development (MoHURD), in order to reduce GHG emissions and mitigate climate change, issued a series of policies to promote the development of urban public transportation (Li et al., 2012). It further released a national standard to evaluate "green" buildings. In 2008, Shanghai and Baoding were appointed as "experimental cities" for low-carbon city initiatives. In 2010, the National Development and Reform Commission of China (NDRC) appointed five provinces and eight cities as the first batch of low-carbon city pilot projects.

The purpose of this paper is to explore what has been done in de-carbonizing cities in China. Key questions asked in this paper include: What have been done in Beijing in CO_2 emission reduction? How are the attempts in de-carbonizing Beijing related to jobs and economic well-being of the city? Data are gathered from the planning documents of the Beijing, government publications, and

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field observations in Melbourne. The analysis of the data is guided by a conceptual framework of low carbon city summarized from the existing literature. The paper is organized into five sections. Section 1 introduces the research purpose and questions. Section 2 presents a conceptual framework of low carbon city making. Section 3 outlines the energy consumption and policy analyses in climate research and practice of Beijing. Section 4 calls for low-carbon spatial planning, based on empirical studies in Beijing. Section 5 summarizes and concludes.

Literature Review and Conceptual Framework

As China started to promote low-carbon development, research into China's low-carbon economy began to thrive. Research to date has either examined China's overall transition to low-carbon economy (Qi & Wu, 2013; Wang & Watson, 2010; Zhang, 2010), or has reviewed China's low-carbon practice in specific areas, such as energy consumption (Yuan & Zuo, 2011), electronic development (Kahri et al., 2011), technological innovation (Zhou et al., 2012), or urban planning and construction (Zhao, 2011). Unsurprisingly, low-carbon city policy has also received extensive scholarly attention. Scholars have examined the evolving concepts and practice of low-carbon cities in China (Li et al., 2012; Su et al., 2012), or have conducted detailed case studies based on the policy of individual cities, such as Beijing (Zhang et al., 2012), Shenyang (Xi et al., 2011), Shenzhen (Jong et al., 2013), Chongqing (Liu et al., 2012). A comprehensive review piece of China's low-carbon city policy, which mentions not only sectoral low-carbon policies, but also the approaches of financing low-carbon cities, was published by the World Bank (Baeumler et al., 2011). These researches, either outlining a comprehensive low-carbon city strategy, or describing the detailed specific cases, provide solid foundation for our review.

This article approaches the low carbon city polices from a different conceptual framework. Figure 1 summarizes and extends the major components in a low carbon city. Four layers of components are significant. First, there are low carbon agents, such as individuals, households, firms and organizations. Second, there is a low carbon economy characterized by low energy use, low CO2 emission and low pollution industries. Third, there are low carbon infrastructures, such as buildings, roads and public transport services. Fourth, there are low carbon spaces configured by appropriate land use mix, population density, and circulation/interaction space. The first three layers consist of daily urban life, whilst the fourth layer provides a context in which the first three operate.

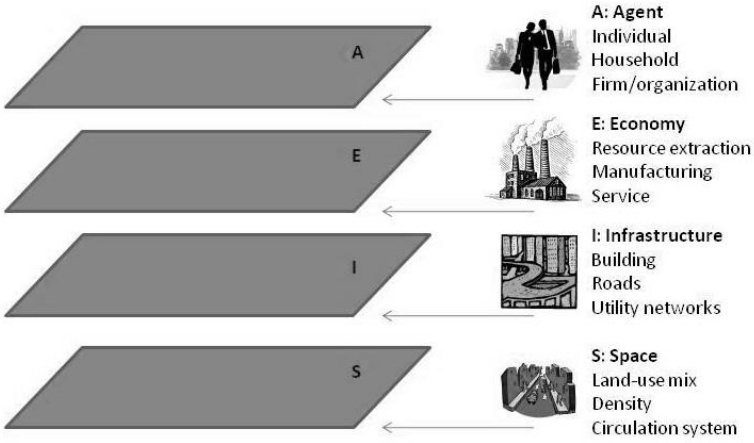

Figure 1: The four layers of a low carbon city

CO_2 emission is a result of activities in the first three layers within the space defined by the fourth layer. Primary energy input is a necessary condition for the operation of these activities. Figure 2 portraits the relationship between primary energy input, urban activities, and CO2 emission. To de-carbonize a city, the CO2 emission needs to be absorbed by the greeneries in the city, possibly, also captured and disposed into selected carbon storage space. These approaches are recognized in the literature. For example, Niu et al. (2009) summarize the CO2 reduction methods, including low carbon at the energy end, in the process, and on the output. Low carbon energy focus is to transform the use of coal-based energy to hydrogen-based energy. Low carbon process includes clean production, low

carbon economic structure, and low carbon society. On the output end, the focus is on carbon capturing, storing, and recycling.

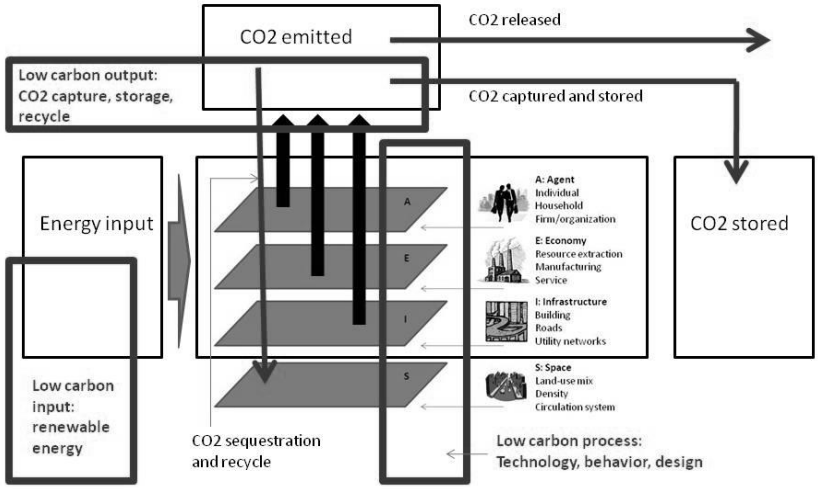

Figure 2: Major dimensions in low carbon city making

The Content Analyses of Low-carbon City Policies in Beijing

Public policy in any area includes multiple elements, which can be further decomposed, analyzed, and assessed. Hall (1993) conceptualized policy as the combination of policy goals, policy techniques or instruments, and policy settings. Using these elements, policy can be examined through a systematically structured lens. To customize this analysis, I decompose "policy" into three elements: policy goal, policy content, and policy instrument. The policy goal is the overarching goal guiding policy in an issue area; it reflects the grand strategy and basic orientation of a certain policy. The policy goal answers the question of what the problem is. If the policy goal points to the destination, the policy content then presents the routes for arriving there. It is the specific method for reaching the goal and addresses the question of what to do. A policy instrument is more detailed and specific. It emphasizes the implementation level and answers the question of how to do it. In one issue area, there is usually one general and broad policy goal, while there might be multiple policy contents that aim at the goal. Similarly, each policy content may have multiple policy instruments.

Under a politically centralized system, like China, the policy goal, reflecting the grand strategy of the whole country, is usually determined by the central government as comprehensive governance actor, the highest authority within the hierarchy of policy-making. The specialized agencies or ministries of the central government, which also sit near the top of the hierarchy, but focus on specific areas, are in charge of making policy contents. Policy contents are an essential part of policy and are expected to drive policy implementation. The policy instruments are made and issued by local governments and sometimes special agencies or ministries. Following the basic orientation of policy goal and principle of policy content, policy instruments help local governments carry out the specific measures. Therefore, under the unitary administrative structure of China, the comprehensive and macro-management agencies of the central government, the specialized agencies of the central government and the local governments are in charge of making the policy goal, policy contents and policy instruments, respectively and in sequence.

Policy goals represent the developmental strategy and include concrete targets. When the policy agenda of "environmental protection" was set, the highest leadership emphasized emission regulation in various occasions. With this top-down pressure, the Beijing Municipal Government has taken serious measures to control carbon emissions. This study collects reports and articles on low carbon policies in Beijing from two newspapers (Xin Jing Bao and Beijing Youth) and a Chinese academic article database, and analyses the contents of the reports and articles. Field survey and interviews with local officials, employers, planners, are also conducted.

The industrial sector is highly energy intensive and takes around 40% of global energy use (IPCC, 2007). It is

also mainly responsible for GHG emissions. Under the rapid process of urbanization, this trend is particularly obvious in Beijing. The industrial policies focusing on low-carbon development are generally understood as the "low-carbon economy", which touches on almost all areas of industrial operations, from manufacture to retail, from agriculture to service. The Municipal government has launched close monitoring of high-consumption and high-emission industries, while enterprises are required to adopt modern technologies, strengthen management, and install GHG reduction equipment in new projects.

To be specific, the detailed industrial policy content includes three major aims: to assess energy efficiency for new industrial capacity, to eliminate energy-inefficient industrial capacity, and to encourage the development of high-technology, innovation-driven industries and the service sector. For instance, to build new industrial agglomeration is regarded an effective policy instrument to alter the unfavourable industrial structure. To promote the service industry, which is low-carbon in nature, is another common policy instrument. The ratio of the tertiary sector in GDP in Beijing is 70% and the growth rate of Beijing's service sector reached 8% in 2013 (Beijing Bureau of Statistics, 2014). These results, on the one hand, are driven by urban demand, and on the other hand can be attributed to the support policies of these cities.

To build a low-carbon city, one important approach is to adjust the industrial structure. The enterprises of traditional industry, which have high energy-consumption and low efficiency, became targets, either moved out of the urban area or upgraded. The low value-added and low-end sectors are moved out of the urban jurisdiction, while the high value-added sectors are upgraded. Automobiles, for a long time, have been a traditional pillar industry of Beijing. As early as 2010, the government of Beijing started to sell the low-carbon concept to its automobile industry. Today, to be involved in Beijing's automobile industry means not only manufacture, but also design, research, and new-energy approaches. Other cities, for instance, Shenzhen, have also adopted this approach for developing their own electric automobile industry.

It is worth noting that Beijing, and some other cities, regard the high-tech and low-carbon industries as their opportunity to attract more investment and to increase their local GDP rapidly. The main focus of local governments is not necessarily "low carbon" per se, but "industrial development". More than 300 cities chose the solar photovoltaic industry as their leading industry. Many cities provided low-interest loans or other kinds of support to the producers in low-carbon industries, but neglected the fact that there was no sufficient demand to absorb their products in the market. It caused serious bubbles among the industries and many producers were phased out.

Transportation is another major GHG emission source. The Kyoto Protocol has identified that the transportation sector contributes around 13% of global CO2 emissions. Due to their diverse layouts, this share greatly varies among Chinese cities (as 7% for Tianjin and 16% for Beijing) (Dhakal, 2013). But what makes the transportation sector an important concern in low-carbon policy is the rapid growth rate of its share in total GHG emission. With the rapid growth of car ownership rates in Beijing, the emission from the transportation sector increased dramatically, as shown in the Figure 3.

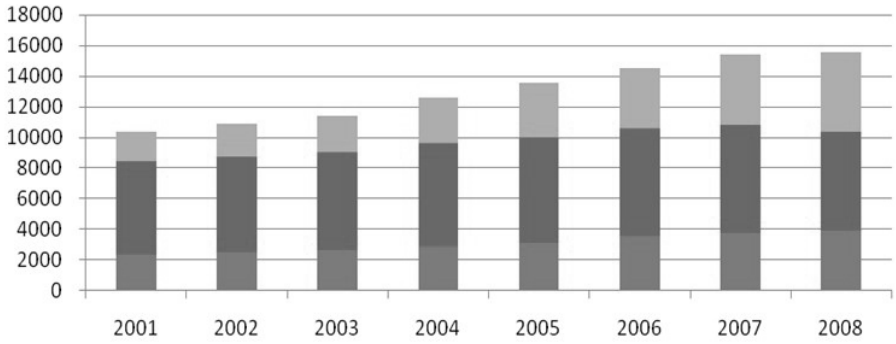

Figure 3. The Structural Change of Carbon Emissions in Beijing (2001-2008)

Note: Dark grey colour (the bottom) represents carbon emission from building; black colour (the middle) represents carbon emission from manufacturing; light grey colour represents carbon emission from transportation.

To build a low-carbon urban transport system, both urbanized and urbanizing areas have issued similar policy instruments. The first is to develop public transportation and to build walkable and cycle-friendly infrastructure. Since the mid-2000s, Beijing has started to increase funding for the construction of underground railway and bus systems. From 2009 to 2013, Beijing invested 330 billion RMB in its transportation system. The length of bus rapid transit (BTR) and railway systems combined has reached more than 600 kilometres. In July of 2013, the daily ridership of the public transportation system reached 9,750,000 passenger-trips. Meanwhile, the system is still undergoing rapid growth. It is planned to extend the total length of the subway system from 456 km in 2012 to 1000 km in 2020 (Beijing Municipal Commission of Transport, 2013).

Walking and cycling, once-popular modes of transportation in Beijing, have declined considerably in recent years due to rapid motorization and spatial growth. Recently, Beijing has begun working to regain lost ground by improving its residents' walking and cycling experiences. These projects have included introducing segregated bicycle lanes to improve cyclist safety; improving the quality of secondary and tertiary roads, which are extensively used by cyclists and pedestrians; and providing basic facilities and street amenities, such as toilets, benches and trees. Beijing's Green Beijing Plan (2010–2012), for example, promises actions to allocate more space to pedestrians and cycling, adding more bicycle parking places, and providing better connections between cycling and public transit. Beijing, since 2007, has adopted a low-price policy for all public transport and the government has paid 18 billion RMB annually in subsidies for subway and bus users (Beijing Municipal Commission of Transport, 2013).

However, in Beijing the service and maintenance of public transportation systems lags behind. In the future, Beijing will need to focus more on "people-centred" principles: i.e. facilitate bus and subway transit, increase pedestrian accessibility, build cycle-friendly roads and improve the service quality of the whole transportation system.

Buildings are the major component of a city, and urbanization means more built-up areas. The building sector is highly energy-consuming and a major GHG emitter. It is estimated that, the growing building sector has consumed more than 15 to 45 percent of China's total primary energy (Li & Colombier, 2009; Steinfeld, 2008).

Initially, the requirement to build "energy-saving" buildings was just a symbolic policy with little substantive action (Wang, 2011). Only since the mid-2000s when climate change became a more prominent policy problem, has energy efficiency building truly entered the policy agenda. For instance, China was one of the first developing countries to introduce energy building codes. However, the enforcement of energy building codes was ineffective until very recently. In 2001, the rate of compliance with energy building codes was only 5% during the design phase and 2% during the construction phase. By 2008, these rates had increased to 98% during the design phase and 81% during the construction phase (Levine et al., 2010).

With varied policy contents, the building sector made significant progress towards low-carbon city development in Beijing. Actually, these standards or targets issued by the MoHURD are just minimum requirements. In practice, Beijing, with more resources and capability, both financial and executive, has adopted stricter regulation on energy efficiency of the building sector. However, rebound effect regarding low carbon building development has also been observed in Beijing.

An Alternative Approach: Low-carbon Spatial Planning

Given the above content analyses of low carbon development policies, this article argues that there are two cornerstones of the concept "low carbon city": the spatial and spatial dimensions. Issues explored under the spatial dimension include alternative energy sources (e.g. solar, wind and tidal), energy saving products (e.g. insulation of buildings), and behavioural changes related to the application of energy saving practice. Nevertheless, issues such as land use planning, transportation planning, and the behavioural aspects of the spatial dimension are important for at least three reasons, as the following:

The first reason is the uncertainties of using new energy sources for low carbon energy, because their consequences are not totally known yet. Examples include hydropower, which used to be regarded as "green" and perfect energy source, but turned out to bring severe ecological impacts on lower reaches of a river, and nuclear power which is low carbon, but unstable and even dangerous, as indicated in the incident of Fukushima Nuclear Power Plant. The second is so - called "rebound effect" of technological advancement in low carbon process (Greening & Greene, 2000). It refers that, with the

improvement on energy consuming efficiency, the price of energy resource decreases actually and thus the consumption of energy resource increases eventually. The third one is that built environment has long term effects on people behaviours, which are difficult to change once the spatial form is fixed. Cordon (2007) pointed out that, in U.S. cities, because of the lack of appropriate spatial planning, half of the urban lands cannot be served by public transit because of low population density, and thus have to rely on private automobiles for a long time.

In the following empirical analysis, the planning parameters, i.e. density, land use mix, accessibility to employment, and proximity to public transit, are to be tested in the neighbourhoods of Beijing. Household carbon emission data were collected by questionnaire surveys on the August of 2010. The questionnaires were filled up by spatially stratified randomly selected 1,400 households, which contained four aspects, i.e., neighbourhood built environment and location, travel behaviour and the associated energy consumption, in-house energy consumption, and household characteristics. One thousand one hundred and seventy-four (1,174) questionnaires were valid, with the ratio of 87.6%.

Household carbon emission is the sum of emission at the house site and off-site. These were derived by converting power, gasoline, natural gas, heating, and other types of energy consumptions at household location and off-site consumption (i.e. travel to work and other places, activities in non-work related sites). Carbon emissions from transportation were calculated with reference to Beijing Transportation Annual Report, whilst in-house carbon emissions were calculated with reference to Beijing Energy Statistical Yearbook. Neighbourhoods characteristics were measured by building density, land use mix, accessibility to employment, and proximity to public transit. The planning parameters were extracted on the basis of land use data collected from Beijing Municipal Commission of Urban Planning.

The 1,174 surveyed households were geo-coded in map, by the aid of ArcGIS 9.3. In this paper, a high- or low-carbon neighbourhood is defined as a cluster of households with high- or low-carbon emissions. Such a cluster is identified by a “hot-spot” in spatial autocorrelation statistics. We identify such a hot-spot by using the Moran’s I index. A positive Moran’s I means that adjacent units have similar values of a variable, and thus the occurring of spatial concentration, while negative spatial autocorrelation can be interpreted as spatial dispersion (Longley, 2001).

Local Indicator of Spatial Autocorrelation (LISA) is used to detect the local spatial concentration, or high- and low- carbon neighbourhoods in Beijing. A spatial statistical tool, was employed to identify high- and low-carbon neighbourhoods. The LISA index for a household i is defined as

$$Ii = z_i \sum_j w(i,j) z_j = \frac{x_i - \bar{x}}{\frac{\sum_{j=1, j\neq i}^{N} x_j^2}{N-1} - \bar{x}^2} \sum_{j=1}^{N} w(i,j)(x_j - \bar{x})$$

where xi is the value of carbon emission in the household i, zi is the standardized form of xi, and W (i, j) is a spatial weight matrix where W (i, j) = 1, if the household i and household j are within certain distance, and W (i, j) = 0 otherwise.

Figure 4 shows the LISA map of household carbon emissions in Beijing. The spatial distribution of the clusters of high-carbon emission households and the clusters of low-carbon emission households are indicated in the figure. In general, the clusters with significant LISA value are mainly distributed in the urban fringe and suburbs, while clusters within the inner city and remote area are rare. There is notable difference between the distribution of high-carbon household clusters and low-carbon household clusters.

In order to explore the relation between planning parameters and household carbon emission, this study selected five high- and low-carbon neighbourhoods for further intensive case study.

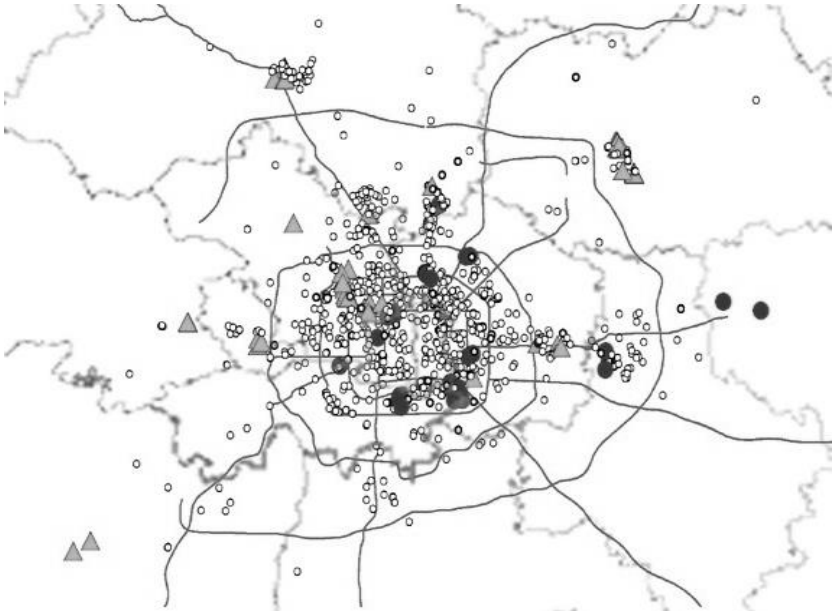

Figure 4: The High- and Low-Carbon Neighbourhoods in Beijing

Note: Dark dots represent high-carbon neighbourhoods, and grey triangles represent low-carbon neighbourhoods.

The main selection criteria include 1) significance in carbon emission, 2) comparability in population size, land area, economic activities, and location, and 3) readiness of data for analysis. There were three high-carbon neighbourhoods, viz., Anhuili in Chaoyang District, Fangzhuang in Fengtai District, and Guoyuan in Tongzhou District. Anhuili was the neighbourhood with the highest carbon emission among the five, Fangzhuang once was the neighbourhood for rich family, and Guoyuan was the neighbourhood with the longest commuting distance in our survey data. There were two low-carbon neighbourhoods, viz. Sanyimiao-zijin in Haidian Distract, and Bajiaolu in Shijinshan District. The former located close to Zhongguancun, one of the largest employment centres in Beijing, and the latter was the residential area of the Capital Steel Group, one of the largest State-Owned Enterprises, or danwei in Beijing. The amount of carbon emission per person per year is reported in the figure as well. From the highest carbon emission to the lowest, the sequence of the five neighbourhoods was Anhuili, Fangzhuang, Guoyuan, Bajiaolu, and Sanyimiao-Zijin.

Judging from the land use maps collected from Beijing Municipal Commission of Urban Planning, the building forms of Sanyimiao-Zijin and Bajiaolu were compact, whilst those of Anhuili and Fangzhuang were dispersed. Building densities of the five neighbourhoods were calculated. The results are reported in Figure 5

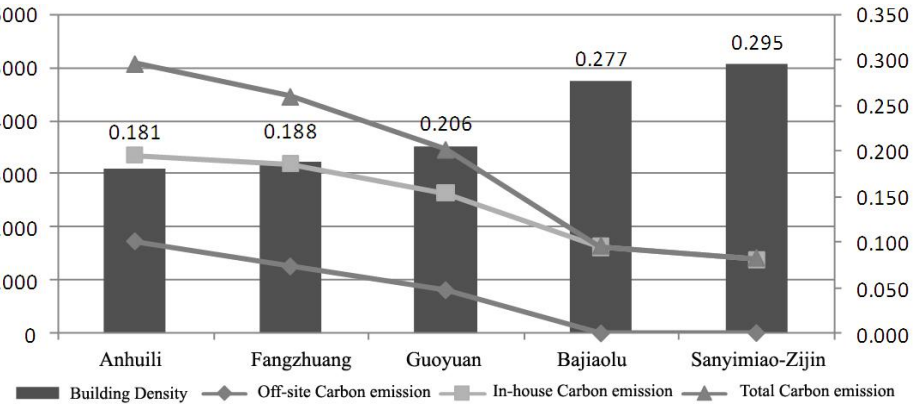

Figure 5: Building densities and household carbon emissions in the five neighbourhoods

As shown in Figure 5, the relationship between building density and in-house carbon emission is negative. This relationship is controversial in the existing literature. Rosenfeld et al. (1995) argued that higher building density intensifies the urban heat effect, thus leading to more energy consumption for cooling. On the contrary, Ewing and Rong (2008) claimed that higher building density is associated with smaller spaces per unit and less area of out-door walls, which is more efficient in storing cool/heat and thus reduce energy consumption and carbon emission. Our study supports the latter that higher building density does not lead to higher in-house carbon emission. Among the five neighbourhoods, the average area of apartments in Annuli and Guoyuan was larger than 90 square meters, while that in two neighbourhoods with lower carbon emission, Bajiaolu and Sanyimiao-Zijin was less than 90 square meters. Many apartments in Bajiaolu were even less than 70 square meters. Thus in Beijing, higher building density usually implies smaller area per unit, which leads to reduction in energy consumption for cooling and heating (and eventually carbon emission). It is worthy of note that our study area is a residential district, where there is a lot of urban heat.

In order to examine the impact of land use mix on household carbon emission, this paper identified a 2 Km * 2 Km area with the centroid point in the neighbourhoods as the study area. Choosing 2 Km as the boundary is because it is the distance of 20 minutes' walking or 10 minutes' cycling. The land use patterns of five neighbourhoods are shown in Figure 6.

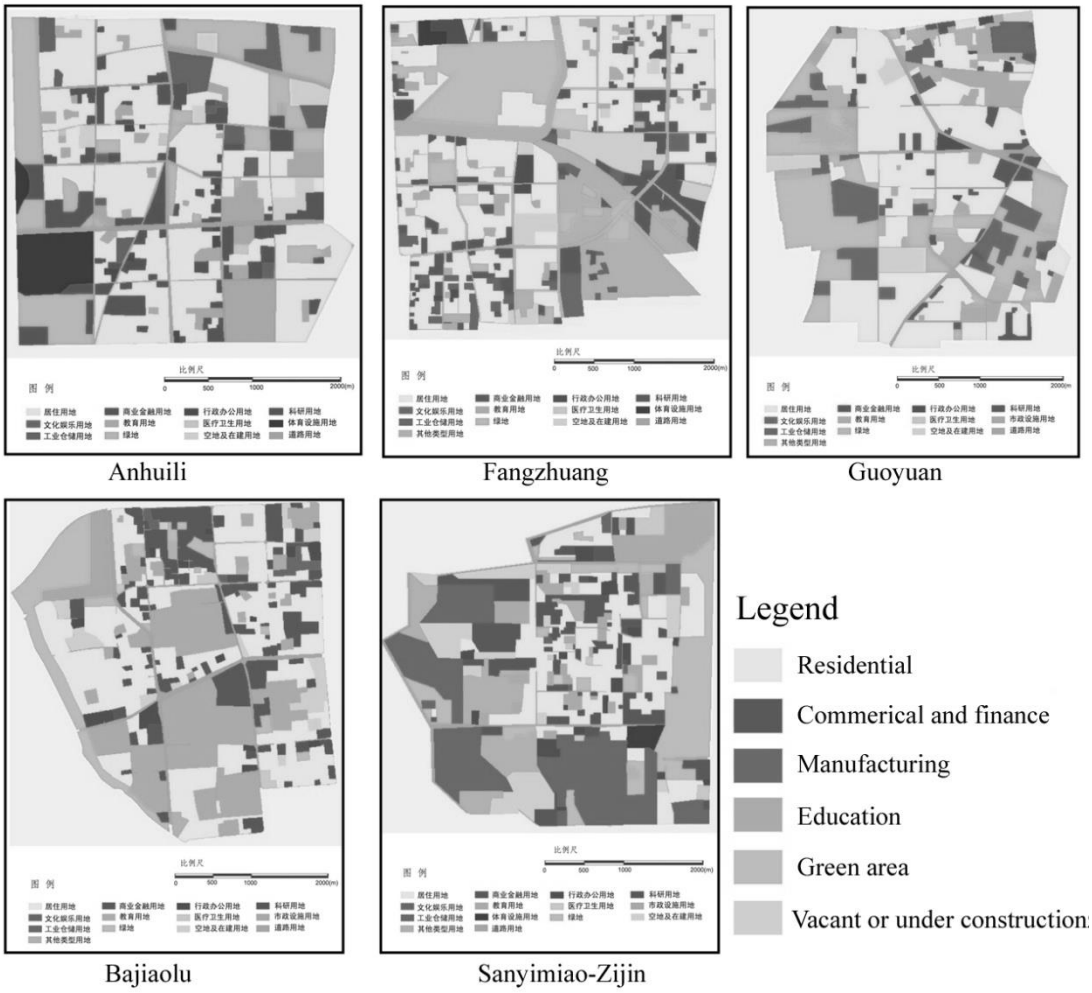

Figure 6. Land use pattern of the five neighbourhoods

Based on the figure, land use structures of the five neighbourhoods were calculated and reported in Table 2. Among the neighbourhoods, the shares of residential land use in Anhuili, Fangzhuang and Guoyuan were larger than 40% and notably higher than those of Sanyimiao-Zijin and Bajiaolu. Except for Guoyuan, the shares of commercial

and financial land use in other four neighbourhoods. For other types of land use, the share of educational land use in Sanyimiao-Zijin was the highest among the five, the share of manufacturing land use in Bajiaolu was the highest, and the share of green area in Guoyuan was the highest. A neighbourhood will generate higher carbon emission if its and the surrounding land was mainly occupied by residential, and a neighbourhood will produce lower carbon emission if its and the surrounding land was occupied by more manufacturing, education, commerce and finance activities. Land use mix ensures the balance of job and housing, thus affecting residences' travel mode choice and commuting distance and reducing transport related carbon emission.

On the basis of the sub-district employment and population densities data provided by Beijing Municipal Commission of Urban Planning, the ratios of employment/population in the five neighbourhoods were calculated. Results indicate that the ratio of employment/population in the high-carbon neighbourhood was significantly lower than that in low-carbon neighbourhood. The ratios of employment/population in two high-carbon neighbourhoods, Anhuili and Fangzhuang, were 0.610 and 0.608, whilst the ratios in two low-carbon neighbourhoods, Sanyimiao-Zijin and Bajiaolu, were 0.972 and 1.403. Bajiaolu even provided employment opportunities for people outside of the neighbourhood. Most of the its residents relied on walking or cycling for commuting, and thus had the lowest transport carbon emission among the five neighbourhoods. On the contrary, the share of employment/population in Guoyuan was lowest, with only 0.289, which implied that most of residents in Guoyuan had to travel longer distance in commuting.

In general, the relationship between land use pattern and household carbon emission is as follows. Within certain boundary around a neighbourhood, household carbon emission increases with the rising share of residential land use, and decreases with the rising share of land use providing more employment opportunities. The larger the ratio of employment/population, the lower the household carbon emission in the neighbourhood, especially for the transport carbon emission.

Existing literatures indicates that whether a neighbourhood is close to employment centre affects its residents commuting behaviour significantly, which thus has great impact on household transport carbon emission. With reference to the definition of employment centre in the Master Plan of Beijing (2004), the following analyses the accessibility to employment of the five neighbourhoods.

The three high-carbon neighbourhoods were all far away from employment centres in Beijing, while the two-carbon neighbourhoods were close to. Specifically, Sanyimiao-Zijin was close to Zhongguancun High Tech Park, which was defined in the Master Plan (2004) as a functional centre in Beijing. A large amount of IT firms, producer services, office buildings and employment opportunities were clustered in Zhongguancun Park, which attached good accessibility to employment to the neighbourhood of Sanyimiao-Zijin. Bajiaolu was even within the administrative area of Capital Steel Group, one of the largest SOEs and employment centres in Beijing. Furthermore, the area was defined in the Master Plan (2004) as Shijinshan Comprehensive Service Centre and was proposed to develop high-end producer services and creative industries in preparation for the relocation of Capital Steel Group. Till now, new employment opportunities from the emerging sectors, including finance, consultancy, cartoon, computer game etc., were clustered in the Shijinshan Comprehensive Service Centre.

The impact of accessibility to employment in a neighbourhood on its residents' commuting pattern is clearly demonstrated in Figure 5, which represents commuting patterns of all the households surveyed in the five neighbourhoods. The commuting destinations of the households in two low-carbon neighbourhoods were in proximity to the neighbourhood respectively. Except a few, the commuting destinations of residents in Bajiaozhuang were mainly clustered in Shijinshan Comprehensive Service Centre, while the commuting destinations of residents in Sanyimiao-Zijin were all located in Zhongguancun High Tech Park.

In comparison, the commuting destinations of the households in high-carbon neighbourhoods were quite dispersed. The commuting destinations of residents in Anhuili were mainly concentrated in Chaoyang District. Some of them were in the Jiangguomen CBD and Yansha business district, while a large proportion were dispersed in the office buildings around the Second Ring and Third Ring. The commuting destinations of residents in Fangzhuang were even wide-spread, including not only the inner city districts, viz. Dongcheng District and Xicheng District, but also the urban fringe districts, viz. Fengtai

District, Chaoyang District, and Haidian District. Undoubtedly, Guoyuan in Tongzhou District was the neighbourhood with the longest commuting distance and most dispersed commuting destinations among the five case neighbourhoods. Only a small proportion of commuting destinations of residents in Guoyuan were in Tongzhou District, while the most were in Chaoyang District. And even some of them were in Xicheng District, Fengtai District, and Haidian District, which is 50 kilometres far away from the neighbourhood.

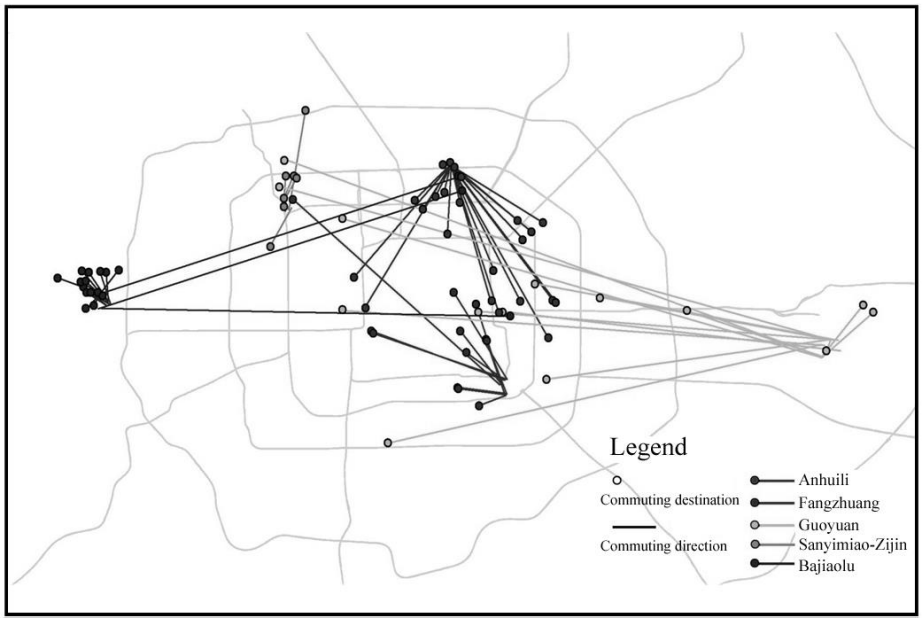

Figure 7. Spatial distribution of commuting patterns in the 5 neighbourhoods

Among the various motorized transportation modes, subway and public bus are the most low-carbon modes. The per capita carbon emission by using subway and public bus is significantly lower than that by using taxi, private vehicle or motorcycle. Between the two modes, subway is more efficient and low-carbon. The following thus focused on the proximity to subway of the selected neighbourhoods. The accessibility to subway is measured by two indicators. One captures geographical proximity, that is, the linear distance between subway station and the centroid point of neighbourhood; the other reflects the connection condition, which measures the distance of walking route from the centroid point of neighbourhood to subway station. The latter is usually larger than the former.

Among the five neighbourhoods, the geographical linear distances from the centroid point to the nearest subway station in Anhuili, Sanyimiao-Zijin, and Bajiaolu respectively were all within 1 kilometre. Only the linear distance in Fangzhuang was over 1.5 kilometres. If connection condition between neighbourhood and subway station is considered, the proximities to public transit in Sanyimiao-Zijin and Bajiaolu were the best. It takes only 8 minutes to walk. The following are Anhuili (about 10 minutes' walking), Guoyuan (about 12 minutes' walking), and Fangzhuang (about 18 minutes' walking).

The above findings are summarized in Figure 8, including the geographical linear distance and connection route distance. The two low-carbon neighbourhoods, Bajiaolu and Sanyimiao-Zijin, enjoyed the best proximity to subway station, while in the following were Anhuili, Guoyuan, and Fangzhuang. It suggests that the proximity to subway station affects residents' choice on transportation mode. According to our questionnaire data, 60 percent of the households surveyed in Bajiaolu choose to use subway as main transport mode, and 50 percent of the households surveyed in Sanyimiao-Zijin choose to use subway. On the contrary, none of the households surveyed in Fangzhuang choose subway, while 71.4% of the households choose to use private vehicles and motor bicycles. Clearly, improving the proximity to public transit has very positive effect in building up low-carbon neighbourhood and thereby low-carbon city.

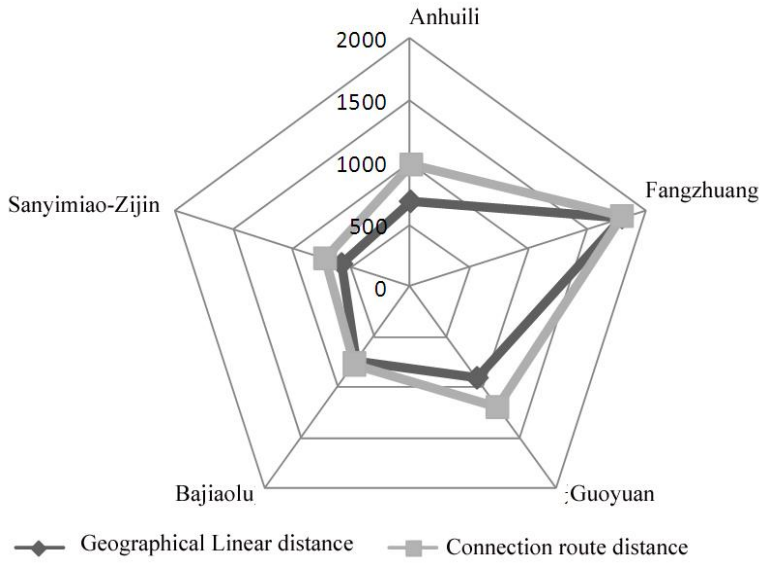

Figure 8. Proximity to subway station in the five neighbourhoods

Summary and Conclusion

Taking Beijing as an example, this article claims that, in the process of building low-carbon city, urban planning plays a key role. In the wave of urbanization when new urban areas mushroom, to use the tool of urban planning appropriately is the first step in controlling GHG emission. In the urbanized areas, although the basic urban layout cannot be changed easily, decision-makers also try to use the tool of urban planning to reshape the form of the city and redefine the function of urban areas. It has been confirmed in many Chinese cities that urban form affects residents' household carbon emission significantly. Planning methods, therefore, have been called for, aiding the construction of low carbon cities.

This study explores the relationships between urban spatial planning and household carbon emission in Beijing. Based on a spatially stratified sampling 1400 household data via questionnaire, the authors employed GIS and the spatial statistical index LISA in identifying three high-carbon and two low-carbon neighbourhoods. The following intensive case study on the five neighbourhoods reveals that:

1) Intensifying building density is in favour of reducing household in-house and transport carbon emission, by reducing energy consumption for cooling and heating per building area and by encouraging residents to use low-carbon transport mode.

2) Land use mix increases the ratio of employment/population, thus improving the balance of job and housing, which leads to less commuting distances, therefore, less transport carbon emission.

3) Better accessibility to employment shortens the commuting distance of residents and encourages the use of public transport, thus reducing transport carbon emission effectively.

4) The proximity to public transit promotes the use of public transport significantly, therefore, reduces household transport carbon emission.

Based on the findings, adjustment of planning parameters provides an alternative approach to reduce carbon emission in Beijing. Planners need to rethink on the traditional approach in residential planning and design. In the premise of satisfying national planning standard, planners could consider improving building density, narrowing building area per unit, and promoting compact built environment. At a larger scale, planners could try to strike the balance of job and housing, to avoid mega residential projects, to arrange more land use for the economic sectors with high density employment. At the urban scale, planners could improve public transport network, intensify the density of public transit, and enhance the accessibility of neighbourhoods to public transit facilities. On the other side of the coin, reconfiguration of employment distribution, e.g. planning more sub-centres, is a useful approach to reduce household carbon emission as well.

In summary, higher building density, mixed land-use pattern, better accessibility to employment, and proximity to public transit, are important planning parameters that reduce household carbon emission in Beijing. The planning

principles found and documented in the literature based on the studies in Western cities work in the capital city of China as well. This study adds new evidence to the argument that urban spatial form has significant effects on household carbon emission. Optimizing spatial form, therefore, is an important policy strategy to achieve low carbon city, and the planning institution is the approach that should never be overlooked.

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City Life and Its Influence on the Relational Development of Young Adults: Perspectives from the Book of Proverbs and the Ghanaian Society

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Abstract: The book of proverbs, especially chapters 1-9, provides some insights into the urban culture of ancient Israel. Addressed to the young adults, Proverbs 1-9 aims at directing the desires and values of young men as they navigate through life. The fervour and commitment displayed by Israelite sages clearly show the danger urban culture poses to the young adults. As a large and heterogeneous conglomerate of individuals and their settlements, cities have been important social variables in the development of cultures and humans. The emergence of urban studies is a testimony to the growing realization that cities make a mark on the way of life of society. The phenomenon of the city, however, is not a modern reality, but a cultural fossil, which continues to take on its own form and shape. Our appreciation of ancient testimonies about city or urban life could facilitate our understanding of how modern cities could contribute to sustainable life. Focusing on ancient cities in the Old Testament, we are not only looking for origins and parallels of modern cities, but also seeking to explain the past in order to illuminate the present. From a literary historical perspective, this study examines the influence ancient Israelite city had on the relational development of young Israelite adults within various contexts of life. As an important skill for urban survival, relationship is key to young adults as they negotiate through the throes of urban culture. The paper proposes that the complex challenges urban culture throws to young adults today can find inspiration from how ancient Israelite society addressed its challenges.

Key words: Proverbs, Urban, Young Adults, Wisdom, Relationship

Introduction

For Zukin (1997,1), cities "represent the basest instincts of human society". To have large groups of people concentrated in an area with diverse tasks and responsibilities represent a great achievement for humans who, hitherto, were scattered and vulnerable to larger beasts of the land and air. Holding together different people with varied skills, cities in this process of consolidation opened up their economy to include manufacturing and commerce alongside agriculture, thereby leading to the creation of bureaucracy. As a cultural fossil, modern cities have become economic, political, and cultural icons where people continuously negotiate their identities and meaning. Central to these processes of identity formation and creation of meaning is relationship; the oil that ensures the optimal function of the city. Indeed, relationship is not peculiar and limited to city life, although its nature makes it one of the key distinctive features between urban and rural life. Explaining this distinction, Lim posits that, because cities attract diverse people, they create "a new order of relationships among persons, radically different from... rural areas" (1998, p. 140). Several studies show that relationships in the city are superficial and characterized by lack of proximity (cf. Mumford, 1961). Thus, Imig (1983) argues that urban dwellers do not pay much attention to interpersonal interaction as do rural dwellers.

Perhaps the social group that is greatly affected by urban life is young adults. Defining young adults is a difficult task due to socio-cultural determinants, which are varied across time and space. In this paper, however, a legal definition is avoided in favour of a socio-cultural one, and since the paper dialogues with ancient Israelite culture and the Ghanaian culture, the definition adopted has to be applicable in these cultures. Before we consider who a young adult is in the two cultures, suffice to explain briefly the basis for engaging the two cultures in this study. Although many African cultures have been linked to the ancient Israelite society through their traditions on their origins and on linguistic grounds, such as the Akan and the Ga people of Ghana, and the Bemba of South African (cf. Ukpong, 2000), the basis for engaging the Akan culture and ancient Israelite culture lies not in this perceived connection. Rather, the basis for this engagement lies in the continuous use and belief in the Bible (Old Testament) by

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many Ghanaians by virtue of their affiliation to the Christian faith. As contemporary readers of the Bible (Old Testament), Ghanaian Christians are confronted with the culture and the life and thought of ancient Israel which, on the one hand, has great similarity with many Ghanaian cultures, but, on the other hand, differs considerably from them. With the increasing call for biblical scholars to contextualise their studies and make it relevant for users of the Bible within their context, this paper aims at bridging the two cultures so that Ghanaian readers of the Bible can appreciate and understand the place of the Ghanaian context in biblical interpretation.

Although set apart by thousands of years, the life and thought of ancient Israel and many traditional African societies show great similarities, including their understanding of a young person. Generally, a person is considered a young adult when the person moves from the stage of dependence (childhood) into independence (adulthood). The Hebrew word translated as young person is **na'ar**. According to Bland (2002), the word refers to a "teen" or a "young adult". Such a person's transition from childhood to adulthood is marked by the ability for him (**na'ar** is a masculine noun) to take a partner. Thus, adulthood begins from the age when a community perceives one as liable or permissible to marry. A similar situation persists in Ghana. Marriage is an important determinant of the coming of age. Among the Akan, for instance, it is the responsibility of the father to ensure that he marries off his sons (especially the eldest son). After marriage, the son is no longer dependent on the father. An Akan proverb says, woaso *aware a tɔw wo prɛtse* (*if you are due for marriage then buy your utensils*). This proverb communicates the responsibility and independence that comes with marriage. After marriage, one is no longer dependent on the parents for living.

Because of the immediacy of their transition, young adults in Ghana are considered to be inexperienced and needing guidance. Ghanaian Cities with their complex web of social settings present a worrisome situation for these young people who may still be grappling with who they are and the meanings they should assign for themselves. The interpersonal relationships they engage in from different social contexts are important mediums through which young people, negotiate their identities.

From a historio-literary perspective, this study examines the influence ancient Israelite cities had on the relational development of young Israelite adults. As an important skill for urban survival, relationship is essential to young adults as they negotiate through the throes of urban culture. Paying attention to ancient testimonies about city or urban life could facilitate our understanding of how modern cities could contribute to sustainable life. By focusing on the nature of urban life in ancient cities in the Old Testament, we are not only looking for origins and parallels of modern equivalence, but also seeking to explain the past in order to illuminate the present. The paper proposes that the complex relational challenges that today's urban culture throws to young adults can find inspiration from how ancient Israelite society addressed its challenges.

In order to achieve the above goals, the paper is organised as follows. Beginning the discussion is an overview of young adults and their relational development in urban settings. This section puts into perspective three major relationships young adults in Ghana find themselves in within urban settings. Next, we look into how the Old Testament constructs the concept of city and the varied social contexts city life generated. Following is a discussion on the construction of urban life in the book of Proverbs, with specific attention to how the book constructs young adults and the varied relationships they find themselves in. Finally, we explore implications from the ancient Israelite case of young adults within urban settings for their counterparts in the Ghanaian society.

Young Adult and Their Relational Development in Urban Contexts: The Ghanaian Perspective

As social beings, humans consolidate their humanity through the relationships they build and sustain. From birth, humans construct a web of relationships ranging from the immediate familial context of parents and siblings to the larger world of friends and neighbours. At the youthful stage of human life, relationship appears to take on an added degree of significance as young people become more conscious of themselves and their surroundings as they construct their identities and create meanings for themselves. When young people acquire the ability to interact and relate with others in a positive way they are perceived as having gained maturity.

According to the 2010 Census, majority of Ghanaians (50.9) live in urban dwellings with a youthful population (Ghana Statistical Services, 2010). This means that a large number of young people in Ghana live in urban settings.

The kind of relationship they build, thus, is key to their development and success in life. Nukunya (2003) points out that urban centres in Ghana are associated with the development of slums, organised crime, juvenile delinquency, and many other vices. With these vices on the increases, young people are mostly at risk, and this is when relationships become key to their development.

One of the key relationships today's young people find themselves in is romantic relationship (Furman & Shaffer, 2003; Wilson-Shockley, 1995). Furman, for instance, indicates that the significance of romantic relationships lies in the role they play in shaping the developmental tasks of young people. Such tasks include identity construction, building and maintaining relationship with peers, and development of sexuality. Romantic relationships in Ghana, especially within urban settings, are increasingly becoming more dangerous for young people. In a study by Bingenheimer and Reed (2014), female youth in Ghana are highly at risk of coerced sex not from strangers, but people they know, especially their partners. They write, "Our findings suggest that having ever had a boyfriend is the primary predictor of reporting coerced sex among young women, beyond any influence of family, school or other household socioeconomic variables" (Bingenheimer and Reed, 2014).

Apart from romantic relationships, parent and sibling relationship continues to be an important part of the lives of young people in Ghana. After all, these are groups young people have been part of since infancy until they move from their primary home. Studies indicate that parent and sibling relationship strongly impinges on the identity and relational development of young people (Edwards et al., 2006; Sanders, 2004). Like many African peoples, a Ghanaian child lives longer with his parents before completely weaning him/herself off the parents. With increase in urbanism in Ghana, transition from childhood to adulthood has become more protracted and dynamic with factors, such as age, playing little role, while others, such as job and sex, becoming increasingly important. For instance, many Ghanaians youths continue to live with their parents until they find themselves a job. With few job places available, many young people are without jobs and continue to depend on their parents.

Peer relationship is yet another social role young people pay attention to. Critical to young people's sense of social acceptance, peer groups exert a big influence on young people and their understanding of their social and relational development (Sullivan, 1953; Erikson, 1968). Sullivan pushes that the absence of peer group in a young person's life could lead to psychological problems (Sullivan, 1953). However, when peer formation is put within the context of urbanism, young people would have to be weary of the kind of peer groups they join. A study by Bingenheimer, Asante, and Ahiadeke (2015) on peer influence on Ghanaian females towards sex indicates that, generally, female peers discourage each other from engaging in premarital sexual activity. Unfortunately, negative peer influence abounds on other aspects of life. Acquach et al. (2014), for instance, show that peer influence is a major factor for fighting among the youth in Ghana.

These biological and environmental based relationships are essential to the total development of young people in Ghana. The more positive these relationships are the likelihood of the development of confident young persons, who give out their best to their societies. However, the reverse will be a society made up of many young people who become deviant and a burden to their communities. Interestingly, the connection between young people and their relational development is compounded by social and environmental setting in which they find themselves. Urban youths, for instance, are believed to be challenged by the forces of the city more than their peers in the countryside. They are born and raised in the cities and towns. They grow, develop, and act out their life drama in the cities and towns. These urban centres, therefore, serve as a crucible for the development and experiences of young people. Due to the large concentration of heterogeneous people at a given locale, urban life is characterised by "the multiplication of relationships that can exist among people and things …" (Simone, 2010, p. 5). What is more, several factors mediate and constrain the productivity of urban relationships. Economic structures, political forces, and socio-cultural determinants, such as class and race/ethnicity, form a complex web of forces that entangle and influence the relational development of young people.

In all this flux, cities are not monolithic; their dynamics further create challenges to young people as they continuously renegotiate their identities in the face of a fast moving world. For instance, within a short span, technology can transform an approach to life and in the process destabilise previous ways, and at the same time erect new approaches to life. The influx of social media,

for instance, has transformed how relationships are built and managed among young people (Lenhart, Smith, & Anderson, 2015; Tinning & Fitzclarence, 1992). These developments further compound the lives of young people, leading to negative reactions, such as stress, violence, and depression. Being the future of the Ghanaian society, young people need the necessary support systems as they develop and manage relationships with people within the city. As argued by Anna K. Tibaijuka, the Executive Director of UN Habitat, "the state of the young in any city is the litmus test for the city's level of sustainability and vibrancy" (Ragan et al., 2004).

City and Urban Life in the Old Testament

Construction of cities is not a modern phenomenon. As physical and cultural fossils, cities have played important roles in ancient cultures including ancient Israel. The Old Testament (O.T) gives valuable insights into ancient cities, such as Nineveh, Gaza, Damascus, and Babylon, all outside the territories of ancient Israel. Important cities within Israel itself included Samaria and Jerusalem. Suffice to note that, although these cities alluded to in the Old Testament existed in history, this study approaches the subject of city from a literary perspective. In other words, it perceives the cities described in the Old Testament as imaginative descriptions of their authors. As Alter puts it, a literary work recreates "the world from a highly coloured point of view—inevitably, that of the novelist, and, often, that of the principal character as well" (2005, p. x). Alter does not deny the possibilities of novels or fictions containing or reflecting historical realities. Indeed, the Bible presents itself as a record of the past. What Alter focuses on is the fact that the literary works deal with the subjective experiences of a character. Descriptions of cities that emerge from the literary works represent the sensory perceptions of authors or characters. These descriptions may be based on material realities of the historical city, but, ultimately, they represent subjective experiences of the character. The implication of this perspective is that we need not be quick in equating what we read of ancient cities in the Old Testament to what pertained in their historical existence.

In the O.T, the most dominant word used for city is ***ʿîr***. According to Frick (1977) the word which appears over a 1000 times connotes the idea of "a fixed settlement, which is rendered inaccessible to assailants by a wall and/or other defence works" (p. 30). Frick is of the view that the central preoccupations of ancient Israelites in building cities were the elements of defence and protection. This explains why cities in the OT are said to have walls and citadels. On the other hand, Laughlin (2006) describes biblical cities as "a form of permanent human settlement with political, social, economic, and religious relationships with its immediate surroundings" (p. 1). For Frick, however, the elements of defence and protection are foundational to cities in the O.T. Thus several cities in the O.T were described in the language of defence, such as the enumeration of fortifications, including the presence of citadels and walls (cf. Deut. 1:28; 2 Kgs. 17:9; Jer. 5:17; 8:14). Such fixation on defence and protection reveals the primary function of cities in the O.T that is security. Thus, Frick (1977) writes, "The walls of a city were not intended to be the demarcation of the city limits; they rather signified the cooperative attempt of a social unit to find complete security for the place of its abode" (p. 32).

An important characteristic of biblical cities is the relative size of its dwellers, which raises the issue of the heterogeneity of the city dwellers. The sheer number of people concentrated in an area naturally creates specialization of skills, which, in turn, leads to social differentiation and stratification. Several proposals have been given on the processes behind the social structure of Israelite cities, especially during the monarchy. One such proposal is by Max Weber. He argues that few families through the accumulation of wealth emerged as the ruling class and in the process disarmed the peasants, who initially were freeholders. This created class antagonism so prevalent in the O.T, especially in the rhetoric of the prophets (cf. Frick, 1977).

A resultant effect of the process of stratification is the extent to which the family as a social institution was affected. Scholars, such as Schluter and Clements (1986) have argued that urbanisation largely influences negatively the institution of family. As the microcosm of the entire society, the family, which aims to maintain unity, in order to guarantee its survival, faces serious challenges in this endeavour. Weakening of kinship bonds is perhaps the most conspicuous of these challenges. Since the city is a conglomeration of people, who have migrated from mainly rural settings, the desire of family members to congregate at an area as seen in the rural setup is mostly challenged. What happens then is that family members may live apart, which, in turn, leads to weaker and less commitment

towards family bonds. According to Wirth (1938), the extended family unit comes under serious constrains by city life. He argues that family values, such as maintaining family contacts and strengthening kinship ties, are disrupted by the process of urbanisation. However, Frick (1977) challenges this view by positing that, in the case of ancient Israel, the main source of harm to the extended family was the institution of monarchy and not, necessarily, the changes urbanisation introduced. Although the monarchy is the single most important factor in the kind of social structure that emerged after its existence, its mutual ties to urbanisation cannot be overlooked. Both urbanization and the institution of monarchy were symbiotically related in a way that decoupling them gives a less accurate picture of their combining effect on the social life of the Israelites (this does not mean that urbanisation cannot thrive in the absence of the institution of the monarchy).

What is certain for sure is that the social life of ancient Israelite city dwellers was significantly different from rural dwellers. For instance, the cleavage between the ruling elite and the citizenry created disenchantment on the part of the latter as their lives were structured in a manner that sought the interest of the former. Scott (1968) captures this as follows:

> *The desire for security and satisfaction then was the mainspring of social action, and determined most decisively the form of the social order and the quality of its human relationships. Within the Israelite society, certain individuals, groups and classes had attained a position of dominance and privilege through the exercise of power, the influence of prestige and the possession of wealth; and the latter means were continually being sought for the former ends. The interests of society as a whole were … too easily identified with the interests of the ruling class* (p. 183-4).

In many ways, this affected the relational demand of city dwellers. Mumford (1961) opines that because of "the wider the area of communication and the greater number of participants" (p. 647) city dwellers tend to have more relational problems. In the case of ancient Israel, these relational problems were compounded by the kind of social order that emerged as a result of the process of urbanisation. In other words, city life undermined the social factors, such as family bonds and community values, that upheld and facilitated human relationships. According to Toy (1899), a proper description of ancient Israelite cities included the images of brisk commerce, feasts, gossips, temptations to licentiousness, relaxation of family-ties, worship of money, and close relations with royalty.

Urban Life in Proverbs: Implication for Young Adults and their Relational Development

Proverbial genre is mainly considered as a folk product (Mieder, 2004). This understanding extends to the book of Proverbs, but it is not an easy parallel to make. As Crenshaw (2000) puts it, "the greatest challenge facing scholars at the beginning of the twenty-first century is to describe the social setting of wisdom over the years" (p. 227). Two schools of thought have developed along this line; the elite/official camp and the popular/tribal camp. The former pushes forward the view that the *sitz in leben* or social setting of Proverbs is the court of the king or the sages who were a professional group in the service of the king. Among the evidence provided are the association of the book of Proverbs to kings (such as Hezekiah and Solomon) and the nature of the sayings. Proponents of the latter argue that the social setting of proverbs is the family and the folk life of the people. The fact that the genre of proverbs is an oral tradition common to all cultures and the predominance of themes that reflect the life of ordinary people in Proverbs are some of the arguments they put up. Both sides have valid arguments for their position, but the problems arise when one has to choose one side over the other. There is no point in choosing, however, since there is the possibility that Proverbs contains the social setting of both the upper class or court life and the ordinary or popular background of its sayings. This is the position of scholars such as Aitken (2001), who argues that "Israel's wisdom had many different strands to it and as many different spokesmen. It was, for example, equally at home in the pithy proverbs of the common folk, the moral and religious instruction of parents, the sagacious advice of the elders, and the political acumen of royal counsellors" (p. 2). What this means is that each saying or section should be evaluated on its own basis.

Interestingly, the main unit chosen for this study, Proverbs 1-9, has little controversy surrounding its *sitz im leben* (social setting). Several scholars share the view that the social setting revealed within its contents is mostly urban. Murphy (2002), for instance, writes of the

instructions in Proverbs 1-9: "These instructions were produced among educated women and men belonging to the urban upper class of the Yehud province (p. 281). Toy (1899) equally supports the urban context of Proverbs 1-9, when he argues that the setting for this large periscope is to be located in the Persian and Greek period. In his interpretation of the activities of gangs, as mention in Proverbs 1:10ff, Toy (1899) writes, "the organized robbery here referred to suggests city life of the later time, the periods when, under Persian and Greek rule, Jerusalem and Alexandria sheltered a miscellaneous population, and a distinct criminal class became more prominent" (p. 14).

Wisdom and Urban Life

Having established that Proverbs 1-9 has urban settings, we now look at Proverbs as a wisdom genre and the implication of wisdom for urban living. Proverbs is the foundation of O.T wisdom books, which includes Job and Ecclesiastes (Childs, 1979). Wisdom is one of the traditions of ancient Israel, which has survived alongside others, such as the legal and prophetic traditions. However, wisdom is peculiar; unlike the others, which show an overt commitment to the Yahwistic faith of ancient Israel. Wisdom does not touch on any of the unique religious tenets of the Israelite people, such as the promise to the patriarchs, the Exodus tradition, and the covenant at Sinai. Proverbs, and by extension the wisdom corpus in the O.T, addresses itself to universal concerns of humans, such as how to avoid temptation, how to speak, diligence, and friendship. Wisdom is about life, and not only that, but how one can maximise one's life through proper formulation of character. In the opening of the book of Proverbs, wisdom emerges as a set of skills and competencies one masters as a necessary requirement to living. The remainder of the book shows that the individually acquired skills and knowledge are to be demonstrated within a community of others. Bland (2002) is of the view that wisdom primarily deals with how one lives in concert with others. He writes, "Wisdom is primarily relational. Thus, in order to find wisdom, individuals must not seek it primarily in solitude or private meditation, but in community with God and with other human beings" (Bland, 2002, p. 12). Ultimately, wisdom aims at promoting communal harmony by directing individuals to have the right conduct in society.

It is this goal of wisdom, which makes it an important asset for urban living, especially for young adults. In the O.T, the city poses several challenges to its dwellers in maintaining **mišpat** (*justice*) and **tsedeqa** (*righteousness*); two qualities, which promote harmony within society. It is not too surprising that biblical images of cities are tagged with negative descriptions of sin and oppression. For instance, the story of the Tower of Babel depicts the emergence of city as a human invention against God. Thus, right from the primeval times, urbanisation was a challenge to divine authority. Since city is of human origin, its character was a reflection of humanity's imperfection. For Proverbs, then, City life demanded an attitude and character, which positioned one to successful deal with the temptations urban life presented.

Young Adults and their Relational Development in Proverbs

Proverbs 1-9 is a unit for young adults. Its two main genres, the lectures and the interludes of wisdom poems, primarily target the young adult male. The former, which is the object of study, overtly and frequently uses the term **ben** (*son*), which can be construed here as a biological relationship between parents and their male child or the formal relationship between a teacher and his students. In any of these nuances, **ben** refers to a relatively young individual male, who is matured enough to make informed decisions. Prudent decision making is what Proverbs 1-9 offers to the **ben** (*son*). Because of the complexity of urban life and the challenges it poses, Proverbs 1-9 simplifies life choices into the dyadic structure of the right path (the way of the wise) and the evil path (the way of the fool). In the process of teaching and directing the **ben** (*son*) towards the right path, Proverbs 1-9 alludes to several relationships that city life throws along the path of the **ben** (*son*). Among these relationships are peers/gangs, the parent, and God. Below, we explore how with wisdom the **ben** (*son*) can successfully negotiate through the complex web of relationships which urban life offers.

Parents: The relationship between parents and their sons is one of the important bonds the O.T fervently promotes. Among the benefits fathers derived from this relationship is the continuation of his name by the son. Thus, the father is loaded with several responsibilities towards the son, including the instruction of the son in the Law and other norms of the society (cf. Ex. 13:14; Duet 11:19; Josh 4:6). Sons, in turn, were to honour their parents. In Proverbs 1-9, the relationship between parents (father and mother) and sons is captured in the form of instructions or lecture between the two. They appear in formulaic expressions, such as:

Proverbs 1:8 *My son, hear the instruction of your father*

And do not forsake the law of your mother

Proverbs 2:1 *My son, if you receive my words,*

And treasure my commands within you

Proverbs 3:1 *My son, do not forget my law*

But let your heart keep my commands.

Parent-son relationship is fundamental to the progress and success of the **ben** (*son*). Through this relationship the parents transfer wisdom to the son. The parents are the epicentre for the wisdom the **ben** (*son*) needs. As Fox (2008) argues, the father emerges as an authoritative figure, who seeks to direct the desires of the **ben** (*son*). The phrase **bĕnî** (*my son*) highlights the bond between the two characters and makes the basis for which the **ben** (*son*) is to heed to the parents dependent on the established kinship bond. In Proverbs 4:3-9, the father alludes to the instructions he received from his father, that is, the grandfather of the ben (son). It is the relationship he, the father, had with his parents, which enabled him to attain the wisdom he has now, and which he, in turn, gives to his son. From this argument, the father's concern is that the attainment of wisdom is partly dependent on the relationship children have with their parents.

Since parent-child relationship is so crucial for attaining wisdom, how does the father go about managing the relationship in order to achieve the goal of the son becoming wise? First, the father assumes an authoritative figure in his relationship with the son. He demands attention from the son. His rhetoric is filled with imperatives such as *hear* (1:8), *be attentive* (4:1), and *incline your ear* (5:1). Although he presents two alternatives, he offers his choice to the son and demands obedience from him. The son only has two choices: accepting the father's counsel, in order to become wise, or rejecting the father's counsel, which leads to folly. Accordingly, the relationship is based on the authoritative presence of the father and the obedience of the son. I have argued elsewhere that the authoritative presence of the father can be explained against the backdrop that the father is instructing the son in virtue, an exercise which demands pedagogical strategies, such as firmness (Okyere, 2013).

Second, the father develops his relationship with the son through intimacy and openness in their interaction. As a young adult poised for adventure, the son faces numerous temptations, sometimes very overwhelming. Through intimacy and openness, the father paints a picture of life choices and their effects. He does not shy away from presenting the message in its raw and vivid character, lest the son misconstrue him as equally susceptible to these temptations. In Proverbs 6:25-29, for instance, the father speaks of the adulterous woman, who tempts the **ben** (*son*) as follows:

25: Lust not in your heart after her beauty

Let her not captivate you with her glance

26: For the price of a loose woman may be scarcely a loaf of bread

But if she is married, she is a trap for your precious life.

27: Can a man take fire to his bosom, and his garment not be burned?

28: Or can a man walk on live coals, and his feet not be scorched?

29: So with him who goes in to his neighbour's wife; non who touches her shall go unpunished.

Fox (2008) argues that the father "speaks to the budding adult in a confidential tone, man-to-man, alerting him to the pull of greed, conformity, and above all, lust with a vividness that reveals his own nagging susceptibility to their call" (p. 350). Wisdom here lies in knowing the dangers or temptations in life and guarding against them.

Friends (Gangs): Proverbs promotes friendship. Good friends are compared to kinsmen (cf. 17:17; 27:9), as they never abandon the relationship. But Proverbs 1-9 is weary of the kind of friends the son could entangle himself with. Urban life throws all sorts of people into one's path: real danger abounds. The first lecture, Proverbs 1:8-19, gives insights into dangers of bad company that are often too common in urban centres. In vv. 11-14, a gang throws an invitation to the **ben** (*son*) to join them. Careful analysis of their invitation reveals the level of danger young people face. The unit reads as below:

11 If they say*, "Come along with us; let us lie in wait to for blood, let us wantonly ambush the innocent;*

12 *like sheol, let us swallow them alive and whole, like those who go down to the pit;*

13 *we shall find all precious goods; we shall fill our houses with spoils;*

14 *throw in your lot with us, we will all have one*

purse"

The phrase, **lēkāh 'itānû** (*come along with us*), reveals a sense of power on the part of the gang over the **ben** (*son*). As an imperative, the phrase is not only indicative of the opposition the gang offers to the authority of the father, but also the promise of peer fellowship with all its attendant benefits. Three prizes are hurled towards the **ben** (*son*) as basis for joining the gang: that is, adventure (v.11), easy money (v.13), and camaraderie (v.14). Adventure provides young people avenue to express their energy and showcase their potentials. In this instance, the adventure promised includes the careful act of laying an ambush, waiting patiently for a victim to come along, and pouncing on the victim to inflict pain and to, ultimately, kill the victim. Such exuberance and thoughtful planning is to lead to easy money. Herein lies the difficulty in understanding the gang, since the members do not lack the power or means to earn money rightly. Rather, it is a matter of choice: a way of life they have chosen. That explains why the father admonishes the son as follows: **'al tēlēk bĕderek 'itām** (*do not walk in the way with them* – v. 15). In other words, the son should not take along this kind of life. However, the gang offers an even greater prize of companionship. According to Newsom (1989), implicit within the offers of the gang is an egalitarian ethos. By throwing in his lot, the **ben** (*son*) ties his fate to the rest of the members. In addition, Fox (2008) points out that the phrase **gôrālkā tapîl** (*cast in your lot*) has a double semantic function: apart from the meaning of tying of fates together, there is also that of uniting their booty to share equally. Few young people can withstand such alluring invitations from peers.

Although friendship is healthy and can improve one's life, the kind of friends one chooses has an influence on one's thought and actions. Since young people rage with so much ideas and energy, they easily become vulnerable, especially to peer pressure. Urban life compounds their vulnerability by accentuating the forces that pull them to surrender their will. As a result, approval of peers and group acceptance become an important choice for many young adults, who do not want to be regarded by the peers as weak and unadventurous.

Partner (Wife) vs "Strange Woman": Proverbs points out the dangers urban life poses to the relationship that exists between couples. The **ben** (*son*) who is just married or about to marry is cautioned against the dangers of illicit and amorous relationships (Prov. 5:1-23; 6:20-35; 7:1-27). The focus of the warning is on the **zārāh** that is "strange woman". Who is this "strange woman"? Several proposals have been put forward by scholars on the identity of this woman. Perdue (2000, p. 118) sums it up when he writes, "this enigmatic figure appears to include a variety of identities: a prostitute, a fertility priestess, an adulteress, a worshiper of a fertility goddess, and folly". However, the explanation given by Bland is preferable here. For Bland (2002), the "strange woman" is another man's wife. Her strangeness stems from the fact that she is not supposed to be "known" by other men. In Proverbs 7:19, the "strange woman" speaks of the absence of her husband. Seduction is the main danger posed by this "strange woman".

The first time we meet the "strange woman" is in Proverbs 2:16. She emerges as a smooth talker, who has the power to dazzle her victims. In her second appearance in Proverbs 5:3, she persists in her smooth talk as her words are likened to honey. Speech emerges as an important strategy for the strange woman to lure her victims. Her characterisation reaches its peak in Proverbs 7. Two words depict her inner disposition: **homiyāh** (*loud*) and **soreret** (*stubborn*) (Waltke, 2004). The former portrays her constant movement with the goal of being visible. She is not afraid to be seen and heard. Her description as **soreret** (*stubborn*) or defiant ties into her incessant and noisy movement on the street. Her inner restlessness leads to outer display of defiance. The concluding part of v. 11 reads, **bĕbētāh lo'-yiškĕnû raglêhā** meaning "*her feet does not stay in the home*". This woman acts in desperation for something she believes is located outside her home. In v. 13, her actions crown her desperations as she seizes the young man and kisses him without any sense of shame or sensitivity to public scrutiny. She yearns for a sexual encounter with the young man. One may argue that her desperation for sexual union with the young man stems from the absence of that encounter in her home. But this argument is made weak by the observation that the woman continuously seeks out young boys in the street, an action, which informs us of her insatiable quest for sexual pleasure.

In order for the **ben** (*son*) to understand the danger she poses, a litany of the negative effects of associating with her is outlined. Beginning is the loss of one's value, which, in Proverbs 5:9-10, are presented as **hôdekā** (*your honour*), **šĕnotêkā** (*your years*), **koḥekā** (*your strength*), and **'ăṣābekā** (*your labours*). There is also the health risk captured in the phrase **biklôt bĕśārkā ušĕ'ērekā** (*when*

your flesh and body are consumed – 5:11). Fox (2008) suggests that venereal disease might be the case here, especially when the disease of Gonorrhoea is alluded to in Lev 15:1-15. Social and physical negative effects culminate, finally, in the death of the young man (cf. 2:18-19; 7:22-23). If the **ben** (*son*) cherishes his life, if he yearns to have a full life, then one sure thing to do is to avoid the strange woman; that is, completely bar any thoughts of establishing a relationship with her.

Admonished to avoid the strange woman, the **ben** (*son*) is urged to take comfort in the wife. Unlike the strange woman, who poses danger and may lead to one's death, the wife is a fountain of life goodies for the young man. In Proverbs 5, the wife emerges as the best solution to the dangers posed by the strange woman. If it is sexual pleasure the young man is after, the wife is the best person to offer that. The increased challenge posed by the adulteress or the "strange woman" urges the father to strengthen his rhetoric with penetrating images to convince the **ben** (*son*) of the need to be loyal to the wife. For instance, the wife is compared to *loving doe* –**'ayelet 'ăhābîm,** who is ever ready to offer her comforting breast (v. 19). Sexual pleasure is likened to the *well* or a *cistern* (**bôr**), and the **ben** (*son*) is encouraged to drink from his own well. Indeed, the climax of the father's message to the son is captured in the second part of v. 18, which reads, **ûśĕmaḥ mē'šet nĕ'ûrekā** (*and rejoice in the wife of your youth*). Not only are the values of commitment and faithfulness key to successful relationships, but also genuine interests to enjoy one another. Although it appears the emphasis is on the son to be the active agent in securing the relationship, the wife is presented as ever ready to meet the demands of the husband. She yearns and seeks her husband's embrace (5: 18-19). Husband and wife are to meet each other's sensual needs in their journey of life. An open expression of their love should break barriers and bind the two in a manner, which leaves no room for intruders, such as the "strange woman".

God: As a traditional society, ancient Israel was a religious community. Belief in God as the creator and sustainer of the world was a fundamental knowledge that no person could challenge. When the psalms talk of persons who say in their heart "*there is no God*", it is not an issue of atheism that is being raised. Rather, the psalmist is referring to people who know the existence of God, but disregard its implication by ordering their life in a manner, which displeases God (Okyere, 2016). The belief in God in ancient Israel is comparable to the Akan society where recognition of God's existence is a given, hence the saying "**obi nkyere abofra nyame**" (*no one teaches a child that there is God*).

Proverbs elevates relationship with God as fundamental to attaining wisdom. This clearly stands out in what many perceive to be the thesis of the entire book, **yira't yĕhwāh rē'šît dā'at-ḥākmāh** (*the fear of the Lord is the beginning of wisdom* – 1:7a). Waltke (2004) explains that the phrase **yira't yĕhwāh** (*fear of the Lord*) has two poles of meaning: a rational and a non-rational pole. Rationally, the term is synonymous to "law" or "statutes" or "commands" of the Lord. Whybray (1965) explains further by stating that the phrase refers "to a standard of moral conduct known and accepted by men in general" (p. 96). By fearing the Lord, one is motivated to rightful behaviour. Non-rationally, the fear of the Lord ignites emotional response of fear and trust in the creator. It is an emotional response that leads one to seek diligently the will of his or her creator.

For Bland (2002), *the fear of the Lord* begins with godly living. It is gained by practicing what is right, just, and fair. Thus, one's fear of the Lord leads to one's observances of his statutes. Core to the statutes is how an individual ordered his or her life to maintain social harmony. Deuteronomy explicitly explains what it means to fear the Lord in 10:12-13 as follows:

> *And now, O Israel, what does the LORD your God ask of you but to fear the LORD your God, to walk in all his ways, to love him, to serve the LORD your God with all your heart and with all your soul, and to observe the LORD's commands and decrees that I am giving you today for your own good?*

God is a relational being who yearns for his people to love him through their observance of the law. An examination of the law shows that it is rooted in establishing good relationships among people within the community. God's law prevents injustices, seeks to liberate the poor, protect the vulnerable and ensure parity in social and economic relationships. By taking the path that embodies these values, the young adult affirms his relationship with God.

A relationship with God, which is characterized by *the fear of the Lord*, leads to several benefits for the young adult in the city. One such benefit is prudence (Proverbs 1:3). The Hebrew word for prudence is **maśkîl**; its root is

śekel. According to Fox (2008), **śekel** refers to "insight," the ability to grasp the meanings or implications of a situation or message. **Śekel** is, consequently, discernment or prudence, the ability to understand practical matters and interpersonal relations and make beneficial decisions. It later comes to include intellectual understanding and unusual expertise. The temptations of city life, which Toy explains as "the urban crimes of perjury, theft, robbery, and murder", demanded strong personalities, who, having attained the quality of wisdom, will know what to do in any given situation.

Relationship with God also gives the **ben** (*son*) a sense of hope and optimism. For instance, Proverbs 3:5-6 reads

> 5 *Trust in the Lord with all your heart,*
> *and do not rely on your own understanding;*
> 6 *in all your ways desire his presence,*
> *and he will make your paths straight and smooth.*

Optimistic individuals are hopeful (Bruiniks & Malle, 2005). They believe that no matter the situation they find themselves in they live in "*the best of all possible worlds*". Their positive approach to life predisposes them to appropriate actions for change. Several studies indicate that hope and optimism are essential elements in attaining mental health within the fast moving urban life. Believe and trust in God or a transcendental being positions one with the understanding that positive events will occur frequently in their lives than negative ones, because they have a greater being who looks out for their wellbeing. Thus, Proverbs 3:26 reads, "*for the Lord will be your confidence and will keep your foot from being caught*." Such reassurance is a welcome news to young city dwellers, who may be struggling to make sense of the hustle and bustle of life.

Also, implicit in Proverbs 3 is the need for the **ben** (*son*) to have time and seek the presence of God and reflect on its implication for his life. A relationship with God involves the conscious effort on one's part to know God. In Proverbs 2:4, knowing the fear of God and his knowledge requires seeking it. The Hebrew word for seek is **bāqaš**. It connotes the ideas of searching and desiring. Thus, the subject engages in a purposeful activity to connect with something or someone. In this context, the object desired for is God. The **ben** (*son*) in Proverbs 3 is encouraged to channel part of his energy in seeking or searching for God and his knowledge. Indeed, such habits on the part of young adults today could help them loosen up as they take a break from secular life and the stress of urban life, and devote some time for spiritual exercises.

Implications for the Ghanaian Society

The world of Proverbs is the kind in which temptations abound. There exist gangs who lure young ones to join their fold in order to commit all sorts of vices. Prowling the streets are women who want to prey on young adults. Families bonds are stretched and broken sometimes. In these circumstances, relationships matter, especially to young people. It shapes their identity and determines the trajectory of their lives. For the book of Proverbs, the only way to deal with the temptation urban life offers is to attain wisdom. Wisdom is an attitude and approach to life; it disposes one in a manner that makes him or her navigate through the challenges unscathed. Although ancient Israel and the Ghanaian society are historically separated by thousands of years, there are many common grounds between the two societies. As Mumford (1961) argues, there is continuity in the character of ancient cities and contemporary urban structures. Thus, many of the challenges that confronted ancient dwellers of cities continue to persist in modern times, including Ghana. In what follows, we explore the implication of the above discussion for the Ghanaian society.

Helping Young People Understand Their Choices: One important observation in the lectures of Proverbs is the continuous effort on the part of the father to direct the path of his son. The father does not take for granted the idea that his son is old enough to make his own choices. Indeed, the very reason why the father is preoccupied with the son's life is because of the status of the son as a free independent person who makes his own decisions. The **ben** (*son*) makes his decisions and bears the consequence of his decisions. Thus, the father's intervention is aimed at helping the **ben** (*son*) to have a proper understanding of what lies out there. This intervention of the father in the life of his adult son is not a strange concept among many traditional societies in Ghana. The Ghanaian anthropological landscape shows that a child continues to be a "child" of the parents, irrespective of age and status. Transporting this portrait of parental intervention in the lives of their adult children will meet resistance in the current social context of many Ghanaians, especially for young people living in urban centres.

As Macmillan (2007) argues, the sense of independence is an important determiner of adulthood for young people. However, the import of the biblical portrait lies in the position that some level of assistance for young adults is important in helping them in their decision making. In other words, for Proverbs, advent of adulthood does not mean one is all knowing to the extent of being immune from counsel. The underlying principle here is that young people need to be continuously guided in their choices as they become more independent and lead their own lives. Such guidance need not necessarily come from parents. Various stakeholders, such as the church, Non-governmental organisations (NGOs), and other social centres, can play constructive roles in this respect.

Maintaining Family Bonds: Family connections should be maintained even when young people believe they are matured enough to chart their own path. In the lectures of Proverbs 1-9, the father and mother are the fountain of wisdom for the **ben** (*son*). Just as the father received wisdom from the son's grandfather, so he passes it onto the **ben** (*son*). There is the implicit message of the need for the **ben** (*son*) to pass on the wisdom to his own children. As a result, wisdom becomes a family tradition, which creates an identity for the family as well as shapes the fate of family members. By maintaining healthy relationship with the son, the father contributes to the security and development of the son. The father's rhetoric shows that a healthy bond exists between parent and child, so intimate that he could speak frankly and openly with his **ben** (*son*).

Such healthy relationship between father and son or parents and their wards is increasingly becoming rare among urban settlers, including those in Ghana. Because family members may not be living close to each other, unlike the village setting, contacts are reduced, leading to weaker and less committed family relationships. Many families are making up for this inadequacy through the use of social media, such as Whatsapp. These developments are good and need to be encouraged, since family bonds are one of the fulfilling and purposeful group individuals can identify with.

Reducing Exposure to Violence and Social Vices: Although there are positive images of urban life in the O.T, largely, a picture of judgment and condemnation characterizes urban life. Proverbs is no exception to this, as concentration of sin/crimes is one of the images prevalent in the lives of city dwellers. Because of their inexperience and continuous definition of their identities, young people sometimes become easily vulnerable to bad companies and friends. In Proverbs, the sages dwell on the personality of the young adult to overcome the challenges posed by bad companies in the city centres. As much as dwelling on the character and personalities of young adults could reap some results, the source of the problem that is the presence of these bad companies remains unchecked. A vital component of policy formation on cities should aim at tackling the sprawling of gangs and other anti-social groups, which entice young people to join their fold.

Promoting Spirituality among Young People: Proverbs posits that young adults are better positioned to enjoy life when they inculcate religion or spirituality into their lives. Establishing good relationship with their creator (God) could lead to hope and optimism on the part of young adults. Right attitude becomes the concern of young adults as they order their lives in a way that pleases their object of worship. Many studies confirm the importance of spirituality for one's development and wellbeing (cf. Daaleman & Frey, 2004; Fehring, Brennan, & Keller, 1987). In Ghana, religion is very much integrated into the fabric of daily life. Churches abound and mosques are also increasing. It is, therefore, safe to conclude that majority of Ghanaians are religious. However, there is increasing concern that the religious nature of the society does not translate into right attitude and behaviour of Ghanaians. There is a disconnection between the attitude and behaviour of Ghanaians, on one hand, and their religiousness, on the other hand. Some, therefore, are of the view that religion is failing to affect the society positively.

Proverbs proposes that young adults establish a relationship with their God. In other words, young people should develop spirituality (where spirituality means a personal relationship with one's object of worship as opposed to religion, which is institutionalized and formal). This is not to say young people should not be part of a religious institution or tradition. Rather, they should move beyond the mere association with a religious tradition to a personal commitment to their object of worship. Personal relationship with one's deity has the ability to effect far reaching changes in the lives of young people. They conceive themselves as having a larger purpose in life. Ghanaian cities can help young people in this respect through the provision of spaces and places where the environment promotes relaxation and reflection. Such

spaces and places can be exploited for spiritual exercises of reflection and contemplation. This way, young people will be spending their time productively as they reflect on their lives in relation to their beliefs system.

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Gender Implications of Credit Use on Urban Catfish Production in Lagos State, Nigeria

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Abstract: The study examined the gender implication of credit use on concrete catfish production in Lagos State, Nigeria. Multistage sampling procedure was employed to select seventy-eight (78) male, and forty-two (42) female respondents in the study area. The data were obtained with the aid of well - structured questionnaire and analyzed with descriptive and inferential statistical tools, such as frequency count, percentages and regression model. The result of the regression analysis revealed that there is a significant relationship between total revenue and cost of feed, amount of credit used, years of farming experience, size of pond and labour. The study also showed that the sum total of elasticities of variables was less than unity (i.e. 0.801), which indicates that fish production in the study area is in stage II, which is the rational stage of production. The result of the analysis showed that the average total cost per kilogram of catfish was N460.00 and the average total revenue per kg of fish was N 760.00k. This gives a gross margin of N480.80 per kilogram of fish produced. It was recommended that policies should be put in place in order to encourage women to have access to credit so as to make catfish farming attractive to younger women in particular as a means of livelihood in the urban settings.

Key words: Urban Agriculture, Gender, Catfish, Credit Use, Regression

Introduction

Urban agriculture has gained importance, especially in developing economies, since it has been discovered to be a viable intervention strategy for the urban poor to earn extra income, therefore, reduces their reliance on cash income for food. It is a major component of the urban foods system by providing the diversity needed to ensure dietary quality, which is an important aspect of food security. It provides an important source of supply in urban food systems and only one of several food security options for households. The increase in human population coupled with large numbers of undernourished people, especially in developing countries, have made the need for food production a major worldwide issue of concern (Okechi, 2004).

The immense opportunities presented by increasing urbanization in Nigeria can be exploited to meet the challenges of unemployment, poverty and inadequate nutrition that pervades the cities, since they offer large markets, cosmopolitan and affluent population that demands more and better nutrition, and growing industrial and service sectors that depend on the agricultural sector for raw materials. (Nwiro, 2012). As succinctly put by Pretty et al. (2003), with dwindling food production, degrading agricultural environment, widespread poverty and insecurity in Africa, fish farming provides the poor and hungry with a low cost and readily available strategy to increase food production, using less land and less water without further damage to the environment.

Nigerian Fish farmers, especially women, are faced with enormous difficulties in acquiring credit facilities, such as late disbursement of agricultural loans, non-fulfilment of security or collateral requirement necessitated by bad debts, diversification of funds by the banks management for non-agricultural purposes. Lack of adequate, accessible and affordable credit is among the major factors responsible for the systemic decline in the contribution of aquaculture (largely made up of catfish farming) to the Nigerian economy (Amao, 2013). This paper gives a situation analysis of the role gender plays in the urban agriculture context within the metropolitan Lagos. It looks at the implications and proffers possible solutions for policy options. In this manner, the study is designed to address the following research questions: What are the socio-economic characteristics of concrete catfish farmers in the study area? What are the roles of men and women in concrete catfish production in the study area? What are the factors affecting the output of catfish production in the study area? What are the profitability of

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catfish production on gender basis in the study area?

The general objective of this research is to determine gender implication of credit use on urban concrete catfish production in Lagos state by determining the factors affecting the output of gender on catfish production and analysing the profitability of catfish production on gender basis in the study area.

Literature Review

The ability to earn cash income is a significant determinant of poverty reduction and perhaps the biggest challenge urban dwellers face is that the majority of them work in sectors where wages are low, working conditions precarious and job tenure insecure. In Nigeria, where most of the cities have large agricultural resources and potentials relative to the industrial and service sectors, fish farming can generate significant employment, provide income-earning potentials for the urban population, enhance the socio-economic status of the farmer as well as generate foreign exchange (Oluwasola & Ajayi, 2013; Olagunju, et al., 2007; Adekoya & Miller, 2004; Eyo, 1992). Despite the fact that spontaneous urban growth can pose a major challenge to the development and growth of large - scale farming, cat fish production is an enterprise that requires small areas of land and which can make use of the several stream channels for the sustainability of the urban environment. Fish farming also has enormous potentials of improving the nutritional standard of the masses of the people. Fish contains higher percentage of protein than meat and is important for its high nutritive value and significance in improving human health. Faced with increasing wealth, changing dietary patterns and urbanization, fish farming provides the key to meeting fish demand in the face of dwindling fish supply from captured sources. Fish farming is not just uniquely placed to reverse the declines in supplies experienced from captured fisheries, but also has notable potentials for new livelihood opportunities, providing mechanism for lower priced fish, enhanced nutritional security and employment for poor communities (Jagger & Pender, 2001).

Fish farming generates employment directly and indirectly in terms of people employed in the production of fishing output and other allied business. It also generates income for all categories of people involved in fish farming and thus contributes to the national income. When compared with livestock, it requires less space-time, money and has a higher feed conserving rate.

Gender norms are an important constraint to increasing agricultural productivity. Inequality in the distribution of resources between men and women is linked with production inefficiency, yet interventions targeting smallholder farmers often fail to redress women's lack of access to, and control of, important agricultural resources, complementary inputs, such as seeds and fertilizer; new varieties and technologies; agricultural extension; labour; credit; markets; and social capital (Oseni, 2003).

Methodology

The study was carried out in Lagos State, Nigeria. Lagos State, with an area of 3,568.6 km2 and an estimated population of 17.5 million in 2006, is the smallest (in terms of land mass) and most densely populated state in Nigeria. With a growth rate of 3.2 percent, the State currently boasts of a population of over 21 Million people. Out of this population, Metropolitan Lagos, an area covering 37 percent of the land area of Lagos State, is home to over 85 percent of the state population. Lagos state has a coastline, which stretches up to 10 percent of its landmass. In addition, over 20 percent of its landmass comprises fresh, brackish and marine waters. The state also has a fair share of both saline and freshwater mangroves with their associated features, which sprawl about 30 percent of the entire landmass.

Sampling Technique

A multistage sampling procedure was used to select the respondents for the study. The sample frame was purposively selected with a random sample size. The concept of purposive sampling was as a result of selected farmers who specialized in concrete catfish farming in Lagos State. This was based on the peculiarity of catfish production in the study area. The first stage involved purposive selection of three ADP zones in the state (Epe, Badagry and Eti-osa). The second stage involved the random selection of three local government areas (LGAs) from the identified ADP zones. The third stage was the random selection of 14 concrete fish farmers, which comprise of both male and female farmers from each of the identified local government areas with probability proportionate to the size of LGAs. Random sampling technique was used to select 126 concrete catfish farmers out of the list of registered catfish farmers (both male and female) that was obtained from the Agriculture Department in the Area Council. The names were shuffled together and 126 catfish farmers were randomly selected through

balloting. Only 120 respondents were readily available for interview.

Data were collected from primary sources through the use of structured questionnaire with the help of trained enumerators. The questionnaires were distributed to the selected catfish farmers in the study area. Data collected include socio-economic characteristics of the respondents (age, sex, family size, educational qualification, access to credit, educational attainment, marital status, experience, major occupation, access to extension agent and membership of cooperative), the inputs used (fingerlings, pond size, feed, fertilizer, labour) as well as production output (quantity of catfish in Kg) and constraints (sources of fingerlings, feed, access to credit, market,) faced by the farmers.

The three analytical techniques used to analyse the data collected for the study were descriptive statistics, net farm income, and regression model.

Descriptive statistics: The relevant instruments under this statistic include percentages and frequency distribution.

Net farm income: To determine the profitability of catfish farming in the study area, net farm income (NFI) analysis was used. The tool was used to estimate the gross revenue and total cost in the production period. The difference between the gross revenue and the total cost of production was the profit or the net farm income. The total revenue represents the total number of fish produced multiplied by the unit price. The total cost comprises the variable cost and the fixed cost of establishing and running the pond. The equation for net farm income is given as:

NFI=TR– (TVC+ TFC) .....(1)

Where: NFI = Net Farm Income (₦)

TR =Total Revenue (₦)

TVC = Total Variable Cost (₦)

TFC = Total Fixed Cost (₦)

Regression Model: The multiple regression models were also applied to determine the effect of the farmer's socioeconomic characteristics and institutional factors on the catfish productivity. For those farmers that had access to loan, the difference in the average net income of the farmers from the catfish production before and after credit use was used as a proxy for catfish revenue:

$Q=\pi a-\pi b$ .....(2)

Where

a and b represent after and before respectively.

It, therefore, implies that the effect of the credit - use on catfish farmers has been captured by the revenue proxy in equation (2). Four functional forms of the specified model were tried: Simple linear, semi-logarithmic, double-logarithmic, and exponential.

The production function postulated for fish farmers in the study area is implicitly presented by equation (3)

$Q=f(X_1,X_2, X_3, X_4, X_5, X_6, X_7, X_8,$ **Error! Reference source not found.**).....(3)

The implicit function was linearized and specified in a log-linear form (Joshi & Jha, 1992; Idumah, 2006) as:

$LnQ=\beta_0+\beta_1X_1+\beta_2X_2+.....+\beta_8X_8+$**Error! Reference source not found.**……. ...(4)

Simple linear form:

$Q=\beta_0+\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+\beta_5X5+\beta_6X_6+\beta_7X_7+\beta_8X_8+$**Error! Reference source not found.**..... (5)

Semi-logarithmic form:

$Q=ln\beta_0+\beta_1lnX_1+\beta_2lnX_2+\beta_3lnX_3+\beta_4lnX_4+\beta_5lnX5+\beta_6lnX_6+\beta_7lnX_7+ \beta_8lnX_8+$**Error! Reference source not found.**..... (6)

Double-logarithmic form:

$LnQ=\beta_0+\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+\beta_5X5+\beta_6X_6+\beta_7X_7+\beta_8X_8+$**Error! Reference source not found.**..... (7)

Exponential form:

$LnQ=ln\beta_0+\beta_1lnX_1+\beta_2lnX_2+\beta_3lnX_3+\beta_4lnX_4+\beta_5lnX5+\beta_6lnX_6+\beta_7lnX_7+\beta_8lnX_8+$**Error! Reference source not found.**..... (8)

The lead equation was chosen on the basis of correct signing of the explanatory variables, the significance of the regression coefficient and the value of the coefficient of multiple determinations.

Where

Q = Total Revenue (₦), X_1 = Age of farmers (years)

X_2 = Sex of the respondents/farmers. Dummy male=1, female=2

X_3 = Cost of Feed (₦), X_4 = Educational Level (years)

X_5 = Years of Experience (years), X_6 = Family size (No)

X_7= Size of pond (square meter), X_8 = Labour (Man days)

Error! Reference source not found.= Error term assumes to have a zero mean and constant variance.

According to Greene (2005) and Gujarati (2003), the disturbance term is expected to fulfil all the assumptions of classical regression model except that of homoscedasticity, which breaks down when cross- sectional data are used (Ayanwale & Osotimehin, 2001). The technique of the ordinary least square (OLS) was then used to estimate the multiple regression equation. Rather than a straight line, geometric interpretation of the model involved a plane. The R, therefore measured the strength of the relationship between net income from catfish production and the specified explanatory variables.

A priori expectations for the variables X_1, X_4, X_5, X_7 and X_8 were expected to be positively associated with total revenue, while X_3 is negatively associated with total revenue and X_6 could be positively or negatively associated with revenue depending on whether the family is a production or consumption unit. The selection of the variables used in the regression model as well as the a priori expectations were based on the assumption that, in traditional and near subsistent farming enterprises characterized by low resource inputs, age of the farmers (X_1), family size (X_6), farming experience (X_5), labour (hired and family labour) (X_8) and educational level of respondents (X_4) are critical to output (Akinola & Adeyemo, 2008) and the ability of farmers to take risks in adopting new innovations or technologies (Adesina & Zinnah, 1992). Other studies on fish farming like Olaoye et al., (2013); and Olagunju et al's., (2007) added other inputs, such as cost of feed (X_3) and pond size (X_7). This present study, therefore, added the variable X_2 (sex=dummy). The four functional forms of the regression model - linear, semi-log, exponential and the double logarithm- were fitted to the model but only the double logarithm model which provided the best fit and was in line with a priori expectation, was selected and discussed.

Results and Discussion

Socio-economic Characteristics of the Concrete Catfish Farmers

The distribution of the socioeconomic characteristics of male and female Catfish farmers is presented in Table 1. The fish farmers, as indicated, were in their prime age, hence, economically active (Aihonsu & Olatingiri, 2012). Given necessary resources, these sets of farmers could increase their productivity. They are also in the age where they could take risks that could increase output as well as income (Akinola & Adeyemo, 2008). The result shows that majority of the male (59.0%) and the female (66.7%) Catfish farmers had tertiary and secondary educational qualification respectively. The high level of education might be due to the urban nature of the study area and its implication is that the respondents will be very receptive to new innovations in their methods of production.

Fifty-seven (57) percent of the urban catfish farmers had up to 5 household members. The average household member was, however, 4. This is contrary to the general believe that catfish farm operators in South Western Nigeria, generally, had a large family size. Large family might be exploited as cheap sources of labour for the poultry farms. However, large family sizes might be a drain for business profit, as household expenditure, particularly on consumption, is high. This basically explains why most small - scale farms close down when they could no longer provide the required funds for their smooth operation.

A larger proportion (51.3%) of the male Catfish farmers and 42.9% of the female Catfish farmers had 1 – 5 ponds. This implies that both the male and female Catfish farmers had access to the same number of ponds. These enhance their production and livelihood. Most (67.9%) of the male Catfish farmers had no access to training on Catfish production. However, the female Catfish farmers had more access to training than the male catfish farmers. This implies that there is a greater awareness and the institutional support in training the Catfish farmers especially the women, which invariably enhances their productivity in Catfish production. This is an indication that urban female catfish farmers utilize their full potentials in profitable activities, like aquaculture. This is also reflected in the number of hours they spend on the farm. The women spent an average of 2.7 hours, while men spent an average of 2.2 hours on farm. It implies that women spent more time on farm than men due to the fact that most women involved in sorting and processing, which could take much of their time before finishing the work. Credit availability is very significant in catfish production. The farmers need credit to buy feeds, pay for drugs, buy fingerlings, pay for quality water and pay for high cost of pond maintenance. Table 2 shows the distribution of the respondents' pond acquisition based on their initial capital as well as the ability to seek more fund to support the catfish production. Catfish famers that had access to additional fund were able to acquire more number of ponds. Highest percentage (66.7%) of female catfish farmers and

62.5% of male catfish farmers were able to acquire more than 4 ponds for their business. This implies an increase in the number of catfish produced at any point in time. They will also enjoy economies of scale. The same thing happens to the size of pond the catfish farmers could afford

Table 1: Frequency and Percentage Distribution of Concrete Catfish Farmers

ITEMS		MALE		FEMALE	
		Freq	%	Freq	%
SEX		78	65	42	35
AGE	20-30	8	10.3	5	11.9
	31-40	13	16.7	18	19.1
	41-50	20	25.6	19	45.2
	51-60	28	35.9	6	14.3
	>60	9	11.5	4	9.5
EDUCATION	Primary	7	8.9	6	14.3
	Secondary	25	32.1	28	66.7
	Tertiary	46	59.0	8	19.0
HOUSEHOLD SIZE	0-5	45	57.7	24	57.1
	6-10	23	29.5	12	28.6
	>10	10	12.8	6	14.3
YEARS OF EXPERIENCE	1-5	40	51.3	18	42.9
	6-10	23	29.5	14	33.3
	>10	15	19.2	10	23.8
POND SIZE	1-400SQM	43	11.5	28	66.6
	401-800SQM	26	33.3	11	26.2
	801-1200SQM	9	11.5	3	7.1
ACCESS TO CREDIT	YES	40	51.3	18	42.9
	NO	38	48.7	24	57.1
ACCESS TO TRAINNING	NO	53	67.9	12	28.6
	YES	25	32.1	30	71.4
AV. OF HOURS SPENT ON THE FARM		2.2		2.7	
OTHER SOURCES OF OCCUPATION	YES	74	94.9	40	95.2
	NO	4	5.1	2	4.8

***Source*:** Data Analysis, 2016

Table 2: Distribution of Respondents' Pond Acquisition Based on Credit Access

	ACEESS TO CREDIT				NO ACCESS TO CREDIT			
	MALE		FEMALE		MALE		FEMALE	
	(40)	(%)	(18)	(%)	(38)	(%)	(24)	(%)
NO OF POND								
1-2	4	10 .0	2	11.1	35	92.1	24	100
3-4	11	27.5	4	22.2	2	5.3	-	-
>4	25	62.5	12	66.7	1	2.6	-	-
POND SIZE								
0-400SQM	3	7.5	2	11.1	32	84.2	24	100
401-800SQM	09	22.5	2	11.1	5	13.2	-	-

801-1200SQM	28	70.0	14	77.8	1	2.6	-	-

Source*:* Data Analysis, 2016

Gender Based Gross Margin and Net Returns Analysis

The result of the profitability of Catfish production from a gender perspective is reported in Table 3. The gross margin analysis for the calculation of the profitability was carried out on kg of catfish raised per production cycle. According to Adeyeye and Dittoh (1982), Gross margin is a good measure of profitability. The result shows that the total variable cost incurred by male and female farmers were N460 and N510 respectively, while the total revenue accrued to the male and female farmers were N300 and N250 respectively.

The gross margin of the male Catfish farmers was higher than that of the female Catfish farmers, which indicates that the profitability of the male Catfish farmers was higher than that of the female Catfish famers. The returns per naira of 1.65 for the male Catfish farmers implies that, for every 1 naira invested in kg of Catfish production, the farmers make a return to investment of N1.65k. In the case of the female Catfish farmers, a return per naira invested was estimated to be N1.49; that indicates that, for every 1 naira invested in kg of Catfish production, the farmers make a return to investment of N1.49k. Although, the male and female Catfish farmers make profit from investment in Catfish farming, the profit margin of the male Catfish farmers was higher than that of the female Catfish farmers. A plausible explanation for the observed difference in the profit margin of the male and female Catfish farmers is that access to resources, especially quality water for fish production, control of assets, decision-making powers between women and men, tend to favour the male Catfish farmers than the female Catfish farmers.

This is in line with Anosike and Fasona (2004), who noted that women have more difficult access to water in Lagos state. Doss (2001) opined that gender affects access to labour, land and other important inputs for production, and may also affect preferences around production processes and outputs. In addition, women within the household may have less tenure security than men, which makes them less likely to invest in certain types of agricultural technologies that can enhance their productivity. Drechsel, Hope, and Coe (2013) also noted that women have limited access to land and starting capital for agriculture. The implication of the result of the gender based profitability analysis is that women with a lower profitability compared to men will tend to have a lower livelihood support from Catfish production in contrast to men, who will tend to have a higher livelihood support from Catfish farming as a result of their higher profit margin.

Table 3: Average Cost and Returns of Farmers Per Kilogram of Fish Raised

ITEMS		MALE		FEMALE	
		Freq	%	Freq	%
SEX		78	65	42	35
AGE	20-30	8	10.3	5	11.9
	31-40	13	16.7	18	19.1
	41-50	20	25.6	19	45.2
	51-60	28	35.9	6	14.3
	>60	9	11.5	4	9.5
EDUCATION	Primary	7	8.9	6	14.3
	Secondary	25	32.1	28	66.7
	Tertiary	46	59.0	8	19.0
HOUSEHOLD SIZE	0-5	45	57.7	24	57.1
	6-10	23	29.5	12	28.6
	>10	10	12.8	6	14.3
YEARS OF EXPERIENCE	1-5	40	51.3	18	42.9
	6-10	23	29.5	14	33.3
	>10	15	19.2	10	23.8

POND SIZE	1-400SQM	43	11.5	28	66.6
	401-800SQM	26	33.3	11	26.2
	801-1200SQM	9	11.5	3	7.1
ACCESS TO CREDIT	YES	40	51.3	18	42.9
	NO	38	48.7	24	57.1
ACCESS TO TRAINNING	NO	53	67.9	12	28.6
	YES	25	32.1	30	71.4
AV. OF HOURS SPENT ON THE FARM		2.2		2.7	
OTHER SOURCES OF OCCUPATION	YES	74	94.9	40	95.2
	NO	4	5.1	2	4.8

Source: Data Analysis, 2016

Test of Hypothesis

The null hypothesis, which states that there is no significant difference in profitability between male and female Catfish farmers in the study area, was rejected because the calculated z value (78.4) is greater than the z critical one tail (1.55) and two tail (1.86) at 1% level of profitability as shown in Table 4. The study then concludes that there is a significant difference in the profitability between male and female Catfish farmers in the study area.

Table 4: z-Test: Two Sample for Means

	Male cat fish farmers	Female cat fish farmers
Mean	12199.920344	10441.9234
Known Variance	13070.973	11187.47
Observations	78	42
Hypothesized Mean Difference	0	
Z	78.43160654	
P(Z<=z) one-tail	0	
z Critical one-tail	1.546883218	
P(Z<=z) two-tail	0	
z Critical two-tail	1.861993576	

Source: Data Analysis, 2016

Estimated Production Function

In determining the factors affecting catfish production, a structural relationship was specified. Total revenue was regressed on the demographic characteristics of the farmers, socio-economic characteristics and other independent variables as cost of feeds, type of ponds. Though four functional models (linear, semi-log, exponential and double log) were used, the double log was chosen. The choice of the production function is predicated on its conformation to a priori expectation in terms of signs and magnitude of the coefficient, the number of significant variables and the coefficient of multiple determinations (Olayemi & Olayide, 1981). The regression result is presented in Table 5, showing the coefficients and the t-tests. The adjusted R^2 for the estimated regression showed that about 74% of variation in total revenue of fish farmers in the study area was explained by the explanatory variables with the remaining 26% unexplained; this is due to random variable (**Error! Reference source not found.**).

Five of the estimated coefficients sex (X_2), educational level (X_4), farming experience (X_5), size of pond (X_7) and labour (X_8) have positive signs, which indicated that an increase in any of the five variables would increase the level of total revenue of the respondents Ceteris Paribus. The coefficients of age (X_1); cost of feed (X_3); family size (X_6) had negative signs, which indicated that an increase in any of these variables would decrease the total revenue of the respondents Ceteris Paribus.

Labour, size of pond, Farming Experience, cost of feed and Education were significant at 10%, 5% and 1% level respectively. The number of labour used (X_8) was statistically significant with its coefficient indicating that an increase in labour used by a man-day will increase net income by 80%. This is very important, as labour is the most important input in smallholder farm business enterprises. The size of pond (X_7) was also statistically significant with increase in net income by 33.5%.

Table 5: Multiple Regressions Estimates of Factors Affecting Catfish Production

Variables	Factors	b-values	t-values
	Constant	2.247	2.143**
X_1	Age	-0.526	-0.043
X_2	Sex	0.369	-0.739
X_3	Cost of feed	-0.457	2.428**
X_4	Number of years spent in school	0.291	3.323***
X_5	Years of Experience	0.006	2.096**
X_6	Family size	-0.024	-0.094
X_7	Size of the pond	0.335	2.730**
X_8	Labour	0.807	1.915*
R^2		87.68	
R^{-2}		74.15	
F		53.243	

Source: Field Survey, 2016Variables

***sig. at 1% ; **sig. at 5% ; *sig. at 10%.

Elasticity of Production and Return to Scale

The total sum of elasticities of production of the variables, as shown in Table 6, was less than unity, that is, 0.807, indicating decreasing returns to scale. This suggests that catfish production in the study area had a decreasing positive return to scale. Each additional unit results in a smaller increase in product than the preceding unit. The catfish production in the study area fall within the rational stage (Stage II) of the production function. The implication of this is that the more input one puts in, the higher the profit even though at a declining rate.

Constraints Associated with Concrete Catfish Production

The results in Table 7 show that all the women Catfish farmers attributed poor water quality to be the major constraints militating against their profitability in Catfish farming and invariably their source of livelihood. Also, the issue of proper disposal of water from ponds, as indicated by 39 out of the 42 women Catfish farmers, is a high-ranking constraint affecting the income generation from Catfish farming. The major issue that is militating against the profitability of men Catfish farmers is high cost of feeds, as indicated by 71 out of the 78 men Catfish farmers. Among other constraints facing the female catfish farmers are the issues of cannibalism and poor management.

Table 6: Elasticity of production and return to scale of urban catfish farmers in Lagos State

Independent Variables	Elasticity of Production
X_1	-0.526
X_2	0.369
X_3	-0.457
X_4	0.291
X_5	0.006
X_6	-0.024
X_7	0.335
X_8	0.807
Return to scale	

Source: Data Analysis, 2016

Table 7: Distribution of Respondents Based on Constraints Associated with Concrete Catfish Production

	Male		Female	
	Frequency	%	Frequency	%
1. High cost of feeds	71	91.0	38	90.5
2. Availability of quality water	36	46.2	40	95.2
3. Water disposal	28	37.8	39	92.9
4. High cost of labour	42	37.8	41	97.6
5. Lack of extension services	68	87.2	15	35.7

6. Shortage of fingerlings	28	35.9	22	52.4
7. Inadequate funds	38	48.7	37	88.1
8. High cost of pond maintenance	16	20.5	29	92.9
9. High mortality of fish	26	33.3	37	88.1
10. Pest and diseases	41	52.6	29	69.0
11. Cannibalism	36	46.2	41	97.6
12. Poor management	28	35.9	37	88.1

Source: Data Analysis, 2016

Multiple Responses

Roles Played by Men and Women in Concrete Catfish Production

Table 8 show the distribution of respondents by roles played in concrete catfish production. Based on the result, men were more involved in feeding (100.0%), stocking (96.2%), cropping (93.6%), sorting (61.5%) and processing (26.9%) in the rank order. Moreover, women were more involved in feeding (100.0%), buying/selling (100.0%), stocking (52.4), cropping (52.4%), sorting (76.2%) and processing (90.5%) in the rank order. However, more of women than men were involved in buying/selling, sorting and processing, while more of men than women were involved in stocking and cropping activities due to the fact that men have more strength and rugged than women, and catfish farming requires much energy, which female may not be able to cope with.

Table 8: Distribution of Respondents Based on Roles Played by Men and Women

Roles	Male		Female	
	Frequency	%	Frequency	%
Feeding	78	100.0	42	100.0
Stocking	75	96.2	22	52.4
Cropping/harvesting	73	93.6	22	52.4
Sorting	48	61.5	32	76.2
Buying/selling	23	29.5	42	100.0
Transportation	20	25.6	15	31.3
Processing	21	26.9	38	90.5

Source: Data Analysis, 2016

Multiple Responses

Conclusion and Recommendation

Insufficient funding of urban catfish farmers (especially for women) has limited the spate of development of the industry in Lagos State Nigeria. This has often caused low level of production output in the industry. In this study, therefore, the impact of credit on urban male and female catfish farmers was investigated. This study shows that credit is very important in catfish production. This is a major challenge to policymakers and operators of credit institutions, such as banks and cooperative societies. The role of labour, as captured by the household size, is equally found to be critical. This implies that improvement in the catfish production sector could help to absorb the unemployed. Production of catfish is highly profitable and it is related to size of the enterprise. Other variables that contributed to the profitability included age, educational status and the number of labour used. It is, therefore, recommended that more people should be encouraged to participate in the business so as to increase their income. The Association of Cat Fish Farmers should organize training, workshops and seminars for their members, so that they could have access to improved methods and technologies of catfish production. Finally, as more funds were made available to the catfish farmers at minimal costs, the level of output in industry will improve.

This study has also established that gross margin of the male Catfish farmers (N300/kg) was higher than that of the female Catfish farmers (N250/kg), which indicates that the profitability of the male Catfish farmers was higher than that of the female Catfish famers. Hence, women with a lower profitability compared to men will tend to have a lower livelihood support from Catfish production in contrast to men, who will tend to have a higher livelihood support from Catfish farming as a result of their higher profit margin. All the women Catfish farmers attributed poor water quality to be the major constraints militating against their profitability in Catfish farming and invariably

their source of livelihood. It is recommended that differences in conditions, needs, access to resources, control of assets, decision-making powers between women and men based on their assigned gender roles are taken into consideration in manpower training, equitable distribution of resources and access to supportive services by both genders towards enhancing their Catfish productivity and increasing their livelihood support.

Urban agriculture should also be established as a legitimate and viable urban economic activity. Furthermore, since it has been identified that women participate in urban agriculture, they should be provided with production resources, especially credit. This is because, if women have greater control over fund, the incentive for them to increase production may be greater. This would, therefore, lead to increased production, better income and improved standard of living for urban dwellers. The practice of urban agriculture thus serves as a coping mechanism in dealing with poverty and economic hardship, which are prevalent in urban areas.

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Residential Mobility and Housing Submarket Changes: the Case of Shanghai

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Abstract: Urban housing submarket analysis usually places emphasis on intra-urban household migration as the underlying dynamics. However, intra-urban and inter-urban household move coexist in an era of enhanced globalization. This paper introduces a wider and longer perspective to the analysis of household migration. Using a dataset from Shanghai, it empirically shows that non-spatial household mobility is a better indicator than spatial mobility, which is traditionally perceived to indicate housing submarket changes and the driving forces of the dynamics of housing submarkets in different sectors.

Key words: Residential Mobility; Housing; Submarket; Change, Shanghai

Introduction

Traditional models on housing issues are cast in terms of demand and supply linked to a spatially ordered economic opportunity structure, or ecology which were derived from paradigms formulated in a societal context, which is very different from that of today (Bartelt, 1997). Therefore, their foci and implicit assumptions about the nature of the social world are increasingly irrelevant. Bartelt (1997) argued that introducing a global perspective to the analysis of cities and their housing transforms the basic conceptual framework of disciplinary and market-based analysis of urban housing, indicating that contemporary housing analysis must be recast in terms of urban industrial restructuring and labour migration as well as capital flows at both national and transnational scale.

On the other hand, urban housing submarket analysis usually places emphasis on intra-urban household migration as the underlying dynamics. However, an urban housing market is not a closed system; there are also household migration flows into and out of the urban housing system. Moreover, intra-urban household movement results from a number of reasons, which may be related to housing supply, demand, neighbourhood dynamics and other socio-economic reasons. Household spatial mobility patterns should strictly be seen as a symptom or indicator of housing submarket changes rather than underlying dynamics.

The body of literature focusing on residential spatial mobility is substantial and continues to grow, but most of these studies are descriptive. Different works approach the reasons for household move from different angles, and, therefore, differ in their conclusions. This paper introduces a wider and longer perspective to the analysis of household migration on housing submarket changes, and examines the factors that contribute to the dynamic changes in urban housing submarkets, and the extent to which they affect the growth and decline of housing submarkets.

The next section proceeds with a review of the relevant literature on household move to demonstrate the complexity of the reasons for households move, especially in the context of enhanced globalization, and to support the argument that non-spatial household mobility would be a better indicator of housing submarket changes than spatial mobility as traditionally perceived. After a review of the conceptual basis of the relationship between residential mobility and housing submarkets, the subsequent section develops a nested non-spatial submarket structure followed by a description of the data and methodology used. An analysis of empirical results is then presented, followed by a discussion of findings and conclusion.

Why Households Move

At the macro-level, Henley (1998) examines the links between the performance of the housing market and other sectors of the economy in the UK. Much mobility may have been speculative in that real gains from homeownership were used to finance trading-up, which in turn, was motivated by future real gains (Ling & Hui, 2013). Residential mobility may now have been motivated by other concerns, such as equity release or job mobility. It could be concluded that levels of housing wealth are an important factor in explaining mobility (Henley, 1998; Clark, 2013), but the relationship between the two is not linear.

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Forrest (1987) points out that the housing market and its relationship to the social structure is considerably more complicated than a division between owners and renters. What is emerging from the literature on housing and social and economic change is a complex mosaic of social differentiation according to ethnicity, class, gender, and locality. He posits that qualitatively different groups of households, for example, those with highly marketable skills, who move in an exclusive national and international housing market are generously assisted by their employers. Others whose labour is easily substitutable or who experience deskilling are excluded from occupational benefits and will have highly localised, immobile, and stigmatised housing histories. Although it is the imperatives of employment which shape the housing histories of core workers, for a mass of locally employed, middle earning, middle strata, the pattern of residential movement is more likely to be associated with life-cycle stages and family growth and decline. For those on the social and economic margins, their housing histories will be shaped by bureaucratic rules and procedures in conditions of greater scarcity and control.

At micro-level, a substantial literature has been developed to explain the relationship between residential mobility and housing tenure (Li, 2003).

Clark et al. (1984) focus on the nature of housing consumption by tenure and life-cycle characteristics of households and the impact of space requirements on residential mobility. Residential mobility or intra-urban migration does not only contribute to changes in the pattern of urban development but also brings about associated shifts in a host of activities (e.g., employment, consumption of private goods and public services). Studies on residential mobility since Rossi (1955) published his classic piece have emphasized the demand variables, and residential mobility is primarily seen as a spatial adjustment process. Family size, household income, stage of the family life cycle, events in the course of a person's life and education have been found to be among the most salient factors underlying residential move decision (Wu, 2006). Improving living conditions and floor area are key motives for most migrant households in Hangzhou, China (Jim & Chen, 2007).

More recently, scholars have given more attention to the supply-side variables. In practice, patterns of residential mobility may be quite diffused and hard to relate to household characteristics alone (Vlist et al., 2002). For many housing related issues, it is important to place analysis in the context of the social relations associated with the delivery and reproduction of housing as a useful physical entity (Ball, 1986). White (1985), (Boyle (1995) and Hamnett (1991) have argued that residential mobility is influenced by the availability of housing opportunities and the constraints that restrict housing choice. Factors, such as size of the public housing sector and the associated eligibility criteria, housing market tightness and the spatial distribution of new private housing, and the availability of cheap private rental apartments in the inner city, have been found to be of importance in determining the level and type of residential movement. External factors, such as proximity to various retail centres, dominated the moving decision-making (Jang & Kang, 2015). Other factors include green space, water bodies, landscape and recreational opportunities, educational facilities, security and property management (Jim and Chen, 2007).

Previous studies have shown that residents in different tenures have different migration propensities. Renters, in general are more mobile than owners (Li & Mao, 2017). In Britain, households in privately rented properties are more mobile than renters of council housing (Owen & Green 1992). Housing tenure also affects the distance as well as the direction of residential moves Boyle, 1995; Forrest, 1987; Hamnett, 1991; Pawson & Bramley, 2000). For instance, it has been found that residential moves by tenants, especially the public housing tenants, are generally over a short distance. Elsewhere, Li and Huang (2006) argue that changes in the tenure structure are associated with changes in the pattern of intra-urban migration.

Moore and Rosenberg (1993) point out that although the demand side variables tend to have similar influences on the desire to move in different localities, the effects of the supply-side conditions, or what Ball (1986) labels as the structure of housing provision of a given city, are quite place specific. As a result, the pattern of residential moves and its effects on the socio-spatial composition of a city vary rather substantially from one city to another.

Intra-urban Residential mobility and Housing Submarkets

By partitioning the housing stock into submarkets, Grigsby (1963) was able to examine how dwellings were linked by patterns of household intra-urban mobility. Household migration patterns were, in turn, seen to lead to changes in prices and structure quality.

In their work to model and measure neighbourhood changes, Leven et al. (1976) were of the view that households' movement is determined by an interaction of a complex set of sub-market supply and demand factors rather than the simple price and physical quality relationship of the filtering model (Maclennan, 1982, p.34).

Based on a review of the underlying theory of the nature and existence of submarkets, Jones et al. (2004) have queried the use of the standard hedonic statistical test for submarkets, and argues that submarkets must be seen within an analytical framework that includes intra-urban mobility patterns. Based on a year's transactions in Glasgow, they returned to housing submarket analysis with its emphasis on intra-urban household mobility migration developed by Grigsby in the 1960s, and examined intra-urban household mobility patterns to explore the internal dynamics of urban housing markets within a submarket framework.

In this study, six potential submarkets were chosen a priori, and later these were aggregated to three submarkets by hedonic modelling. When cross-tabulation was undertaken to determine the mobility percentages between submarkets, a rather strict containment was observed in each submarket. Although it is acknowledged that the empirical results are, in part, likely to be case study specific, it is argued that the findings imply that an understanding of intra-urban linkages is an important element in analysing the submarket structure and spatial dynamics within local housing systems. It is concluded that it is possible to demonstrate that sub-markets tend to be self-contained and stable. However, Ling and Hui (2013) use a similar method to examine the evolution of spatial submarkets in Hangzhou, China, but concludes that five preset spatial submarkets is not stable, and the spatial distribution of submarkets changes in the process of market development.

However, it is households' searching behaviour rather than mobility pattern that could reveal housing substitutability, and thus housing submarkets. First of all, households' searching behaviour is not traceable in practice, and actually no empirical work has been found on submarket identification based on households' searching behaviour. Secondly, rising incomes enable different income groups to move to housing that exceeds their pre-move standards. They may filter up/down, and usually do not move within the same housing submarket because of high costs of searching and moving. Thirdly, households' mobility as the outcomes results from a number of reasons. These might be demand reasons, supply reasons, neighbourhood reasons, social and economic reasons, such as job availability, which may relate to urban economic restructuring in the context of globalization. Intra-urban household movement or spatial mobility pattern, commonly described as underlying dynamics of housing submarkets, should be seen strictly as a symptom or indicator of housing submarket changes. Furthermore, spatial mobility patterns may be discrete and not present regular patterns, thus it is difficult, if not impossible, to generalize.

Therefore, this paper suggests that it is necessary to introduce a wider and broader perspective for contemporary housing market analyses, and that non-spatial household mobility pattern would be a better indicator than spatial mobility pattern for understanding the housing submarket dynamic process.

Housing Submarket Structure

Our understanding of the micro-foundations of the market is less developed, less coherent and has been less prominent in shaping policy and practice (Keskin & Watkins, 2017). There is considerable imprecision and inconsistency surrounding the conceptualization of housing submarkets (Watkins, 2001). There has also been a lack of clear distinction of dimensions between supply segmentation and demand differentiation. Different sets of dimensions taken from both the supply and demand sides have been used in various attempts to identify housing submarkets. As such, a range of submarket definitions have unsurprisingly emerged. Correspondingly, a number of means and techniques have been employed in various attempts to identify housing submarkets with different conclusions reached (Watkins, 2001). The urban housing submarket structure is a neglected area of study in most recent work. There is no clear definition of the urban housing submarket structure, although a number of empirical studies have shown its existence (see, for example, Tu, 1997, Jones et al., 2003).

There are numerous influences on housing supply segmentation and on demand stratification. The factors leading to supply segmentation may be conveniently summarized into three categories: hierarchical spatial dimensions related to externalities embedded in complicated urban spatial structure, tenure dimensions, and

structural dimensions; whereas the dimensions of demand differentiation vary across societies and over time depending on welfare and institutional arrangements (Zhang, 2015).

To facilitate the identification of submarkets and a fuller understanding of housing market operation, a nested hierarchical housing submarket structure is developed for Shanghai (Figure 1). On the supply side, the dimensions are divided into three levels. The first level is the neighbourhood, distinguished by spatial dimensions. It is the unique site, situated in a locality that tends to produce homes with the same or similar structural characteristics and at prices that tend to attract similar household types. The second level of housing submarket structure relates to tenure types, such as private ownership, RTB private ownership, social housing, and free-market rental. The third level is housing structural dimensions, such as number of bedroom(s) and bathroom(s), floor space, dwelling type, balcony etc.

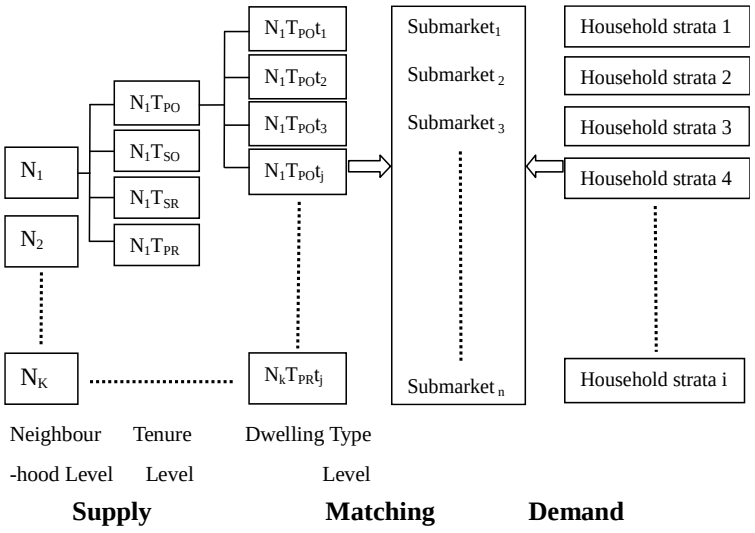

Figure 1: A Nested Hierarchical Local Housing Submarket Structure

Note: $N_{1, 2 ...K}$ refers to neighbourhoods; T_{PO} to Private Owner-occupation sector, T_{SO} to Ownership via RTB, T_{SR} to Social Rental sector, T_{PR} to Private Rental sector; $t_{1, 2... j}$ represents hierarchical housing stock segments differentiated by housing values and structural characteristics in a given neighbourhood. Household strata$_{1, 2 ...i}$ refer to homogeneous household groups differentiated by their socio-economic and institutional variables. Similarly, $T_{PO}t_1$, $T_{PO}t_2$ ...$T_{PO}t_j$ represent housing stock sub-hierarchy in private owner-occupation sector, $T_{SO}t_1$, $T_{SO}t_2$ ...$T_{SO}t_j$ indicate housing stock sub-hierarchy in RTB owner-occupation sector, and so on.

Key dimensions on the demand side include socio-economic status, institutional dimensions, and household income, stage in life cycle, and preferences, which stratify urban households, which (tend to) live in a neighbourhood, into strata. The contribution of each demand dimension to household stratification varies across societies and over time, depending on the ethnic composition, institutional and welfare arrangements, housing policy, and income distribution etc.

The housing submarket structure emphasizes the importance of segmenting both supply and demand in determining submarket formation, definition, and identification. Spatial, tenure and structural dimensions interact together to segment housing supply; and socio-economic, institutional dimensions, and household income, preference, stages in life cycle come together to differentiate demand. As such, a housing submarket may be defined as a collection of all dwelling units in a neighbourhood with the same potential tenure and similar structural attributes and prices, and a certain group of potential household demanders for which these housing units are evaluated as a whole as close equivalent.

Data and Methods

The empirical section of this paper is based on the analysis of the multifaceted data set of 231 households obtained in March 2006 from a field survey of two neighbourhoods, Gushan and Nancheng, in the east and

south of Shanghai respectively (Figure 2). In the Shanghai market, housing stock developed in different periods had different structural characteristics. The population in each neighbourhood was divided into non-overlapping structural groups or strata according to information on built time and the structural types. Subsequently, the established technique of proportionate stratified random sampling was used to select households for interview, to ensure that the sampling fraction was representative of each stratum and that sampled homes were in proportion to the structural compositions of the housing stocks, representing the development processes of each neighbourhood. One hundred and eighteen respondent households were from Gushan and One hundred and thirteen from Nancheng. The survey included information about when and what types of dwellings were built and transacted, when and what types of households moved in, their composition, heads' age profile, current income, education attainment, occupation, *Hukou* registration, their pre-move housing status and employment status related to the institutional legacy in China.

Statistics of residential composition in Shanghai consistently show that apartments (flats) in both high-rise and multi-storey residence block dominate and form the most influential sectors within the local market. In the case of multi-storey residential blocks, different types of apartments may be clustered at the same spatial point; correspondingly, spatial housing submarkets might overlap. As such, this paper takes a nested non-spatial submarket view different from the schemes used in the identification of housing submarkets in the literature, namely spatial scheme, a-spatial scheme, spatial-structure scheme, nested spatial-structure scheme and behavioural method, which is the least common scheme. Following the nested submarket structure (see Figure 1), a multiple step procedure was employed to identify housing submarkets optimally in Shanghai.

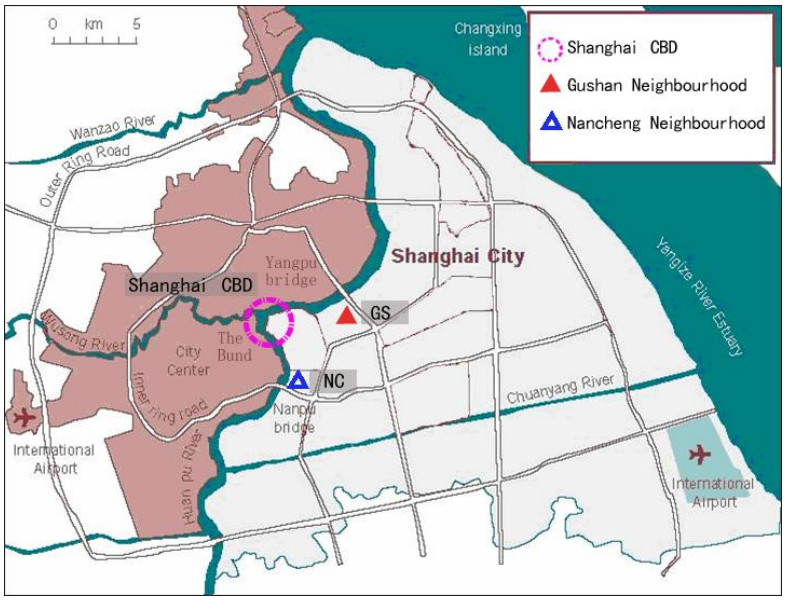

Figure 2: Location of two case study neighbourhoods in Shanghai Urban Area

Firstly, key housing structural variables, namely dwelling size, number of room(s) and number of bathroom(s), age (in 2005), were used as independent variables in hierarchical cluster analysis (Hastie *et al*., 2001) to construct the hierarchy of housing stock segments ($t_{1, 2\ldots, j}$) in each neighbourhood separately. These variables represent key factors of housing supply at the third—dwelling type level (see Figure 1) in a given neighbourhood, which affect household housing consumption.

Secondly, by tabulating the housing stock hierarchy across tenure types, the sub-hierarchies ($TPOt_1$, $TPOt_2$ ...$TPOt_j$ in private owner-occupation sector; $TSOt_1$, $TSOt_2$ ...$TSOt_j$ in RTB owner-occupation sector; $TSRt_1$, $TSRt_2$ ...$TSRt_j$ in social rental sector and $TPRt_1$, $TPRt_2$ ...$TPRt_j$ in private rental sector) can be derived, representing housing supply at differing submarket levels in different tenure sectors in each neighbourhood

separately. Given the housing units in the same neighbourhood would be expected to appreciate or depreciate at similar rates, it is reasonable to assume that housing units in each neighbourhood would stay in their relative housing submarket positions over time. Cross-sectional information dating back to 1994 on part of households' housing consumption and their characteristics can be traced and used in cross-sectional analysis to examine the growth and decline of submarkets in different sectors during the study period.

Changes in Housing Submarkets in Shanghai

There are six different types of single family flats funded by either public or commercial sources in different periods in both Gushan and Nancheng in terms of number of room(s), ranging from one to six. Six distinct hierarchical levels of housing stock strata emerge in both Gushan and Nancheng (see Table 1) when the set of independent variables, including dwelling size, number of room(s), number of bathroom(s), and age (in 2005), are entered into group average (GA) method and centroid linkage for hierarchical clustering analysis (Everitt *et al.*, 2001).

Housing units in each stratum are sufficiently similar to each other compared to those assigned to different strata, and can potentially be transferred across different tenure sectors on the market. However, the housing unit stratum level labelled at the same grade in different neighbourhoods should not be regarded as equivalent or treated as the same level in the Shanghai market.

Table 1: Graded Housing Stock Clusters in GS and NC

GS			NC		
Submarket Level	Flat Size (m^2)	Value in 2005	Submarket Level	Flat Size (m^2)	Value in 2005
i	138*	875	I	186	2154
ii	108 ~ 116*	719-775	II	150 ~ 162	1605-1876
iii	76 ~ 97*	590-672	III	118 ~ 129	1366-1473
iv	56 ~ 68	327-505	IV	97 ~ 112	1049-1216
v	42 ~ 50	214-351	V	62 ~ 65	628-696
vi	21 ~ 33	77-193	VI	43	416-460

***Sources*:** Field Survey. Value is in thousand CNY

Table 2: Growth and Decline of Housing Submarkets in Gushan and Nancheng (1994-2005, % of Total)

	Tenure	*PO*						*RTBO*							*SR*				*PR*					*Vacant*				*N*
Gushan	*Level*	*i*	*ii*	*iii*	*iv*	*v*	*vi*	*iv*	*v*	*vi*	*iii*	*iv*	*v*	*vi*	*iv*	*vi*	*i*	*ii*	*iii*										
	2005	1.7	6.8	9.3	2.5	5.9	5.9	19.5	14.4	4.2	0.8	0.8	3.4	14.4	0.8	9.3													118
	2004	1.7	6.8	9.3	1.7	5.9	5.9	19.5	14.4	4.2	0.8	1.7	3.4	20.3	0.8	3.4													118
	2003	1.7	6.8	9.3	0.8	4.2	5.9	20.3	16.1	4.2	0.8	1.7	3.4	22.9	0.8	0.8													118
	2002	1.7	6.8	7.6	0.8	2.5	5.9	18.6	15.3	4.2	0.8	4.2	5.9	22.9		0.8			1.7										118
	2001	1.9	1.9	5.6		1.9	5.6	18.7	15	5.6	0.9	7.5	9.3	25.2		0.9													107
	2000	0.9	0.9	4.7		1.9	5.6	16.8	13.1	3.7	0.9	9.3	11.2	27.1		0.9	0.9	0.9	0.9										107
	1999		0.9	2.8		1.9	2.8	14	8.4	4.7	0.9	12.1	15.9	29		0.9	1.9	0.9	2.8										107
	1998					2	2	13.1	8.1	2	1	15.2	18.2	35.4		1		2											99

	1997				2			12.1	5.1	3	1	16.2	21.2	37.4					2				99
	1996				2.1			11.3	4.1	1	1	17.5	22.7	40.2									97
	1995				2.1			8.2	4.1	1	1	20.6	22.7	40.2									97
	1994				1			6.2	2.1		1	22.7	25.8	41.2									97
Nancheng	*Level*	*I*	*II*	*III*	*IV*	*V*	*VI*	*III*	*IV*	*V*	*VI*	*III*	*IV*	*V*	*VI*	*II*	*IV*	*V*	*VI*	*I*	*II*	*III*	*IV*	
	2005	7.1	8	12.4	23.9	8.8	1.8	0.9	3.5	13.3	4.4		0.9	0.9	0.9	1.8	1.8	1.8	8					113
	2004	7.1	8.8	12.4	25.7	1.8		0.9	3.5	19.5	7.1		0.9	2.7	7.1	0.9		0.9	0.9					113
	2003	7.1	9.7	12.4	25.7	1.8		0.9	3.5	19.5	7.1		0.9	3.5	8									113
	2002	5.5	9.2	11	24.8	0.9		0.9	3.7	18.3	7.3		0.9	6.4	8.3					1.8	0.9			109
	2001	4.1	4.1	10.2	18.4			1	4.1	19.4	7.1		1	9.2	10.2					4.1	4.1	2	1	98
	2000		2.9	5.8	14.5			1.4	5.8	18.8	5.8		1.4	21.7	18.8							1.4	1.4	69
	1999		2.9	5.8	11.6				4.3	13	4.3	1.4	2.9	27.5	20.3							1.4	4.3	69
	1998		1.4	4.3	11.6				1.4	10.1	2.9	1.4	2.9	30.4	21.7						1.4	2.9	5.8	69
	1997		1.4	1.4	7.2					5.8	2.9		1.4	34.8	21.7						1.4	7.2	14.5	69
	1996				5.8					5.8	2.9			34.8	21.7						2.9	8.7	17.4	69
	1995									8.3	5.6			50	36.1									36
	1994													58.3	41.7									36

Source: Field Survey, Shanghai, 2006. Note: Percentages may not add up to 100 because of rounding.

The composition of housing submarkets in GS and NC have undergone significant changes from 1994 to 2005 in both absolute quantity and relative terms, as shown in Table 2. Generally, both neighbourhoods have shifted from the dominance of social rental submarkets at middle to low level in the early 1990s to that of owner-occupier submarkets in 2005 at differing levels.

Despite some new input of social rental housing during the study period, the share of social rental submarkets decreased dramatically in both GS and NC. In NC, each level accounts for less than 1% of the total in 2005, while in GS social rental submarkets at the bottom level still accounts for 14.4% of the total. The reason is that most of this kind of housing units were built in the 1950s and the 1960s with shared kitchen and toilet facilities, and were not readily plausible to be divided into individual units, and could not be allowed to enter into ownership market.

Ownership submarkets in GS and NC in 2005 account for over 60 and 84% of the total respectively. Apart from increasing commercial housing supply over the period, the main reason for this increase was that social housing in relatively good conditions was transferred to RTB ownership sector under the RTB (Right to Buy: selling to sitting tenants) programme; among them some were resold on the market and transferred to private owner-occupier submarkets. In the meantime, new types of housing submarket—private rental submarkets, mainly at lower levels, began to emerge and increase, accounting for 10% and 13.3% of the total in GS and NC respectively in 2005.

The vacant flats were not cleared until 2002, indicating that both neighbourhoods had suffered from the market recession during the period from 1996 to 2002 when Asia Financial Crisis hit this region. Hierarchical housing submarkets might be subject to frequent disruptions from both the supply and demand sides, thus, in the process of adjustment in which multi-disequilibria and multi-equilibria might coexist.

Spatial Mobility Patterns and Housing Submarket Changes

In the housing economics literature relating to housing submarket studies, spatial mobility patterns refer to intra-urban household movement (see, for example, Grigsby, 1963, Jones et al., 2004). As an open system, there are household migration flows into and out of the neighbourhood housing system, some of which might respond to job-related reasons. Household spatial mobility pattern in this study refers to the patterns of household migration, which includes both intra-urban and inter-urban household migration. Non-spatial mobility patterns refer to the changes in household housing consumption, which may involve in the changes in location, tenure type, quantity and quality of housing consumption.

Of the total 118 households in GS, only 79 households experienced spatial migration during the study period. There were 50 households who moved at their own will, with the rest 29 households moving through bureaucratic match rather than market operation. Of the total, 21 households underwent tenure shift from social rental to RTB ownership (Table 3), and the rest 18 households attained their social rental tenancy rights before 1991, and had been remaining up to the end of 2005.

Table 3: Description of Households' Movement in GS (1991-2005)

Move type	Origin	Submarket Level						Total
		i	ii	iii	iv	v	vi	
Purchase	The same neighbourhood					1		1
	Different districts of Shanghai	2	7	11	3	5	7	35
	Outside Shanghai		1			1		2
Renting	Different districts of Shanghai						1	1
	Outside Shanghai				1		10	11

Source: Field Survey, Shanghai, 2006

Table 4: Description of Households' Movement in NC (1994-2005)

Move type	Household Origin	Submarket Level						Total
		I	II	III	IV	V	VI	
Purchase	The same neighbourhood				1			1
	Different districts of Shanghai	6	7	13	21	8	1	56
	Outside Shanghai	2	2	1	5	2	1	13
Renting	Different districts of Shanghai		2		1		5	8
	Outside Shanghai				1	2	4	7

Source: Field Survey, Shanghai, 2006

Among 113 sample households, 99 households experienced spatial migration into NC during the study period (Table 4), among which 85 households moved in at their will, 14 households moved into welfare housing, and the rest, 14 households, were non-movers in RTB ownership or social housing tenants.

Overall, the spatial mobility patterns revealed from the two case study neighbourhoods paint rather similar pictures. As expected, the household spatial mobility pattern for each submarket is discrete and diffused, and does not present a regular or distinct pattern, even when households from outside Shanghai are excluded. Households moving into the same level housing submarket came from a number of different neighbourhoods either in the Shanghai Metropolitan Area or outside Shanghai.

Household Non-Spatial Mobility Patterns and Housing Submarket Changes

Tables 5 and 6 display households' non-spatial mobility patterns in GS and NC during the study period respectively. For households that moved into the same submarket in non-subsidized sectors, their pre-move starting submarkets were quite different in terms of tenure, location, housing values and unit sizes. They could be owner-occupiers, RTB owner-occupants, social housing tenants, first time or would-be home-buyers, which might be private rental tenants, living with parents, or living in dormitories. The distances involved ranged from short distance, such as several kilometres, to over several hundred or even thousand kilometres, which appear to be quite difficult to generalize. On the contrary, the growth and decline of housing submarkets at differing levels vary directly with household non-spatial mobility patterns, demonstrating that non-spatial mobility patterns are indicators of housing submarket changes.

Tables 5 and 6 show that the main household group buying housing from the market was those who had owned a house before. The second consumption group was those living with their parents in Shanghai before buying a house from the open market, indicating that they might have obtained financial support from their parents for their housing consumption, or at least could have saved more when living with their parents in Shanghai, compared with those inter-urban migrant households.

Driving Forces of Submarket Changes

The migration of households results from a number of reasons. These are demand reasons, supply reasons, neighbourhood reasons, social reasons and economic reasons, such as job availability, which may be related to urban economic restructuring in the context of globalization.

From the supply side, housing in urban China can be divided into two categories in terms of its origin, namely social public housing and commercial housing. Social public housing built by public investment, regardless of its current tenure status, was determined by welfare housing policy in the pre-reform and reform period, with its standards gradually improved. The control over social housing standards was strictly enforced through the whole process of housing construction, which covered housing finance, housing land administrative allocation (supply), housing standard control, housing design, urban planning control and housing construction (Zhang, 2013). Housing built by commercial developers was at middle to high submarket levels. This was driven by financial capital-driven market forces and local interests, and further fuelled by the institutional arrangements, the distortion in the socialist market economy, and the inability of the government to control the housing system (Lai, 1998).

From the demand side, the driving forces of the growth in housing submarkets in different sectors have been explored by examining why different household groups had been housed in different housing submarkets in different tenure sectors. Table 7 presents the driving forces for the growth of housing submarkets from the demand side in GS. It can be seen that in GS for private owner-occupied housing submarkets as a whole, personal reasons (owned home, marriage, change in family size, to be near relatives), and accommodation reasons (increase space, home was due for renovation and demolition) were the dominant driving forces for the growth of private owner-occupier submarkets, accounting for about 40 and 45 percent respectively. Job related reasons (come to work from outside Shanghai, to be near working place) also contributed over 13 percent, while neighbourhood reasons (move to a better neighbourhood, improve child schooling) were under-represented (2.6%).

At differing submarket levels, it can be seen that for high level private owner-occupation submarkets (i to iii), increase space was the main driving force for its growth, accounting for 50 to 55 percent of the reasons for households moving into these types of submarkets. Home ownership, including marriage, were the main driving forces for private owner-occupier submarkets at all levels, especially at level i, vi to iv, which ranged from 33.3% to 57%. Coming to work in Shanghai and demolition of previous home had similar effects on the growth of submarkets at level v to ii. The other forces, such as close to work place, moving to desired neighbourhood (improving child schooling), close to relatives and family expansion, were underrepresented.

For private rental housing submarkets in GS, the dominant reason for its growth was households coming to work in Shanghai, accounting for 100 and 91.7 percent for the submarket growth at level iv and vi respectively.

Table 8 illustrates the driving forces for the growth of housing submarkets from the demand side in NC. The main reasons for the growth of private owner-occupier submarkets as a whole were accommodation reason (increase space, home was due for demolition) accounting for 44.3%. However, compared to that in GS, job-related

reasons (34.3%) became the second main driving forces for the growth of private owner-occupier submarkets, and personal reasons relegated to the third, only accounting for 17% of its growth.

At differing submarket levels, increase space was the first most important driving forces for the growth of private owner-occupation submarkets at middle to high level submarkets, ranging from 37 % to 57 %. Coming to work in Shanghai became the second dominant forces, contributing significantly to the growth of submarkets at all possible levels, ranging from 20 percent to 50 percent.

The other forces for the growth of owner-occupation submarkets appeared to be dispersed, to a varying extent driving the growth of private owner-occupier submarkets at differing levels.

For private rental housing submarkets in NC, the dominant reason for submarket growth was job-related reasons (households came to work in Shanghai, and close to workplace), accounting for over 73 percent of its growth. However, household breakdowns became the third main driving forces, contributing 13.3 percent to the growth of private rental submarkets, which was different from that in GS.

Table 5. Households Non-Spatial Mobility in GS (1991-2005)

Previous Tenure	**Private Ownership**						**RTB Ownership**			**Social Rental**				**Private Rental**		**N**
	i	**ii**	**iii**	**iv**	**v**	**vi**	**iv**	**v**	**vi**	**iii**	**iv**	**v**	**vi**	**iv**	**vi**	
Private Owner		4	2													6
RTB Owner		1	2	1	2										1	7
Social Rental		2	2			1	23	17	5	1	1	3	1			56
Private Rental			1	1												2
Informal		1	1		1	2							1	1	9	16
LWP	2		3	1	4	3						1	15		1	30
DMT						1										1
Tenure Shift in							26	24	12					1	11	74
Moved out							-3	-7	-7		-27	-24	-23			-91
Moved in (1)	2	8	11													21
Moved in (2)				3	7	7										17
Moved in (3)										1	10	17				28
Net mobility	**2**	**8**	**11**	**3**	**7**	**7**	**23**	**17**	**5**	**1**	**-17**	**-7**	**-23**	**1**	**11**	**49**
Total in 1991											18	11	40			69

Total in 2005	2	8	11	3	7	7	23	17	5	1	1	4	17	1	11	118
ΔSubmarket	**2**	**8**	**11**	**3**	**7**	**7**	**23**	**17**	**5**	**1**	**-17**	**-7**	**-23**	**1**	**11**	**49**

Note: informal indicates self-built housing in rural areas, which cannot be sold. LWP indicates living with parents before moving, DMT indicates household living in dormitory provided by employer before moving.

Moved in (1) indicates households moved into housing developed by commercial investor(s); Moved in (2) indicates households moved into social housing resold on the market; Moved in (3) indicates households moved into social housing during the study period.

Source: Field Survey, Shanghai, 2006

Table 6. Households Non-Spatial Mobility in NC (1994-2005)

Previous Tenure	**Private Ownership**						**RTB Ownership**				**Social Rental**				**Private Rental**				**N**
	I	**II**	**III**	**IV**	**V**	**VI**	**III**	**IV**	**V**	**VI**	**III**	**IV**	**V**	**VI**	**II**	**IV**	**V**	**VI**	
Private Owner	4	2	6	4		1									1			2	20
RTB Owner	3	2	2	7	2													1	17
Social Rental		2	3	5	1	1	1	4	15	5		1		1					39
Private Rental		1	1	3														1	6
Informal			1	4	4												2	2	13
LWP		2		3	3								1		1	1		3	14
DMT	1		1	1												1			4
Tenure Shift in					10	2	1	4	15	5					2	2	2	9	52
Moved out		-2		-2							-1	-4	-27	-16					-52
Moved in (1)	8	11	14	29															62
Moved in (2)					10	2													12
Moved in (3)											1	5	7	2					15
Net Mobility	**8**	**9**	**14**	**27**	**10**	**2**	**1**	**4**	**15**	**5**	**0**	**1**	**-20**	**-14**	**2**	**2**	**2**	**9**	**77**
Total in 1994													21	15					36
Total in 2005	8	9	14	27	10	2	1	4	15	5	0	1	1	1	2	2	2	9	113

∆Submarket	**8**	**9**	**14**	**27**	**10**	**2**	**1**	**4**	**15**	**5**	**0**	**1**	**-20**	**-14**	**2**	**2**	**2**	**9**	**77**

Note: informal indicates self-built housing in rural areas, which cannot be sold. LWP indicates living with parents before moving, DMT indicates living in dormitory provided by employer

Moved in (1) indicates households moved into housing developed by commercial investor(s); Moved in (2) indicates households moved into social housing resold on the market; Moved in (3) indicates households moved into social housing during the study period.

Source: Field Survey, Shanghai, 2006

Table 7. Why Households Moved into Hierarchical Submarket in GS（1994-2006）

Tenure	Main Reasons to Move	Submarket Level						% of Total	N
		i	ii	iii	iv	v	vi		
PO	Own home	50	12.5	18.2		14.3	57.1	23.7	9
	marriage				33.3	28.6		7.9	3
	Family expansion				33.3			2.6	1
	Close to relatives					14.3	14.3	5.3	2
	Increase space	50	50	54.5				28.9	11
	Demolition of previous home		12.5	9.1		28.6	28.6	15.8	6
	Improve children schooling		12.5					2.6	1
	Come to work		12.5	9.1	33.3	14.3		10.5	4
	Close to working place			9.1				2.6	1
	Total	2	8	11	3	7	7	100	38
RTB	RTB of In-kind housing				100	100	100	100	45
	Total				23	17	5	100	45
SR	In-kind housing			100		100	100	100	5
	Total			1		3	1	100	5
PR	Come to work				100		90.9	91.7	11
	Decoration/renovation of home						9.1	8.3	1
	Total				1		11	100	12

Source: Field Survey, Shanghai, 2006
Note: Percentages may not add up to 100 because of rounding.

Table 8. Why Households Moved into Hierarchical Submarket in NC（1994-2006）

Tenure	Reasons in their home	submarket						% of	N
		I	II	III	IV	V	VI	Total	
PO	Own home			7.1	3.7	10		4.3	3
	marriage		11.1		3.7	10		4.3	3
	Family expansion	12.5		7.1				2.8	2
	Close to relatives	12.5			3.7	10	50	5.7	4
	Increase space	37.5	44.4	57.1	37.0	20		38.6	27
	Demolition of home			7.1		30		5.7	4
	Desired neighbourhood				3.7			1.4	1
	Improve child schooling		11.1		3.7			2.9	2
	Come to work	25	33.3	21.4	25.9	20	50	25.7	18
	Close to work place	12.5			18.5			8.6	6
	Total	8	9	14	27	10	2	100	70
RTB	Demolition of home					6.7		4	1
	RTB of In-kind housing			100	100	93.3	100	96	24
	Total			1	4	15	5	100	25
SR	In-kind housing				100			100	1
	Total				1			100	1
PR	Divorce						22.2	13.3	2
	Demolition of home						11.1	6.7	1
	Improve child schooling		50					6.7	1
	Come to work				50	100	55.5	53.3	8
	Close to work place		50		50		11.1	20	3
	Total		2		2	2	9	100	15

Source: Field Survey, Shanghai, 2006 Note: Percentages may not add up to 100 because of rounding.

Conclusions

This paper seeks to explore an alternative way to operationalize the submarket concept by developing a nested hierarchical housing submarket structure based on the residential mode in urban China, and examined the driving forces of housing submarket changes in the two case study neighbourhoods respectively during the study period, using a data set from Shanghai housing market.

Empirical evidence shows that for households that moved into the same submarket in non-subsidized sectors, their pre-move starting submarkets were quite different in terms of tenure, location, housing values and unit sizes. Neither overall household spatial mobility nor intra-urban spatial mobility present regular patterns in relation to the changes of housing submarkets at differing levels. Instead, the growth and decline of housing submarkets at differing levels vary directly with household non-spatial mobility patterns, demonstrating that non-spatial mobility patterns are indicators of housing submarket changes.

Public housing built previously by public investment, regardless of its current tenure status, was determined by welfare housing policy in the pre-reform and reform periods, with its standards gradually improved. Housing built by commercial developers was at middle to high submarket levels, shaped by financial capital-driven market forces, local interests, and further fuelled by the institutional arrangements, the distortion in the socialist market economy.

Accommodation (including increase space, demolition of previous home) was the dominant driving force for the growth of private owner-occupier submarkets in both neighbourhoods. This result demonstrates potential demand for space in Shanghai housing market in relation to the legacy of relatively low housing standards in the previous socialist welfare housing system, and the demand affected and created by recent rapid urban expansion and massive regeneration. To a varying extent, personal reasons (own home, marriage), and coming to work in Shanghai were also important driving forces for the growth of private owner-occupier submarkets. This demonstrates the potential demand for housing from new family formation and significant number of immigrant households which might be related to urban economic restructuring in Shanghai.

For private rental submarkets, at lower levels, the

dominant driver was migrant households coming to work in Shanghai. Factors stimulating private rental demand also included close to work place, household breakdowns, and improving child schooling, among other factors. The private rental sector was accommodating a gap in the current market, effectively filling the gap in social rental stock and catering for those who were unable or unwilling to buy property.

Identifying submarkets and their driving forces and understanding the links between them could inform policy decision-making and the development of the housing market. As housing policies usually have non-uniform initial impacts across the submarket hierarchy, one can comprehend their ultimate effects through a submarket analysis approach. The examination of different sets of driving forces for submarket changes at differing levels provides not only a useful way of understanding housing market processes in urban China, but also a basis on which to identify interventions that are likely to be most needed and most effective.

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Quantification of Urban Leisure-Time Physical Activity (LTPA) Among University Students in South-West, Nigeria

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Abstract: Regular participation in urban leisure-time physical activity is beneficial to human health. Despite its importance, it has continued to decline among Nigerians students, consequently leading to rising prevalence of chronic diseases and conditions. There is the need to understudy the various strata of the Nigerian population. This study focused on the quantity of urban LTPA among university students with a view to facilitate intervention programmes. The study adopted descriptive survey design. All the students in public-owned universities in South-western Nigeria were used for the study. The sample for the study was 2,730, which was 10% of male and female students in penultimate and final classes in the selected universities, using multi-stage sampling technique. The researchers' constructed instrument was used to collect data. The data collected were analysed, using descriptive statistics of frequency, percentage, mean, standard deviation and inferential statistics of t-test with 0.05 for statistical significance. The study revealed that more than half of urban university students in South-western Nigeria were not meeting the international physical activity guidelines during leisure-time, sedentary, n = 1473 (52.6%); low intensity LTPA, n = 1796 (64.8%). Quality Physical Education in tertiary institutions geared towards skill development for students' involvement in regular urban LTPA is recommended.

Key words: Active activity, Leisure-time, Passive activity, Physical activity, Sedentary lifestyle

Introduction

Most human activities, LTPA inclusive, are related to the environment. The term environment is derived from the French verb 'environner', meaning 'to surround'; therefore, environment literarily means our surrounding, which is synonymous to urban settlement in the context of this study. Environmental variables may serve as facilitator or inhibitor of LTPA. For instance, extreme changes in the physical environment can promote extreme impact on human body, indicating that the status of human health, energy and comfort can be altered by the physical environment to dissuade a person from engaging in LTPA. Leisure programmes are dependent on environmental quality. Citing Darwin's theory, Jarvie (2006) accentuated that the survival of species would, at least, partly depend on their adaptation and sustainability to their surroundings. Likewise, Morgan (2001) posited that when there is congruence between an individual and his/her environment, they would be happier, better adjusted and more likely to achieve personal goals. The environmentalists believed in the importance of the environment as a determinant of human life (Jarvie, 2006). Thus, leisure is an important basis for the protection of natural, historical, cultural resources and landscape (Williams, 2006).

Since the old days, people have believed in the internal and external powers and forces which drive and direct man. Brymer and Cuddily (2009) have the conviction that human activities benefit from environment. Physical environment provides cues and opportunities for LTPA (Giles-Corti & Donovan, 2002). This may explain why the attention of researchers is no longer focused on individual-level determinants of LTPA alone, but also on the environment in which people perform activities, because it influences the frequency, duration, intensity and type of activity (Lee & Garraway, 2010). Physical environment includes the "built environment" and the "natural environment".

The term 'built environment' refers to man-made surroundings that provide the setting for human activity, ranging from personal shelter and building to neighbourhood and city with other supporting infrastructure (Tomori, 2012). Smith, Troped, McDonough and Defreeze (2015) put it succinctly by defining built environment as the structure of the physical environment that is deliberately constructed or modified by human activity, such as buildings, streets, and parks or play spaces. The natural environment includes forest, landscapes,

coastal region, weather conditions and seasonal variations. As leisure professionals, if we want to provide choice of activities and opportunities for people to experience and develop leisure potentials, then we must provide a favourable physical environment, the right conditions, satisfactions and positive outcomes (Torkildsen, 2005). The physical environmental factors determining leisure-time physical activity are community designs, access to facilities, safety, public transportation and weather conditions and seasonal variations.

Urban leisure-time activity provides opportunity for people living in the town to interact and benefit from their environment-intrapersonal, social and physical environment. The knowledge of its usefulness to humanity prompted various national governments, international organizations and advisory groups to continue to advocate for the positive use of leisure-time. Pieper in Hardman (2001) described leisure as the "basis of culture", the psychological and spiritual disposition, that is, the fundamental prerequisite for the great works of art, music, theatre and philosophy. It provides opportunities for individuals to seeking new experiences, gain knowledge, skills, attitudes and values. According to Edginton, Jordan, Degraaf and Edgington (2012), it gives room for self-exploration to re-event, refocus, renew, refresh, replenish and transform. Archibald (2005) in his research reported that people fail or succeed in life, because of their leisure choices. Leisure has the capacity to clarify our intrapersonal and interpersonal characteristics to others and, therefore, helping us to reveal our identity to others (Hardman, 2001). Leisure is like a two-edged sword; one edge can provide the background for creativity and development and the other can direct people to moral decadence and social problems. It must be noted, therefore, that leisure can be a curse or blessing; an asset or a liability, depending on its content (Torkilden, 2005).

Leisure-time activities related to town dwellers can be divided into two major parts: Active/leisure-time physical activities and passive/sedentary leisure-time activities. These activities may be carried out in the neighbourhood (recreation) or in the course of travelling (tourism). Casperson, in Cushman and Ladlier (1990), defined Leisure-Time Physical Activity (LTPA) as the bodily movements during leisure-time produced by skeletal muscles that lead to increase in energy expenditure. The energy to be expended on these activities depends on the quantity/volume (type, intensity, duration and frequency) of activity. They may be in a form of sporting activities, exercise, chores in and out of the house, or any other recreational activities that can help improve quality of life (Newton, Guo, Yang & Malkin, 2012). Whereas passive leisure-time activity is a sedentary lifestyle, which, according to Owen, Leslie, Salmon and Fotheringham (2000), involves less or no physical activity. In addition, they submitted that physical activeness and sedentariness can coexist, emphasizing the clarity in the relationship between physical activity and sedentariness. This may include watching live and televised programmes, reading novel and engaging in internet-based activities. According to Thayse, Donald, Fernanda, Michele, Daniel, Sara, Peter and José (2017), both sedentariness and physical activity are linked with a wide array of biological, social, behavioural, and environmental correlates. Thus, sedentariness, among other factors, is considered a potential risk in youth, due to its link to the increase in the prevalence of overweight/obesity and metabolic risk factors. In most cases, sedentariness is viewed as the opposite of physical activity, which supports the "displacement hypothesis", assuming that inactive behaviours may replace ones that are more active.

LTPA is in various forms; this activity includes walking, playing tennis, playing soccer, fishing, swimming etc. Sharp, Turker, Baril, VanGundy, and Rebellion (2015) perceived type of activities as the number of different activity contexts to which an individual is exposed. It does not mean the total number of activities, but rather the variety of activities engaged in by participants. For students, most physical activities occur at home, school and neighbourhood. Therefore, it is likely that factors of these levels may interact with individual characteristics to influence their LTPA patterns (Correa, Cordiera, Marques, Dominiquez, Demarco & Hallal, 2013). Ensuring variety in LTPA has long been espoused for participants' enjoyment. Incorporating variety of LTPA, in terms of type, intensity, duration and frequency, in a workout is important for maximum benefits.

According to Corbin, Welk, Corbin and Welk (2004) and Health Promotion Board (2011), there are basically three types of LTPA. They are lifestyle activity, exercise activity and sports activity. Lifestyle is described as a way of living based on identifiable patterns of behaviour, which are determined by interplay between an individual's personal characteristics, social interactions, socioeconomic and physical environment conditions (World Health

Organisation, 2012). Therefore, lifestyle physical activities are physical activities performed by an individual on a routine basis (for example, walking, climbing stairs, mowing or raking the yard), which is usually undertaken with light to moderate intensity, and help to burn calories and cause a minimal increase in breathing and heartbeat. These activities can easily be built into daily life activity (Hardman & Stensel, 2003). Lifestyle activities allow a person to choose from a large variety of leisure and household activities to accumulate the recommended 30 minutes of MVPA each day of the week (Opdenacker, Boen, Auweele & Bourdeaudhuij, 2008).

Variation in personal goals may lead to difference in the quality of LTPA among town dwellers. Exercise and sport are subsets of physical activity that enhances health (Corbin, Welk, Corbin & Welk, 2004). Haapanen- Neiremi (2000) defined exercise as a principal form of physical activity that is planned, structured, repetitive and purposive bodily movements engaged in, in order to improve or maintain one or more components of physical fitness (Haappanen-Nremi, 2000). It is often associated with fitness maintenance and improvement only (Beutel, 2013). Whereas sport is seen as an organised competitive activity that requires adherence to rules and/or customs and specific skill to play, the objective is often associated with winning or losing (Corbin et al, 2004).

From the ancient time, it has been proven that engaging in physical activity is beneficial to men and women. Hippocrates (5th century BC), the father of preventive medicine, wrote extensively on the curative and preventive powers of physical exercise for a variety of ailment, including mental illnesses (Biddle, Fox & Boutcher, 2004). Recent research evidence further corroborated this age-long belief that habitual engagement in leisure-time physical activity has protective effect against the on-set of over 25 chronic diseases, including cardio-vascular diseases, type II diabetes mellitus, colon and breast cancers, stroke, osteoporosis (Kirk & Rhodes, 2010). Nabofa (2010), in his literature, submitted that reducing inactivity among the people by 10% could eliminate more than half a million deaths every year. Furthermore, researches have demonstrated that inactivity (sedentary life style) is detrimental to human health. The World Health Organization in Mandigo (2010) reported that in 2001, 1.9 million global deaths were attributed directly to inactivity. The WHO (2005) remarked that inactivity caused 15% of cancers, diabetes and heart diseases in Nigeria. In economic terms, the WHO has projected that Nigeria will lose 10 billion dollars in 2017 to chronic diseases and conditions caused by inactivity. Hardman (2001) remarked that sick population not only incurs medical expenses, but it also drains the economy through low productivity.

Despite these research evidences, LTPA has continued to diminish among different segments of Nigerian population. Talabi, Ajayi-Vincent and Aribamikan (2010) opined that this may be due to advances in technological development which has resulted in greater convenience among Nigerians, thereby making them physically inactive. About 8 million Nigerians suffer from hypertension; 4 million has diabetes, 100, 000 new cases of cancers are diagnosed each year in Nigerians (Ekpeyong, Udokang, Akpan & Samson, 2013).

From the foregone analyses, there is the urgent need to understudy the LTPA of Nigerians. Various authors recommended periodic in-depth examination of different strata of Nigerian society to ascertain the status of LTPA among them (Alla, 1997, Awotidebe, Adedoyin, Adegbesan, Babalola, Olukoju, Mbada, Chirwa & Bisiriyu, 2014). In consonant with this position, Hansen, Vistisen, Cartensen, Helge, Linneberg, Witte, and Aadahl (2012) noted that there is need to consider LTPA by domains and not overall LTPA of the general population. In fact, this is essential, because various social groups and domains experience a diverse quality of LTPA.

The World Leisure Board of Director (2000) postulated that, to develop a high quality and sustainable LTPA culture in any society, it must commence from educational institutions, particularly colleges and universities. These institutions constitute powerful vehicle through which the basic skills and values needed to function effectively in society are transmitted to the people. Furthermore, it provides an avenue to teach the nature and importance of LTPA and how to integrate the knowledge acquired into personal lifestyles. Biddle and Mutrie (2008) observed that colleges and universities have benefits for the target of LTPA because, first, it captured a critical age range at which change in behaviour appears most likely to be formed and retained. Secondly, students spend most of their time in the school; therefore, school-wide strategies will enable virtually all members of an age range to be targeted. Thirdly, LTPA delivery structures through Sports Centres/Units are already in place in the universities to facilitate skill development. Lastly, a positive behaviour

change achieved at this level can track physical fitness to adulthood.

Three facts seem to emerge from this discussion. Firstly, habitual LTPA appears very useful in building and maintaining a healthy lifestyle. Secondly, there is decline in LTPA among Nigerians. Thirdly, there is limited knowledge of the quantity (volume) of LTPA among various domains of Nigerian society to accentuate programme planning and delivery. Thus, this study intends to study the quantity of LTPA among university students in South-West Nigeria with a view to quantifying the type, duration, intensity and frequency of their participation. Understanding the quantity/volume (type, duration, intensity and frequency) of physical activity will help the students to achieve the right volume of activity to effect physical, physiological, psychological, social and mental change (Erickson, 2013).

The physical activity guidelines of at least 60 minutes of Moderate to Vigorous Intensity Physical Activity (MVPA) per day for at least 5 times a weekly on regular basis has been recommended for people globally (Centre for Diseases Control and Prevention, 2014). Ahrabi-Fard, McCumber and Dolgerier (2013) argued that to design the right type of activity with correct type, duration, intensity and frequency for an expected outcome, professionals need a detailed awareness of individual abilities and condition to help his/her life specific situation with positive results. According to Dobbins, Husson, Decorby and LaRocca (2013), the type, intensity, frequency and duration of LTPA contribute to overall physical health status and suggested that a threshold must be maintained in order to produce health effects. The result of this study will assist policy makers, sports administrators, coaches, parents and other stakeholders to give the necessary supports that will help improve LTPA among the students and consequently enable them to enjoy the benefits of regular participation in LTPA.

Evidence available showed that LTPA has continued to be on the decline among university students in Nigeria (Awotidebe et. al. 2014). The advents of attractive sedentary leisure activities seem to have turned the hearts of our hitherto active university students away from physical activities. It appears they are more involved in inactive activities, such as motorised activities, video games, internet surfing activities, at the expense of physical activities that are more beneficial to healthful living.

Scary figures on health indicators for Nigeria especially as it relates to Non-Communicable Diseases (NCDs), at every stratum of the population, particularly the adolescent, the age group most university students belong, abound in literature (Adegoke 2013; Awotidebe, et. al., 2014; Adegboyega, 2015). This study focused on university, students because prevalence of overweight (13.8%) and obesity (9.4%) amongst them was attributed to insufficient LTPA (Oyeyemi, Ishaku, Deforche, Oyeyemi, Bourdeaudhuiji & Van Dyck, 2014). According to Mogre, Nyaba, Aleyira and Sam (2015), overweight and obesity are the leading causes of non-communicable diseases, such as cardiovascular disease, type 2 diabetes mellitus, some types of cancers and metabolic syndrome.

The health status of university students should be of great concern to the government at various administrative levels in Nigeria, because physical fitness at this period tends to track health fitness to adulthood (Chen, Mason, Zalmont & Hammond-Bennett, 2013). As reflected in the 2011 United Nations (UN) Declaration on NCDs, national leaders worldwide recognised that, if left unchecked, NCDs would place enormous strain on the health systems and economies of many nations. It is apparent today that State Governments in South-West, Nigeria have relatively limited resources to devote to healthcare of people with NCDs, now that the national economy is sliding due to drop in the international price of crude oil (Ajani, 2011). Therefore, it is important that universally accepted health behavior, such as LTPA, is encouraged among university students because of its cost-effectiveness in prevention and cure of chronic diseases and conditions.

It is now widely accepted that health and wealth are connected and that favourable population health status will boost economic and social development (Report of the Obesity Working Group, 2013). Unfortunately, it is not certain if the university students who constitute significant portion of Nigerian population participate in LTPA and, if they do, the pattern of engagement and the determinants of their participation are yet to be ascertained for effective programme planning and implementation. Previous related studies were focused on participation of university students in organized sports as a way of expending energy for gaining favourable health outcomes (Akindutire & Oyeniyi, 2012; Awosika & Olusola, 2014). However, there are varieties of ways university students can achieve this outside participation in organized sports. The activities that have been largely neglected in previous researches are

lifestyle and commuting activities. This study intends to look comprehensively into the intensity, duration, frequency and types of activities engaged in by university students during their discretionary time and identify those factors influencing their participation in these activities. The scope of this study was limited to South-West Nigeria, because of their relatively similar geographical, cultural and social identities.

Methodology

The descriptive survey research design was used for this study. The population was all 219,662 students of the 14 public - owned universities (State: N = 8; Federal: N = 6) in the six (6) states of Southwest Geo-political zone of Nigeria. The sampling was in multi-stage, comprising of four stages. In stage one, proportionate and random sampling techniques were used to select 50% of the universities (State: N = 4; Federal: N = 3). In stage two, random sampling technique was used to select 50 % of the faculties, schools or colleges from each of the selected Universities. In stage three, proportionate and random sampling techniques were used to select 50 % of departments in each of the faculties, schools or colleges. Finally, in stage four, purposive and proportionate sampling techniques were used to select all the penultimate and final year students in each department. The penultimate and final year students were selected, because they were more accustomed to the LTPA culture in their various universities.

The students were arranged in two discrete groups (males and females) according to their listing on their various university registration lists. This process was adopted to move from general to specific and from wide to small, but representative, constituent. The total number of wider population in each of the discrete groups being represented were divided by the size required to arrive at the frequency interval that used in picking 10% respondents from each university selected for the study. The sampled female university students' population in final and penultimate classes was 15,114 with 10%, totalling 1,511, while their male counterparts were 13, 355 with 10%, totalling 1,356. The total for both female and male was 2,876, but an actual sample of 2,730 validly completed this study. Their age range included 16 - 18years, n = 451 (16.5%); 19 - 21years, n = 1139 (41.7%); 22 – 24years, n = 501 (18.5%); 25years and above, n = 636 (23.3%). The sample size for the study was 2,867 university students. The researcher self-constructed instrument, tagged 'Leisure Activity Questionnaire (LAQ),' was used for data collection. The instrument was subjected to a pilot test during which it was administered twice within two weeks' interval, using the "test-retest method". Fifty university students from Joseph Ayo Babalola University, Ikeji, Arakeji, Osun State were selected randomly to fill out the questionnaire. Two weeks later, the same fifty randomly selected students were made to fill out the same questionnaire. The result showed that Cronbach's Alpha analysis revealed a reliability coefficient of 0.87. To obtain data for this study, the researchers obtained ethical approval from the University of Ilorin Ethical Review Committee. After enlightenment about the purpose, procedures and benefits of the study, all respondents filled out and signed the informed consent form. The IBM SPSS application software was used for statistical analyses of data. Descriptive statistics of frequency, mean and standard deviation were used for analysis of demographic and LTPA of the participants. Inferential statistics of t-test was used to analyse the influence of gender of LTPA with alpha level of 0.05. (Table 1)

Table 1: Descriptive Statistics Showing Quantity of Leisure-Time Physical Activity Among University Students in South-West, Nigeria

N/S	Quantity of LTPA	SA	A	D	SD
1.	a). **Lifestyle activities**				
	i. Walking	1175(43.0%)	605(22.2%)	712(26.1%)	238(8.7%)
	ii. Climbing Stairs	422(15.4%)	1211(44.4%)	895(32.8%)	202(7.4%)
	iii. Mowing and raking yard	321(11.7%)	877(32.1%)	1150(42.1%)	450(16.5%)
	iv. Household Chores	689(25.2%)	1306(47.8%)	498(18.2%)	237(8.7%)

	b). **Aerobic activities**				
	i. Jumping rope	586(21.4%)	841(30.8%)	915(33.5%)	388(14.2%)
	ii. Swimming	861(31.5%)	851(31.1%)	684(25.1%)	334(12.3%)
	iii. Biking	404(14.7%)	902(32.0%)	977(35.8%)	447(16.4%)
	c). **Strength and Endurance activities**				
	i. Jogging and running	947(34.7%)	1075(39.3%)	549(20.1%)	159(5.8%)
	ii. Racket games and ball games etc.	742(27.2%)	962(35.2%)	783(28.7%)	243(8.9%)
	iii. Lifting weights of different sizes	647(23.7%)	1073(39.3%)	628(23.0%)	382(14.0%)
	iv. Aerobic dances	580(21.2%)	718(26.3%)	1072(39.2%)	360(13.2%)
	d). **Sedentary activities**				
	i. Reading novels	768(28.1%)	1173(42.9%)	550(20.1%)	237(8.7%)
	ii. Playing Computer games	948(34.7%)	819(30.0%)	796(29.1%)	167(6.1%)
	iii. Internet-based activities	773(28.3%)	1007(36.9%)	589(21.6%)	361(13.2%)
	iv. Watching TV	790(29.1%)	1176(42.9%)	601(22%)	163(6%)
	v. Singing	968(35.4%)	828(30.3%)	664(24.3%)	270(9.9%)
2	**Intensity of activities**				
	i. Sedentary	649(23.8%)	788(28.8%)	881(32.3%)	412(151%)
	ii. Low intensity	967(35.4%)	829(30.3%)	661(24.2%)	273(10.0%)
	iii. Moderate intensity	595(21.8%)	1110(40.6%)	841(30.8%)	184(6.7%)
	iv. Vigorous(high)	606(22.2%)	961(35.2%)	876(32.1%)	287(10.5%)
3	**Duration of activities**				
	i. Less than 10 minutes	720(26.4%)	867(31.7%)	808(29.6%)	335(12.3%)
	ii. 10-20 minutes	643(23.5%)	640(23.4%)	1197(43.8%)	250(9.2%)
	iii. Above 30 minutes	847(31.0%)	810(29.6%)	739(27.1%)	334(12.2%)
4	**Frequency of activities**				
	i. Once a week on regular basis	860(31.5%)	703(25.7%)	887(32.5%)	280(10.2%)
	ii. Twice a week on regular basis	782(28.6%)	931(34.1%)	857(31.3%)	160(5.9%)
	iii. Thrice a week on regular basis	611(22.4%)	779(28.5%)	1072(39.3%)	268(9.8%)
	iv. At least five times a week on regular basis	673(24.6%)	648(23.7%)	1199(43.9%)	210(7.7%)

The results presented in Table 1 indicates that respondents were more involved in sedentary activities such as reading novel, playing computer game, engaging in internet-based activities, watching TV, singing, and listening to music, with average percentage of (67.7%). This was followed by lifestyle activities (63.5%), another category of respondents who participated in strength and endurance activities, such as jogging, running, playing racket games, ball games (61.7%), lifting of weight of different sizes, aerobic dances etc. recorded (53.8%). Again, data describing the intensity of LTPA among respondents indicated that 52.6%% and 65.7% respectively were involved in sedentary and low intensity activity. The results showed that 62.4% of respondents engaged in moderate LTPA and another 57.4% of respondents were involved in vigorous LTPA. The average percentage of moderate to vigorous activity was 59.9%. Table 1 further indicated that 60.6% of respondents were engaged in more than 30 minutes of LTPA daily, but only 48.3% of the population participated in LTPA for 30 minutes daily for 5 days a week on regular basis.

Table 2: Independent Samples t-test Showing Summary of Gender Influence on the Quantity of Leisure-Time Physical Activity among University Students in South-West, Nigeria

	t-test for Equality of Means				
	T	**df**	**Sig.(2-tailed)**	**Mean Difference**	**Std. Error Difference**
Gender Differences Equal Variance Assumed	3.039	2728	.002**	1.264	.416

Key:*Not Significant,**Significant p<0.05, there is significant difference

The data in Table 2 indicated that p-value for gender related differences in LTPA is .002, which is less than 0.05.

Therefore, one can conclude that there is significant gender related difference in the leisure-time physical activity among university students in the South-West Geo-political zone of Nigeria.

Table 3: Mean Scores Showing Gender Influence on Patterns of Leisure-Time Physical Activity among University Students in South-west, Nigeria

		N	Mean		Std. Deviation
Pattern of Participation	**Gender**	**Statistic**	**Statistic**	**Std. Error**	**Statistic**
Lifestyle Activities	Male	1290	11.01	.068	2.425
	Female	1440	10.32	.056	2.116
Aerobic Activities	Male	1290	7.65	.062	2.231
	Female	1440	7.98	.053	1.995
Strength and Endurance Activities	Male	1290	10.98	.075	2.683
	Female	1440	10.75	.060	2.280
Sedentary Activities	Male	1290	14.67	.091	3.298
	Female	1440	13.94	.079	2.984

Table 3 showed that the mean score for the male students (11.01) that were engaging in lifestyle activities (walking, climbing, mowing yard and household chores was higher than that of female students (10.32). However, Table 3 indicated that female students (7.98) participated in aerobic activities (jumping ropes, swimming, biking etc.) more than the male students (7.65). Table 3 further revealed that male students (10.98) were involved in strength and endurance activities (jogging and running, playing sports, lifting of weights of various sizes) than their female (10.75) counterparts. The data in Table 4 demonstrated that male students (14.67) participated in sedentary activities (playing computer games, internet-based activities, washing of T.V. and singing etc.) more than the female students (13.94).

Discussion

The results of the study revealed that university students participated more in sedentary activities, such as reading novel, playing computer games, internet-based activities, watching TV, singing and listening to music etc. more than engaging in active lifestyle activities, strength and endurance activities and aerobic activities. In line with this position, Singh and Misra (2015) researched into the pattern of leisure lifestyles among students and discovered that there was a significant prevalence of screen-time activities among students, reflecting a large engagement in sedentary activities than physically demanding leisure activities.

Further scrutiny of the results of the present study indicated that 48.3% respondents were able to accumulate, on average, 30 minutes at moderate intensity daily for 5 days on regular basis. It thus meant that less than half of the university students in the South-West Nigeria met the International Physical Activity Guidelines, which require individuals to participate in 30 minutes of LTPA daily, at least 5 days a week, on regular basis. The results of this study are in tandem with Judge, Bella, Lee, Petersen, Wanless, Surber, Ferkel and Simon's (2012), which reported that about 60% of university students do not, on average, accumulated five days a week for 30 minutes at moderate intensity in other to achieve maximum health benefits. Likewise, Wattanapisit, Fungthongcharoen, Saengow and Vijitpongjinda (2016) found that more than half of students in tertiary institutions have insufficient urban LTPA, because of study related activities. In his systematic review on the prevalence of university students' participation in urban LTPA of 19 studies from 27 countries, Irwin earlier in (2007) concluded that more than half of university students were not active enough to gain health benefits of LTPA. The frequency of participation in LTPA has been discovered to lead to positive health outcomes. Hoffman (2013) added that, when all factors are equal, increasing the frequency of engagement with critical components of activity usually results in the largest improvement in that activity. Kozechian, Heidlary and Saiah (2012) found significant positive effects of frequency of participation on students' satisfaction with life as a whole and satisfaction with university experience. A number of evidence-based studies indicated that individuals who engage in LTPA at an adequate level are found to be healthier than people that failed to meet the required guidelines for physical activity (Khalaf, Ekblon, Kowalski, Berggen, Westergren & Alhazzaa, 2013). The import of this study is that university students participated in lifestyle activities, aerobic activities, strength and

endurance activities. Truly, individuals can engage in these activities to accumulate the required volume or quality of physical activity that will meet the recommended physical activity guidelines. But, unfortunately, the frequency of participation in these activities among university students in South-West Nigeria was below the recommended quantity to enable them to attain the health benefits of LTPA.

The low level of participation of university students in LTPA may be caused by factors, such as lack of LTPA professionals in Nigerian universities (Adesoye, Ajibua & Ibraheem, 2014), presence of physical environments that are not supportive of LTPA (Jeroh, 2002, Fasan, 2004), inadequate support from significant individuals from within and outside the university community to encourage participation in LTPA among students (Ikhioya & Sosanya, 2002), lack of policy to drive LTPA in academic institutions in Nigeria (Ojeme, 2002), shallowness of Physical Education curriculum in primary and secondary schools (Alla & Olorunisola (2008) and negative attitudes toward LTPA Nigerian universities (Ojeme, Iyawe & Oshodin, 2002).

This results in Table 3 is in tandem with earlier findings of Mota, Santos and Ribeiro (2008), and Bedeli and Moostafazian (2014), who revealed that gender has influence on LTPA engagement. The study conducted by Baranowski (2006) is very relevant in summing up gender-related differences that exist among university students in Nigeria. Baranowski expressed that small differences in self-efficacy, intention, attitudes, social norms, social supports and other constructs as seen between male and female students, as revealed in this study, may have a drastic impact on their levels of motivation to or not to participate in LTPA. Alluding to this, Telford, Telford, Olive, Coachrane and Darey (2015) found that females have less favourable individual attributes associated with LTPA. So, understanding the factors underlying gender differences in LTPA among university students has potential to guide interventions and programme planning strategies to achieve gender equality in LTPA engagement. In these studies, males were significantly more active than females.

Conclusion

The results of the study indicated that university students engaged in diverse LTPA. Though the intensity, duration of LTPA of students were above average, yet the frequency of their engagement in those activities does not meet the international guidelines for physical activity, and this will have negative impacts on the health and wellbeing of the students. The results agreed with previous study that less than half of university students in Nigeria are engaging in LTPA to gain its health benefits. This has serious economic implications for Nigeria in future, since these students will form the fulcrum for national work force in future. It is a known fact that health is wealth. The productive capacity of any nation is determined by the physical, social, physiological and mental wellbeing of her citizenry. In another word, healthy people are vital to national economy. The decrease in the level of LTPA among university students portends great danger for the future of the country. There is the need for interventions in Nigerian universities to forestall the calamity that is waiting to happen.

Recommendations

1. Federal, State, local and institutional policies that will encourage urban LTPA among university students should be promulgated and enforced. National University Commission (NUC) should enforce compliance of universities with the policy of Wednesday lecture free for sports and also ensure that the management of various universities organize their academic programmes in a way that will not interrupt LTPA of their students.

2. Students should be sensitized on the benefits of recreation to the social, physical and emotional components of their lives thus, encouraging and stimulating them to participate willingly in leisure time physical activities

3. University authority should provide facilities and equipment for variety of leisure-time physical activities that will meet the needs and aspirations of students living in the town.

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Does Distance and Personal Circumstances of Trip Makers Matter to Mode Choice? Evidence from Urban Ghana

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Abstract: The paper presents empirical results from an August 2014 cross-sectional survey of short distance trip makers, who reside in various communities in Kasoa in the Central Region as well as Teshie, and Madina in the Greater Accra Region of Ghana. Specifically, the paper examines what urban trip makers in Ghana consider as an acceptable distance for choosing active transport modes. The paper further examines mode choice determining factors. The primary data were subjected to rigorous statistical and geo-spatial/ proximity analyses in ArcGIS. The analyses show evidence of a high use of active transport modes within a walkable distance of 1000 metre radius between trip origins and trip destinations. Also, trip distance and educational status strongly predicted mode choice, although gender and age were also considered as important variables in mode choice. Policy actors must, therefore, focus attention on encouraging pedestrianisation through the provision of secure and unobstructed walkways.

Key words: Mode choice, active transport, walkable distance, Greater Accra Metropolitan Area, Ghana

Introduction

In densely populated areas of the world where people live near centres of activities, trip makers are known to make greater use of active transport modes, such as walking and cycling as opposed to cars (UN-Habitat, 2011; Handy, Cao & Mokhtarian, 2006; Van Wee, 2002; Boarnet & Crane, 2001). Active transport has been associated with positive benefits, particularly for air quality and climate mitigation (Cirilli & Veneri 2014; Cervero, 2013; Naess, 2012; Zegras, 2012). Thus, various studies have highlighted the need to properly coordinate land use and transport planning so as to reduce car dependency, and rather promote active transport modes (Abane, 2011; Zhao, 2010). A proper coordination of land use and transport systems may be exhibited in, for instance, siting basic necessities, such as schools, health centres and markets, near trip makers. This will reduce trip distances and will greatly minimise the time and efforts expended on active transport.

Within the developing world context, walking, as an active transport, is performed largely by the very poor who are unable to afford motorised modes of transport. These 'captive walkers' (Cervero, 2013) are estimated to constitute a third of all trip makers in Africa, for instance (International Association of Public Transport, 2011). A recent World Bank (2015) study confirmed that Ghana, indeed, has a lot of trip makers who walk. This notwithstanding, a review of Ghana's National Transport Policy indicates a lack of clear policies and strategies to promote a safer environment for users of active transport modes. This has led some commentators to argue that, "in developing transport systems, technologists and economists often give priority to fast transport modes and adopt indicators of expected benefits without taking into account the real system effects on society and urban structures" (Oteng-Ababio & Agyemang, 2015, p.28). Generally, it has been observed that city planners are often ignorant about the distance necessary for the development of infrastructure for active transport, and even if the distance is known, its planning implications (Rahul & Verma, 2014). Such ignorance has the tendency to make city authorities insensitive to changes taking place within the urban milieu (Priemus et al., 2001).

Against this backdrop, the author is of the view that, in a business-as-usual scenario, Ghana may not fully attain the Sustainable Development Goal 11 to create "cities of opportunities for all, with access to...transportation" (UN, 2017). Among other challenges, the lack of clear policy guidelines on active transport may exacerbate the lack of access to opportunities by a majority of urban dwellers, who are trapped in a maze of 'transport poverty' (UN-Habitat, 2011), making them poorer and socially excluded. In a recent China-Africa Urban Development

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Forum, this point was highlighted in a keynote address by the sector minister responsible for the Zongo and Inner City Development. He then threw a challenge to participants in the forum to come up with policy recommendations to promote social inclusion. The policy relevance of this present paper, therefore, is seen in its direct response to the minister's challenge by focusing attention on active transport, which, albeit used by many poor urban residents, has received less policy attention.

A survey of literature suggests that studies on active transport have engaged the attention of scholars, particularly in North America and Europe (see e.g. Millward, Spinney & Scott, 2012; Gilmour, 2007; Pucher & Dijkstra, 2003; Rafferty et al., 2002). In other parts of the world, the literature on active transport is burgeoning (e.g. Rahul & Verma, 2014; Matous, Todo & Mojo, 2013; Azmia, Karim & Amin, 2012; Arasan et al., 1994). In Ghana, however, less attention has been placed on active transport to the extent that almost all studies conducted on mode choice have focused on motorized transport (for e.g. see Agyemang, 2017; Amoh-Gyimah & Aidoo, 2013; Abane, 2011; 1993). This then presents a gap in the existing body of literature, which this present paper attempts to fill.

In particular, the paper examines, first, what urban trip makers in Ghana consider as an acceptable distance for choosing active transport modes. Following after Rahul and Verma (2014) as well as Arasan et al. (1994), the 'acceptable distance' is defined as the maximum trip length of slow modes after which a person chooses a fast mode of travel. Secondly, mode choice factors for intra-community trips are explored. The paper is organized as follows. Following a general introduction, highlighting the policy and theoretical gaps, the next section reviews relevant literature on determinants of choice of active transport. Afterwards, background information about the study area, as well as data and methods adopted, including the sampling framework, are discussed.

Then the findings made are presented and discussed in the light of existing studies. The paper, finally, wraps up with concluding remarks and policy recommendations.

Literature Review

Travel distance characteristics associated with active transport appear to vary across cities. For instance, Scheiner (2009) regressed travel mode choice in Germany and found that walking was usually great at distances below one kilometre. Millward, Spinney, and Scott (2013) found that, in Halifax, Canada, the 'walkability' of neighbourhoods is within a one-kilometre radius around respondents' homes. In Calgary, Alberta in Canada, Seneviratne (1985) found that most trip makers were likely to walk an average critical distance of 1.1 Km. In the Indian city of Bangalore, Rahul and Verma (2014) found that at an approximately 1.4 km radius trip makers were most likely to go on foot. Azmia, Karim, and Amin (2012) found that male teenagers and adults in Malaysia, for instance, achieved the highest average walking distance of 407 meters, while the lowest average walking distance is female elderly with the distance of 355 meters. Again, in India, Arasan et al. (1994) found that pedestrians were more likely to walk or bike within an average critical trip time of 20 min and 24 min, respectively. According to Matous, Todo and Mojo (2013), travel activities and social networks of respondents in the Tiyo District of Ethiopia are geographically bound to about 15 minutes walkable distance within their immediate neighbourhoods. These varying and inconsistent findings have led Rahul and Verma (2014, p.112) to caution against the universalisation of the acceptable walking distance, arguing that "the acceptable distance for walking and cycling found for one city cannot be applied directly to any other city".

In addition to geographical factors, there are a number of demographic and socio-economic determinants of mode choice with respect to active transport. These socio-economic and demographic factors include age, gender, education, occupation and income levels of trip makers. While Azmia and Amin (2012) reported regular walking among teenagers/adults due to their physical ability and stamina, compared with older trip makers in Malaysia, (Schwanen et al., 2004), older people in the Netherlands actually walk quite often. With regard to gender roles, studies (van Acker et al., 2007; Schwanen et al., 2004; Simma & Axhausen, 2000) have found that found that women, generally, walked and biked more often than men. In the US, a study found highly educated and high-income trip makers regularly walk to nearby neighbourhood station (Loutzenheiser, 1997). However, while this may be true in some Western societies, such as the Netherlands and Austria, where Schwanen et al. (2004) and Simma and Axhausen (2000) conducted their studies, their conclusions may not be valid for other societies. Given safety and cultural concerns, women are less likely to bike in certain societies, where dedicated infrastructure

for biking is either unavailable or is culturally unacceptable for them to do so. For instance, studies have found that when safer environment is assured, including more street lighting and land use mix, the threat of violent attacks is minimised, thus encouraging more women and even the elderly to engage in active transport (Meleis, 2011; Li, 2003). Wang, Akar, and Guldmann (2015) report that personal perceptions, including safety, commute costs and environmental consciousness, greatly explained the choice of respondents who bike consistently.

The body of literature has demonstrated the role of geographical and non-geographical factors, which influence active transport. The gap that remains to be filled is the extent to which these factors are relevant from a sub-Sahara African country context in view of the differences in spatial, cultural and environmental issues observed.

Methodology

This paper is based on primary data generated in August 2014 through a cross-sectional survey of short distance trip makers who reside in various communities in Kasoa, Teshie, and Madina (Figure 1). Kasoa (Longitude 5.5337202 N, Latitude 0.4729278 W), is a sub-urban settlement found in the Awutu Senya East municipality of the Central region of Ghana. Kasoa is home to an estimated 69, 384 inhabitants (GSS, 2012). The Kasoa Old Market is an important commercial centre, where a majority of inhabitants here visit regularly. The Madina township (longitude 5.6728928, Latitude 0.1824012) is the headquarters of the La Nkwantanang Madina Municipality and home to 111,926 inhabitants (GSS, 2012). A major commercial centre in this town is the Madina Market, where a majority of residents visit. The Teshie township (Longitude 5°35′N, Latitude 0°06′W) is a major town in the Ledzokuku Krowor Municipality. Together with Nungua, this municipality is made up of 227,932 inhabitants (GSS, 2012). A majority of these residents frequent a major local market called the Lascala Market to shop on a regular basis.

Sampling Framework

Earlier studies (Behrens et al., 2006; van der Reis & Lombard, 2003; Godard, 2000) have found that the determination of an appropriate and adequately representative sample size for surveys conducted in developing countries, where resources are relatively scarce is a huge challenge. While large sample sizes may be considered ideal (Twumasi, 2001; Kitchin & Tate, 2000), the incidence of non-sampling errors may be inevitable (Yansaneh, 2005). The population in the study areas is in excess of 100,000. Generally, for a population of that size, a sample of 400, with a ± 5% error margin, a confidence level of 95 % and a 0.5 maximum variability, is considered ideal (Yamane, 1967; Israel, 1992).

A stratified multistage cluster random sampling design was employed to select respondents for the household surveys. The application of the multi-stage sampling technique is justified due to the virtual non-existence of a proper residential address system and/or fixed telephones in some parts of Accra (Yansaneh, 2005). Low levels of education, especially in the high-density low-income areas, have also necessitated the adoption of this sampling technique (Behrens et al., 2006). The multistage sampling design was implemented in two stages. In stage 1, a stratified sampling of residential units into clusters was performed, following a reconnaissance survey of the three localities. Stratification assumes that the population within a particular class will exhibit similar socio-economic characteristics. Thus, based primarily on dominant housing characteristics, which served as the proxy for various socio-economic classes, twelve study sites or localities were identified. The next stage of sampling involved the allocation of sub-samples to each of the selected localities (Table 1). Households in these areas represented the primary sampling unit.

The primary data was generated through structured questionnaires. Respondents were required to answer questions designed around two key thematic areas. These are trip behaviour as well as personal characteristics of survey respondents. Concerning the trip behaviour characteristics, the respondents were asked to show their main transport mode (i.e. the transport mode that covered the longest distance of their journeys) to the main community market, the frequency of use of these modes, and mode-specific attributes, which influence their choice of modes.

Finally, demographic and socio-economic characteristics of respondents, such as gender, age, educational attainment, and income, were elicited through the questionnaires. The generated data were analysed, using SPSS 18 software. The analyses include cross-tabulations to show variations in mode choice by gender, age, education status, and trip distances. The Pearson's chi-square was used to test the statistical significance between mode choice and these

independent variables. The Odds Ratio was calculated, using the Forced Entry Method in logistic regression analysis. This allows all the predictor variables to be tested simultaneously while controlling for multi-collinearity. During the household surveys, the precise locations of houses where respondents were interviewed and the local community markets were picked, using the hand-held global positioning systems (GPS) devices. With the use of the buffer geoprocessing application in ArcGIS 10.4 extension, proximity analyses were performed with distance intervals of 1000 metres from the trip destinations, i.e. community markets. This analysis was performed to identify variations in mode choice with increasing distance away from the markets.

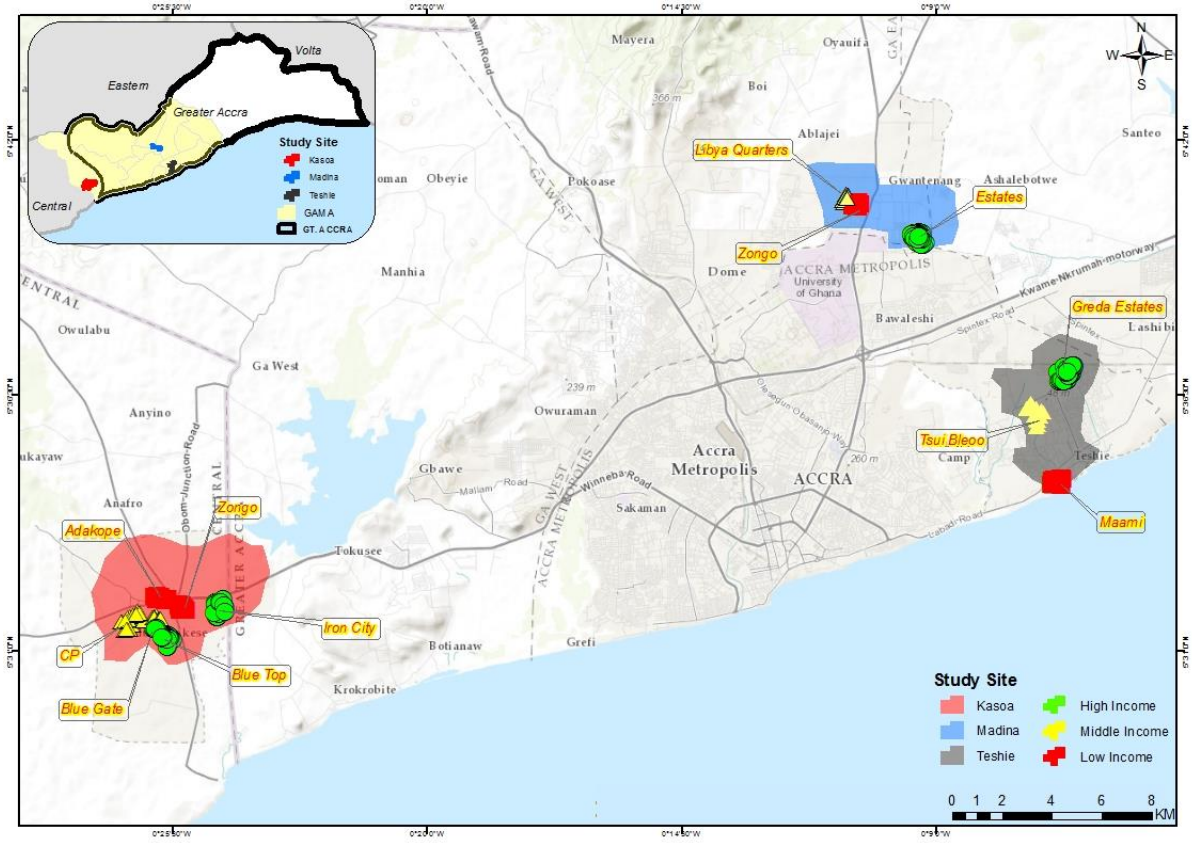

Figure 1: A map of the study area **Source**: Author's construct, 2014

Table 1: Sampling framework for household survey on short distance trips

Income Clusters	Kasoa		Madina		Teshie	
	Study site	Sub-sample	Study site	Sub-sample	Study site	Sub-sample
Low	Zongo	25	Zongo	36	Maami	47
	Adakope	25				
Middle	CP	50	Libya Quarters/UN	36	Tsui-Bleoo	47
High	Iron City	20	Madina Estates	36	GREDA Estates	47
	Blue Gate	15				
	Blue Top	16				
Total		**151**		**108**		**141**

Source: Fieldwork, 2014

Results

Data Characteristics

A total of 363 valid responses, representing 90.8% of the total sample, was obtained and used in the analyses. As seen in Table 2, while males dominated the Kasoa sample, more females were found in Madina and Teshie. In terms of age, respondents between the ages of 20-45 were in the majority with those under 20 years being in the minority in all three study locations. Generally, the majority of respondents had obtained low levels of education. These are people who have obtained at most senior high school education and below. This category of respondents is followed up by others who have attained high education at the university and polytechnic levels. With respect to distance away from the local community markets, most respondents are found to reside within a 2000- metre radius in both Kasoa and Madina. Interestingly, the data did not show residential location beyond 4000 metres in these two communities. This indicates that the majority of residents stay much closer to the trip destination. However, in Teshie, the majority of respondents are found so close to the community market, within a radius of 1000 metres. While some respondents were found to live about 4000 and 5000 metres respectively away from the main community market, they still made regular visits to Lascala Market for their shopping needs. Walking was found to be a major source of mobility for surveyed respondents.

Besides active transport modes, motorised transport modes remain popular in the surveyed communities. Taxis were mostly used in Madina, where, strangely, none of the respondents indicated their use of trotros, which are quite commonly used in the two other communities. The use of motor and pedal cycles was comparatively low both in Kasoa and Madina. In the Teshie sample, none of the surveyed trip makers indicated their use of motor and pedal cycles.

Table 2: Overview of respondents and their trip characteristics (%)

Variable	Elements	Kasoa (n=146)	Madina (n=104)	Teshie (n=113)
Gender	Male	53.4	47.1	46.0
	Female	46.6	52.9	54.0
Age	Less than 20 years	3.4	0.0	0.9
	20-45 years	72.6	80	61.9
	45-60 years	18.5	14.4	30.1
	Above 60 years	5.5	5.6	7.1
Education	No formal	6.2	13.5	7.1
	Low	61.6	46.2	69.9
	High	32.2	40.4	23
Trip distances	1000 metres	33.6	26	37.2
	2000 metres	60.3	50	5.3
	3000 metres	6.1	24	25.7
	4000 metres	0.0	0.0	16.8
	5000 metres	0.0	0.0	15
Modal Share	Walking	32.2	31.7	31.9
	Bicycle	1.4	1.9	0.0
	Motorcycle	2.7	2.9	0.0
	Trotro	26.7	0.0	38
	Taxi	19.9	34.6	6.2
	Private car	17.1	28.8	23.9

Source: Fieldwork, 2014

The role of trip distance on mode choice

A Chi-square test shows a statistically significant relationship between distance (P<001) and mode choice in all three communities surveyed. This implies that distance significantly explains the type of mode choice used by trip makers when they make their shopping-related trips. As seen in Table 3, within a 1000- metre radius from the homes of trip makers, an overwhelming majority of respondents–as high as 72 %- principally walk, or to a lesser degree, bike. When trip distance increases to 2000 metres, there is -64.7% decrease in the use of active transport modes among trip makers surveyed. A further increase in trip distance shows a consistent decrease in the use of active transport modes to the extent that at 5000-metre radius, none of the respondents reported walking as a mode of transport. On the other hand, when the distance increases from 1000 to 2000 metres, the data show a 251.5% percent increase in the use of motorized transport modes. With increasing distance, there is a consistent high use of motorized modes of transport and that by 5000 metres, all respondents had completely switched to one form of car use or the other.

Table 3: Mode type by trip distance to community market (%)

Distance (in metres)	Non-Motorised	Motorised	Total sample size (n)
1000	72.0	28.0	118
2000	20.5	79.5	146
3000	7.9	92.1	63
4000	5.3	94.7	19
5000	0.0	100	17

Source: Fieldwork, 2014

Table 4: Logistic regression analysis of variables associated with mode choice in Accra

							95% C.I. for Odds ratio	
	B	**S.E.**	**Wald**	**df**	**P**	**Odds ratio**	**Lower**	**Upper**
Gender	0.066	0.298	0.049	1.000	0.824	1.068	0.595	1.918
Female						1.000		
Education								
High	-0.968	0.480	4.067	1.000	0.044	0.380	0.148	0.973
Low	-1.686	0.563	8.978	1.000	0.003	0.185	0.061	0.558
No formal						1.000		
Age								
<20						1.000		
20-45	-1.599	1.330	1.445	1.000	0.229	0.202	0.015	2.740
45-60	-0.406	0.573	0.502	1.000	0.479	0.667	0.217	2.048
>60	-0.851	0.642	1.758	1.000	0.185	0.427	0.121	1.502
Distance								
Far	-2.490	0.290	73.743	1.000	0.000	0.083	0.047	0.146
Near						1.000		
Constant	2.327	0.676	11.847	1.000	0.001	10.243		

Note: the reference categories for the various categorical independent variables have been italicised in the model

Source: Fieldwork, 2014

Table 4 presents results from a Logistic regression analysis. When all the predictor variables are modelled together, again, trip distance (P<001) was found to be a significant predictor of mode choice. Trip makers who lived from between 2000 and 5000 metres respectively, categorized as “far”, were 12 times less likely to walk or

bike when they commute to the market. Also, education (P<005) significantly predicted mode choice. Trip makers with low levels of education are 2.6 times less likely to walk compared to those with no formal education at all. Also, highly educated trip makers had decreased odds of walking by 5 times compared with their counterparts who have received no formal education.

Though gender was not found to be a significant predictor of mode choice, males are slightly more likely to use non-motorised modes than female trip makers. In addition, there was no statistically significant relationship identified between the age of trip makers and their mode choices, it does seem that as trip makers grow older, the tendency to walk decreases. For instance, compared to very youthful trip makers (below 20 years), trip makers who are aged between 20-45, 45-60 and those above 60 years had decreased odds for walking by a factor of 5.0, 1.5 and 2.3 respectively.

Discussion

The purpose of this paper was two-fold. First, it sought to examine what urban trip makers in Ghana consider as an acceptable distance for choosing active transport modes. Second, mode choice factors for intra-community trips are also examined. With respect to objective one, the study found that a majority of trip makers surveyed significantly switch to motorized transport modes beyond a 1000- metre radius from their trip destinations. One can, therefore, conclude that the 'walkability distance' in Accra, Ghana, is 1000 metres, consistent with earlier international studies, including those carried out in Germany (Scheiner, 2009); Canada (Millward et al.,2013; Seneviratne, 1985), India (Rahul & Verma, 2014) and in Malaysia (Azmia et al., 2012). The role of distance in influencing choice has been highlighted in earlier studies (Cobbinah & Amoako, 2014; Cervero, 2013). A major implication of this finding is that walking was a dominant source of mobility for surveyed respondents. This is not particularly surprising, since commute distances are relatively shorter. This is consistent with findings of earlier studies conducted in American and Western European cities (Naess, 2012, van Wee, 2002) as well as in some cities in developing countries, including Santiago, Taipei and Hong Kong (Cervero, 2013; Zegras, 2012). These studies have consistently demonstrated that the siting of facilities nearer to commuters promote usage of active transport modes.

The study surprisingly found that the use of motor and pedal cycles in both Kasoa and Madina, particularly in the Zongo neighbourhoods where the majority of residents are Ghanaians of Northern descent was remarkably low. This is because while cycling is generally unpopular in the southern parts of Ghana, it is a very popular active transport mode in Northern Ghana. This surprising finding contradicts an earlier study (Grieco, Turner and Kwakye, 1994) that sampled GAMA residents in Nima, the majority of whom had migrated southwards from Northern Ghana, which concluded that cycling was not only high but was also seen as a culturally acceptable means of transport. The low use of bicycles, in particular, may be accounted for by the fact that in Northern Ghana, motorised transport modes are relatively few than in Southern Ghana. Thus, fatalities and injuries arising from collisions between cycle riders and fast-moving cars are much lower. However, in the highly urbanised southern parts of Ghana, the high use of motorised transport modes makes cycling very risky. Again, the infrastructure and appropriate legislation for non-motorised transport mode operations in Accra are woefully inadequate.

In addition, it was found that even for such relatively shorter trip distances, motorised transport modes still remain popular in the surveyed communities. This may partly be explained by the lack of infrastructure and the general enabling environment to consume active transport among surveyed respondents in Accra. As noted elsewhere, the provision of adequate infrastructure and security promotes active transport use (Meleis, 2011; Li, 2003).

Besides the influence of geographical factors regarding active transport, this study found that personal characteristics of trip makers, notably education, significantly determined the choice or otherwise of active transport. Contrary to Loutzenheiser's (1997) study in the US, this study found that walking or biking was remarkably low for the highly educated and high-income trip makers. This finding may confirm what earlier studies have noted that walking in poor countries, including sub-Sahara Africa, is usually performed by the poor and vulnerable (UN-Habitat, 2011; Cervero, 2013). Thus, with increasing disposable incomes, most people are likely to switch to motorized transport modes.

Though gender was not found to be a significant predictor of mode choice, males are slightly more likely to use non-motorised modes than female trip makers. This finding contradicts an earlier study (Cervero & Golub,

2007), which concluded that walking was basically a female-dominated activity.

In addition, there was no statistically significant relationship identified between the age of trip makers and their mode choices; it does seem that as trip makers grow older, the tendency to walk decreases. This may be explained by increased disposal incomes that make both private and commercial car use affordable and perhaps ageing may be accompanied with reduced vigour and stamina –key ingredients needed for active transport. This finding, however, appears to challenge van Acker et al.'s (2007) study, which found high levels of walking among the aged in Europe, possibly due to the perceived health and environmental benefits, which are attached to active transport.

Conclusion

In a nutshell, the role of geography in determining mode choice is seen from two main aspects –one physical and the other, social. On the physical front, walking and biking, for instance, are common among residential locations such as Zongo and Adakope (in Kasoa); Zongo (in Madina) and Maami (in Teshie), which are found much closer (1000 metres) to the community markets. On the social side, these communities are also among the very low-income neighbourhoods and the majority of residents here are illiterates and semi-literates. On the other hand, car use is high for trip makers who live in the middle and high-income neighbourhoods, such as Iron City, Blue Gate and Blue Top (in Kasoa); Madina Estates (in Madina) and Greda Estates (in Teshie).

Thus, in order to make cities inclusive, safe, resilient, and to address the mobility concerns of the poor and less educated, who usually walk, policy actors must, in the short to medium term, put in policies to prevent encroachment of walkways by brisk commercial activities and also provide adequate lighting and security, especially at night. In the long term, policy makers must provide extra pedestrian walkways with a particular focus on the first 1000 - metre radius from the homes of trip makers to major markets or trip destinations. The study is limited by not including mode choice for work-related trips made over a short distance. Also, data on incomes of respondents were not regressed due to inaccuracies observed in the preliminary analyses. Thus, future studies are encouraged to explore this theme in order to come up with an extensive overview of the patterns of trip behaviour for active transport in Ghana.

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Residents' Perspectives on the Environmental Impacts of Urban Tourism in Cape Coast: Implications for Sustainable Tourism Development

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Abstract: As a corollary to urbanization, cities and towns have become increasingly attractive to tourists, because of the concentration of museums, galleries, shopping centres, theatres, restaurants and other cultural attractions. Though the growth in urban tourism offers a number of socio-economic benefits for residents of host cities and towns, it has also affected the local residents in many ways, including pollution and degradation of the environment. There is, however, increasing concern about the environmental impacts of tourism in urban areas. This study sought to analyse the perceived environmental impacts of urban tourism from the perspective of residents of Cape Coast and examine the implications for sustainable urban tourism development. A cross-sectional household survey of 245 local residents was conducted. Results of the study indicate that though residents perceived urban tourism as having some positive environmental impacts, they were concerned about its negative impacts in terms of crowding, traffic congestion, littering, and waste disposal problems. It is recommended that city authorities and the Ghana Tourism Authority should capitalize on the perceived positive environmental impacts of tourism by using tourism as a tool for the reinforcement of environmental conservation.

Key words: Environmental impacts, urban tourism, sustainable, residents, Cape Coast

Introduction

Cape Coast as an urban destination receives a large volume of tourist traffic. Throughout history, cities and towns have been the focus of tourism activities, providing accommodation, restaurants, entertainment and tourist attractions, such as galleries, shopping centres, and theatres (Aksoz & Bac, 2012). Cities and towns have been described as a magnet of attraction by Taleb Rifai, Secretary of UNWTO. Judd and Fainstein (1999) note that urban visitors are attracted by the cultural, historical and architectural attractions, such as heritage sites. According to Ruetsche (2006), the demand for travel to cities has greatly increased over the last few decades with many people travelling for diverse purposes, including business, leisure, culture, special interests and entertainment. The market for urban tourism is growing rapidly (Law, 2002). As a spin-off of the growing urban tourism market, research on the subject has also heightened. However, Ashworth and Page (2011) are of the view that though scholarly interest in urban tourism has increased in recent years, the scale is limited, given its size and significance.

The UNWTO refers to urban tourism as trips taken by travellers to cities or places of high population density. The duration of these trips is usually short (one to three days), therefore, it can be said that urban tourism is closely linked to the short–breaks market. According to the UN, the world's urban population is expected to grow by 61% by 2030, the volume of people living in cities will rise to 5 billion by 2030 and this will have a considerable impact on urban tourism as a key factor not only in the development of the cities, but also in its economy (United Nations, 2014). Weissmann (2017), in a publication in the Travel Weekly, mentions WTTC report on North America, which indicates that urban destinations account for 20% of total tourism activity and GDP in the U.S., Canada and Mexico.

Like a double-edged sword, the growth in urban tourism offers a number of socio-economic benefits for residents of host cities and towns, but it also affects the local residents in many ways (Law, 2002).

There have been some studies on urban residents' attitudes towards urban tourism (e.g. Andriotis & Vaughan,

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2003; Chen, 2001; Ross, 1992; Snaith & Haley, 1999; Tosun, 2002). The impetus behind the growing amount of literature focused on residents' perceptions of tourism impacts is that an understanding of residents' perceptions of tourism development often helps practitioners and policymakers to adopt appropriate strategies for service delivery and community development (Chen, 2001). This notwithstanding, most of these studies have been conducted in developed countries. However, with growing urbanization in developing countries coupled with the promotion of tourism by governments, it is imperative to conduct similar studies from the developing world perspective.

The impacts of tourism on host communities is generally classified under economic, social and environmental impacts. However, environmental impacts are the more tangible manifestations of tourism impacts. Also, it is inevitable that tourism activity is associated with environmental impacts (Cooper & Wanhill, 2014). This study, therefore, focuses on the environmental impacts of urban tourism in Cape Coast. Cape Coast as an urban destination receives a large volume of tourist traffic, especially during the *Fetu Afahye* festival every year. As the large numbers of tourists descend on the historic city during the festival, they compete with the local residents for the limited infrastructure. Also, during such occasions, environmental problems, including excessive waste generation, loss of biodiversity (Mohammed, 2017; Musora, Mbaiwa, & Bag, 2017) as well as pollution of all forms and magnitudes (Amuquandorh, 2009) are likely to manifest. These negative impacts of urban tourism on an urban area, such as Cape Coast, may have an influence on the perception of residents within whose immediate environment the tourism activities are planned, organized and staged. In this case, residents may embrace tourism as a development strategy or may reject it and develop hostility towards tourists who visit their communities. It is, therefore important to forestall such a situation in order to protect urban tourism from "self-destruction", thereby avoiding the situation of killing the goose that lays the golden eggs. The literature on hosts' attitudes towards tourism indicates that residents' perceptions of the impacts of tourism are important for the sustainable development of tourism in an area (Nunkoo & Ramkissoon, 2010). It is, therefore, imperative to analyse the perceived environmental impacts of urban tourism in Cape Coast and examine the implications for sustainable urban tourism development.

Literature Review

Urban tourism and urban tourism activities

The concept of urban tourism has attracted the attention of academic researchers since the 1980s (Horita, 2017). There has since been a proliferation of various sub-themes under the concept, including destination image, brand and marketing of cities, visitor satisfaction, resident attitudes, as well as planning and development (Henderson, 2017). However, there has been limited research on its environmental impacts and sustainability. Urban areas are recognised as the origins of many tourists and the pivot around which tourist activities revolve (Ashworth & Page, 2011; Ashworth, 2003). Tourism activities, such as festivals, arts and historic events, gastronomic fairs and events, shopping, night-life and sporting activities, usually occur in urban centres (Silk, 2007).

Urban tourism is a type of tourism that focuses on tourism activities and engagements in a multifunctional urban environment. The urban context in which this type of tourism occurs shows that there is a diversity of relationship between the tourist and the city (Ashworth & Page, 2011). It is, therefore, difficult to have a simple, but all-encompassing, definition of the concept of urban tourism other than putting the simple meaning of the words urban and tourism together, as acknowledged by Lapko (2014).

According to Page and Connel (2010), urban leisure and, to a large extent, urban tourism remains a poorly understood phenomenon in the tourism and development nexus. Henderson (2017) is of the opinion that tourists make use of almost all urban features, which means that they do not make exclusive use of only one of the urban features of a city. Visitors from different backgrounds are likely to be attracted to cities due to urban features, such as fast means of communication, formal social life, transport and other social amenities.

Notable urban tourism activities include sightseeing (Silk, 2007), visiting museums and art galleries (Popescu & Corbos, 2010; Shehata & Mostafa, 2017) and other serendipitous activities, such as taking a city tour, shopping, and visiting friends, among other recreational activities. 'Cities have lots of tourist attractions and, therefore tend to attract lots of tourists' (Farahani, Taleshi, & Laleh, 2014, p. 239). According to Lapko (2014), and Hall and Page (2006), the main reasons for visiting the city are numerous,

and they include participating in cultural and sporting events, participating in religious ceremonies, education and participation in business meetings, trade shows and conferences, sightseeing, entertainment and shopping among others.

Environmental impacts of urban tourism

Environmental impact of tourism has gained considerable attention since the 1980s from relevant organisations, like the UNWTO and OECD (Jim, 2000) and many other individual researchers, such as Dokulil (2014), Alipour, Olya, and Forouzan (2017), and Mohammed (2017). However, available literature indicates that tourism has economic impact (Aref, Redzuan, & Gill, 2009; Pratt, 2015), social and cultural impacts (Brandã, Barbieri, & Junior, 2014) in addition to environmental impacts (Alipour, Olya, & Forouzan, 2017; Aref, Redzuan, & Gill, 2009; Dokulil, 2014; Zhong, Deng, Song, & Ding, 2011). Despite the fact that tourism is one of the most important activities in urban destinations that help to conserve the environment, urban areas also face pressure from tourism that result in major negative environmental impacts. The growth of tourism in urban destinations presents various challenges with regard to the protection of the environment, conservation of heritage, preservation of social fabric and cultural values, and maintenance of a desired quality of life for residents (Timur & Getz, 2009). Studies show that the development of urban tourism results in major environmental problems, including loss of biodiversity (Amuquandorh, 2009; Davenport & Davenport, 2006; Mensah & Mensah, 2013; Mohammed, 2017) noise (Musora, Mbaiwa, & Bag, 2017), reduction in the quality of air (Musora, Mbaiwa, & Bag, 2017; Amuquandorh, 2009), traffic congestion (Law, 2002). However, Ashworth and Page (2011) contend that even in world-class premier tourism destinations, only a small portion of the city's physical space, facilities and services and residents are actually significantly affected by tourism.

Sustainable urban tourism development

Sustainability has become one of the most important concepts in tourism planning and development in recent years (Byrd, 2007). The costs and benefits of tourism are now being viewed from the perspective of sustainability. Cities, according to Miller, Merrilees, and Coghlan (2014), are trapped in huge environmental footprints as a result of receiving a great number of tourists, especially within the Central Business Districts (CBDs) on a regular basis of which Cape Coast is no exception. Even though the management of tourism activities in urban settings encourage pro-environmental behaviours (Dolnicar & Matus, 2008), and result in the application of ecotourism principles to urban planning (Higham & Luck, 2002; Weaver, 2005; Wu, Wang, & Ho, 2010), there has been little research on a broader approach, which deals with tourism sustainability concerns (Miller, Merrilees, & Coghlan, 2014). This has helped to draw attention to the need for a balance between economic and environmental interests in tourism (Mihalic, 2016, p. 462).

The rapidly growing concept of urban tourism needs to stand the test of time and, therefore, actions should be taken to develop and sustain urban tourism. To do so, problems that are known to be associated with urban tourism, such as pollution of the air, excessive noise and vibrations, destruction of flora and fauna species, as well as the negative visual impact of tourism in the urban areas, should be controlled. In view of this, studies have proposed sustainable approaches, including urban green tourism (Dodds & Joppe, 2001; Gibson, Dodds, Joppe, & Jamieson, 2003). The rationale behind this is to ensure that both tourists and local residents are responsible for the environment in order to conserve environmental resources for future generations (Leslie, 2012; Mihalic, 2016).

The drive towards sustainable tourism has therefore become very important as results of certain studies by (Byrd, Bosley, & Dronberger, 2009; Látková & Vogt, 2012), revealed that residents who perceive positive tourism impact are more likely to support future tourism development.

Methodology

The study followed a cross-sectional survey design, since the study sought to sample the views of residents in Cape Coast. This involved the collection of data and making inferences about the entire population of Cape Coast at one point in time. Cross-sectional surveys are also referred to as snapshots of the populations about which data is gathered. The descriptive nature of the study also meant that the study did not seek to establish causes and effects, but to describe residents' perceptions of the environmental impacts of urban tourism.

Cape Coast, also referred to as Carbo Corso, was the Capital city of the Gold Coast until 1877. It was one of the first points of contact between Ghanaians and the European colonial masters. It played an instrumental role in the Transatlantic Slave Trade as most of the slaves were held

in the Cape Coast Castle before their journey on the Middle Passage. The study was undertaken in the Cape Coast in view of its importance as a prime tourist destination in Ghana. Apart from the Cape Coast Castle, which has been designated as a World Heritage Site, the city can also boast of beaches, Centre for National Culture, and PANAFEST Festival. In addition, Cape Coast is just 30km south of the famous Kakum National Park. Its rich history is also inherent in the fact that, of all the cities and towns of Ghana, Cape Coast, the capital of the Gold Coast colony until 1877, has the most extensive surviving historic core of pre-1900 buildings (Ghana Statistical Service, 2014).

Figure 1 Map of Study Area

Sources of data

The population of the study comprised of all residents of Cape Coast who were 18 years and above. The population of Cape Coast stands at 169,894 (Ghana Statistical Service, 2014). The Metropolis was divided into 10 zones for the purpose of the research, namely Abura-Pedu, Kotokuraba-Tantri, Ntsin-Kingsway, Bakaano-Castle, Adisadel-Aquarium, Aboom-Mfantsipim, Amamoma-Apewosika, Ridge, Ashanti road and Ola.

Due to lack of a sampling frame, convenience sampling method was employed. A sample size of 300 was deemed suitable for the study, but 245 questionnaires were deemed suitable for the analysis after the data collection. The questionnaire was employed for data collection. It comprised two modules namely socio-demographic characteristics of respondents and perceptions of environmental impacts of urban tourism. A five-point Likert scale was used to gauge residents' perceptions of the environmental impacts of urban tourism. Scale items were based on previous studies on the environmental impacts of tourism (previous studies on environmental impacts).

A pre-test was undertaken on 30 residents of Iture in Elmina to help determine the potential problems with the full-scale administration of the instrument and the reliability of the scale employed. This helped to firm up the instrument for the actual data collection. The actual survey was done in two weeks by third-year students of Environmental Management class of the Department of Hospitality and Tourism Management. Students were trained and given introductory letters. Groups of seven students were assigned to each of the 10 zones. The

questionnaires were usually self-administered except in situations where the respondents were not literate.

Data were processed with SPSS (version 17). Due to the descriptive nature of the study, data were analyzed using descriptive statistics, such as frequencies, percentages, means and standard deviations. The results were presented, using tables and chats.

Results and Discussion

Profile of residents of Cape Coast

Table 1 shows that more than half (58.8%) of the respondents were males, while (41.2%) were females. It is evident from the table that over half (55.1%) of respondents were between the ages of 20 and 29 years, followed by those between 30 and 49 years (24.5%), while 12.7percent were 50 years and above. With regard to marital status, the majority (68.6%) of the respondents had married while 31.4 percent were not.

Also, nearly one-third of the respondents (31%) had attained polytechnic or university degree, while only 6 percent had no formal education. The majority (91%) of respondents professed to Christian faith, followed by Islam (7.8%). Results from Table 1, additionally, suggests that a little over half (51.4%) of respondents were without children, while 48.6 percent had children. A quarter (33%) had between 1- 3 children, while 13 percent had between 4- 6 children. Table 1 further shows that majority (67%) of the respondents earned less than GH¢ 500 (equivalent to US$ 110.4). On the other hand, only a small proportion of respondents (11%) earned GH¢ 1000 and above (equivalent to US$ 220.8 and above).

Table 1: Socio-demographic characteristics of respondents

Socio-demographic characteristics	Frequency(N= 245)	Percentage (%)
Gender		
Male	144	58.8
Female	101	41.2
Age		
Less than 20 years	19	7.8
20-29	135	55.1
30-49	60	24.5
50 and above	31	12.7
Marital status		
Married	168	68.6
Unmarried	77	31.4
Level of education		
No formal education	15	6.1
Basic school	59	24.1
Secondary/ High School	69	28.2
Training college	20	8.2
Polytechnic/University Degree	76	31.0
Other (certificates, diploma)	6	2.4
Occupation		
Sedentary oriented jobs	69	28.2
Mechanical oriented jobs	176	71.8
Religious affiliation		
Christianity	224	91.4
Islam	19	7.8
Other	2	0.8
Child dependent		
With child	119	48.6
Without child	126	51.4
Number of children		
1-3	81	33.1
4-6	31	12.6
7 and above	7	2.9

Monthly income (GH¢)		
50-150	46	18.8
151-300	70	28.6
301-500	48	19.6
501-700	22	9.0
701-900	32	13.1
1000 and above	27	11.0

Impact of urban tourism

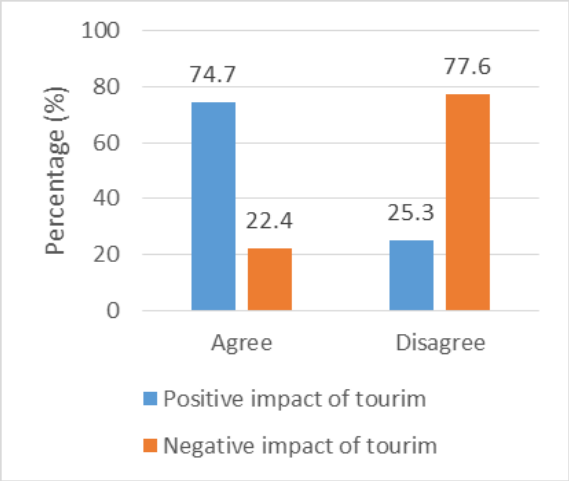

Figure 1: Overall agreement to impact of urban tourism

On the overall percent impacts of urban tourism on the environment, Figure 1 shows that 74.7 percent agreed that urban tourism had a positive impact on the environment, while 22.4 percent agreed that urban tourism had negative impacts on the environment. On the other hand, just about one-quarter of the respondents (25.3%) were of the view that urban tourism did not have a positive impact on the environment, while more than three-quarters (77.6%) of the respondents also did not agree that urban tourism activities had a negative impact on the environment.

This is in line with the findings of by Aref, Redzuan and Gill (2009) that communities perceive tourism to have more positive impacts than having negative impacts on the environment.

Perceived positive environmental impact of tourism

Community perceptions of the environmental impacts of urban tourism were measured, using 24-items on a five-point Likert scale. The results show that residents of Cape Coast rated statements relating to the positive impacts of urban tourism higher than the negative statements, indicating that urban tourism was considered by residents to have a more favourable impact on the environment.

Perceived positive environmental impact of tourism table (Table 2) presents residents level of agreement on the positive environmental impacts of urban tourism. In all, eight (8) elements were used in measuring the perceptions of local residents.

Table 2: Perceived positive environmental impacts of tourism (N=245)

Statement	% in agreement	mean	Standard Deviation
Tourism has led to an increase in environmental awareness among residents	75.5	3.77	1.012
Tourism has led to beautification of the communities	86.1	4.12	0.869
Tourism has led to the protection of environmental resources of the city	69.4	3.71	1.064
Tourism has led to the preservation and restoration of sites of historical and cultural significance	85.7	4.23	0.868
Tourism has led to the conservation of the environment	66.1	3.71	1.037
Tourism has led to an improvement in sanitation and waste disposal	60.8	3.48	1.172
Tourism has led to an improvement in public facilities	65.7	3.69	1.021
Tourism has led to environmental improvement	67.3	3.72	1.010
Overall	*74.7*	*3.88*	*0.676*

*Mean (1.0–1.49 = strongly disagree 1.5–2.49 = disagree; 2.5–3.49 = ambivalent; 3.5–4.49 = agree; 4.5-5=strongly agree)

In general, residents agreed with the notion that urban tourism has positive impacts on the environment (74.7%, mean = 3.88). Specifically, respondents agreed with the statements that tourism has led to an increase in environmental awareness among residents (75.5%, mean = 3.77); tourism has led to beautification of the communities (86.1%, mean = 4.12). Also, 69.4 percent of respondents agreed that tourism has led to the protection of environmental resources of the city, with a mean value of 3.71, while 85.7 percent agreed that tourism has led to the preservation and restoration of sites of historical and cultural significance, including the Cape Coast Castle (mean= 4.23).

Local residents further agreed that tourism has led to the conservation of the environment (66.1%, mean = 3.71), improvement in sanitation and waste disposal (60.8%, mean = 3.48), improvement in public facilities (65.7%, mean = 3.69) and environmental improvement (67.3%, mean = 3.72).

Perceived negative environmental impact of tourism

The perceived negative environmental impacts of urban tourism table (Table 3) also presents local residents' level of agreement to statements relating to the negative environmental impacts of urban tourism. For negative environmental impacts, sixteen (16) variables were used to measure local residents' perceived negative environmental impacts of urban tourism.

Overall, less than one-quarter of the respondents were in agreement that urban tourism had a negative impact on the environment (22.4%, mean= 2.92). Respondents were, generally, uncertain about the statements that tourism has led to crowding in public places (53.4%, mean = 3.22), although a little over half of the respondents were in agreement. Respondents were, generally, uncertain that tourism has led to traffic congestion in the city (39.6%, mean = 2.92), increase in noise levels in the city (44.5%, mean = 3.02), tourism increases the rate of pollution (40.4%, mean = 2.98), and generation of excessive litter in the city (46.5%, mean = 3.06).

Table 3: Perceived negative environmental impacts of urban tourism (N=245)

Impact	% in agreement	mean	Standard Deviation
Tourism has led to crowding in public places	53.4	3.22	1.324
Tourism has led to traffic congestion in the city	39.6	2.92	1.292
Tourism has led to increase in noise levels in the city	44.5	3.02	1.361
Tourism has led to increase the rate of pollution	40.4	2.98	1.243
Tourism has led to generation of excessive litter in the city	46.5	3.06	1.320
Tourism has led to increase in forest loss in the city	28.9	2.50	1.270
Tourism has led to decline in fishing and farming activities	17.5	2.33	1.114
Tourism has led to loss of productive lands	27.8	2.67	1.222
Tourism has led to increase in beach pollution and degradation	44.1	3.03	1.294
Tourism has led to increase in waste disposal problems	47.0	3.02	1.231
Tourism has led to a decline in water supply	26.6	2.56	1.222
Tourism has led to increased pressure on infrastructure and amenities	55.1	3.31	1.298
Tourism has led to an increase in air pollution	33.4	2.81	1.277
Tourism has increased the rate of depletion of natural resources	35.5	2.84	1.253
The construction of large hotels, huge recreational and commercial areas has resulted in negative visual impact	38.0	2.96	1.264
The construction of hotels and other tourist facilities has led to the destruction of the natural environment in the city	36.8	2.92	1.281
Overall	*22.4*	*2.92*	*0.793*

*Mean (1.0–1.49 = strongly disagree 1.5–2.49 = disagree; 2.5–3.49 = ambivalent; 3.5–4.49 = agree; 4.5-5= strongly agree)

In addition, just a little over a quarter of the respondents (28.9%) were in agreement that tourism has led to increasing forest loss in the city (mean=2.50). Again, though more than half of the respondents (approximately 55%) were of the view that tourism has led to increased pressure on infrastructure and amenities, the responses, generally, show that the residents are ambivalent as the mean is 3.31.

Furthermore, respondents were uncertain that tourism has led to an increase in beach pollution and degradation (44.1%, mean = 3.03), increase in waste disposal problems (47%, mean = 3.02), tourism has led to a decline in water

supply (26.6%, mean = 2.56) and that the construction of large hotels, huge recreational and commercial areas has resulted in negative visual impact (38%, mean = 2.96). Also, they were uncertain about the construction of hotels and other tourist facilities, leading to the destruction of the natural environment in the city (36.8%, mean= 2.92) On the other hand, respondents disagreed that tourism has led to declining fishing and farming activities in the Cape Coast area (17.5%, mean= 2.33).

The results of this study contradict the findings of studies done in different locations by different researchers. First, it is inconsistent with the results of studies by Mohammed (2017), Mensah and Mensah (2013), and Davenport and Davenport (2006) that tourism activities in urban areas lead to the loss of biodiversity. In the same way, the study does not confirm the assertion by Musora, Mbaiwa and Bag (2017) that tourism leads to increase in noise. Again, this study did not support the claim by Musora, Mbaiwa and Bag (2017) and Amuquandorh (2009) that tourism causes a reduction in the quality of air and water. This is because the respondents in the Cape Coast Metropolis were ambivalent to these statements.

Conclusions and Implications

The perceived environmental impacts of urban tourism were, generally, favourable among residents of Cape Coast. Residents perceived urban tourism as having a positive impact on the environment. However, they were also concerned about the negative impacts in the following areas: crowding in public places, increasing pressure on infrastructure and amenities, littering and waste disposal problems as well as increasing levels of noise. Cape Coast is not a fully-fledged tourist destination and the current volumes of tourist arrivals have not reached the mass tourism threshold as such it is not surprising that the negative environmental impacts of tourism are not pronounced, as perceived by local residents.

City authorities and the Ghana Tourism Authority should capitalize on the perceived positive environmental impacts of tourism by using tourism as a tool for the reinforcement of environmental conservation. Also, decision-makers should consider planning for tourism in cities alongside other urban strategies, to promote towns and cities tor tourism purposes. This will help to minimize potential conflicts between tourism and other urban land uses.

Residents' perceptions of the impacts of tourism are essential for the sustainable development of tourism in an area. A positive perception usually elicits community support for tourism development, but a negative perception often results in residents' resentments towards tourists and tourism activities. Therefore, urban tourism should be developed in a way that ensures environmental conservation and economic development. This can be achieved through sustainable tourism development where there is active community participation. Adoption of sustainable tourism would help to reduce the tension and friction created by the complex interactions between the tourism industry, visitors, the environment and host communities

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Symbolization of Modern Urban Culture Space: Exploring the Invisible Source of Dynamism for the Internationalization of Higher Education

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Abstract: The symbolization of the signification of modern urban culture space promotes theoretical growth of researches on the dynamism of internationalization of higher education. The internationalization of the city makes it become even more complicated when confronted with the separation of significance from form. The symbolic interactionism theory provides a theoretical approach to this problem. In the modern city, the scope and ways of symbolic interaction have experienced profound changes, and in order to bridge the gap between the form and significance of urban culture space and find ways in which urban symbolic space is represented and its significance expressed, the internationalization of higher education emerges. Its significance is represented through the construction of urban education symbols. On the one hand, it inherits the traditional urban culture and, on the other hand, advances the comprehensive development of human beings.

Key words: Urban Culture Space, Symbol, Higher Education, Internationalization, Dynamism

Introduction

The development and internationalization of modern higher education depends on the development of the modern city and the formation of urban culture. The formation of modern urban space happens, to a certain degree, with the structuring of space. In order to realize its cultural significance, the space structure needs to be symbolized. People are inundated by urban symbols, like blurred neon lights, skyscrapers, various statues, noisy commuting systems, broad highways, walking streets and sensual shopping malls, when the city is undergoing internationalization. Evidently, citizens who are educated cannot totally immerse themselves into the cultural symbols. Thus, it is very significant to explore the interrelationship between culture symbols and the internationalization of higher education, while taking into consideration the symbolization of the structure of urban culture space.

The Formation of Urban Symbol Space: The Point Where Urban Culture and the Internationalization of Higher Education Converge

Modern urban culture space, to a certain degree, exists in the form of urban symbol space, because the city exteriorizes its cultural connotations, to a large extent, through the symbolized landscape and features of urban spiritual culture and so on. Therefore, to interpret urban culture space is actually to interpret urban symbol space.

The so-called symbol is the meaning of one thing, which is contained in another thing. The symbol communicates information and substitutes a concrete thing for another thing or another concept. Modern city transfers reality into symbols through constructing urban symbol space and people explore the city's cultural connotation and its development through the symbols. Cassirer proclaimed, in his book entitled *An Essay on Man*, that "instead of defining man as an animal rationale, we should define him as an animal symbolicum" (44). Obviously, according to Cassirer, the significance of symbol is represented in two aspects: on the one hand, things represent their cultural connotations in symbols; on the other hand, the life of human beings, whether they live in the country or the city, educated or illiterate, all live in the world of symbols and communicate with them.

No longer does man live in a mere physical universe. Man lives in a symbolic universe. Instead of dealing with the things themselves, man is, in a sense, constantly conversing with himself. He has so enveloped himself in linguistic forms, in artistic images, in mythical symbols or religious rites that he cannot see or know anything except by the interposition of this artificial medium. His situation is the same in the theoretical as in the practical sphere (Cassirer, 1985, p.43).

Just as Cassirer believes that people do not live in a world of absolute reality. That is to say, the citizens do not get into urban culture space directly according to their will. Instead, they always need to understand the expansion and

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cultural connotation of the city through symbolized forms, like language, city image, and artistic forms and so on. Their hope and horror, illusion and disillusion, dream and reality are all represented by city symbols through imagination. Certainly, Cassirer tries to answer the question "what is man?" from an ontological perspective. Just as in Cassirer's world of philosophy, the whole world is not the exteriorization of a certain kind of spirit or that of the 'symbol' concept. Conversely, 'symbol' is a special way for human beings to understand this world (Ye, 1998, p.15). Cassirer's theory of understanding the world through "symbols" is very significant for the exploration of specific ways of understanding the connotations of urban culture and further researches on the relationship between this kind of symbolization and the internationalization of higher education.

The definition of urban space varies in different disciplines. The physicist, Newton, regarded space as a purely abstract concept, like the physical world in a container, and others believe that space is part of human being's physiological consciousness. Some scholars point out that beyond the material and functional structure of urban culture space, there is nonmaterial space structure or urban culture space structure. It is the representational space (such as perceptual space, artistic conception space) and fluid space (such as commuting space, shopping space and living space), which are based on material space, but transcend it (Chai, 2000, p.12).

Obviously, from the perspective of culture and education, urban space is the representational and fluid space and a space of significance, which goes beyond the material space.

However, people's understanding of this kind of significance space has to experience symbolization. That is to say, urban culture space is represented in the form of urban symbol space. According to Cassirer (1985), human beings live in a world of symbols. The living environment of "Human beings' can be understood from the two aspects of culture (symbol) and space. It is the spatialization of culture (symbol). Space itself is not a symbol, but it is symbolized" (Zhu, 1995, p.5). Therefore, to interpret the symbolization of culture from the perspective of space becomes very necessary.

Symbol space is a kind of generalization about the forms of the existing environmental space of the whole human race. Thus, urban space should be a miniature of symbol space, which is what is called 'urban symbol space'. Urban symbol space represents the relationships among city, space and human beings (Zhu, 1995, p.5).

The biological existence of Human beings is the precondition for urban symbol space, which is the schematized cognitive mode constructed upon human consciousness in order to understand urban culture space and also as a form of its existence. From the perspective of space structure, the objectives of research, at least, should include the symbol space's components, its spatial and temporal distance scale, subject of space and the type or structure of space. To explore the influence of urban culture space upon the internationalization of higher education, this article focuses on the movement of symbol space, especially the interaction between the symbolization of culture and higher education in order to research on the interrelationship among city, space, human beings and higher education and under the influence of internationalization.

The symbolization of urban culture space is the representation of social behaviours and ways of thinking. In other words, the symbol is the exteriorization of human behaviour and ways of thinking and this is, to a certain degree, congenial to higher education, because higher education represents people's thoughts, culture and behaviours. In terms of its functions, it is exactly aimed at exteriorizing general thoughts and behaviours into the impetus for the construction of urban culture space and the development of the city. From this perspective, it is imperative to explore urban culture's stimulation for higher education with the mediation of the "symbol".

The Flux of Urban Symbol Space: The Invisible Source of Dynamism for Higher Education Internationalization

As a representation of urban culture, the symbol plays it due role at any time. Human beings' reaction towards the external environment is not merely physical, but also through symbols, like language, gestures and facial expressions, they are able to express their thoughts. Human beings live in a world where symbols interact with each other. In urban life, it is even more obvious and the symbolic meaning of urban public squares, the right consciousness and ideology on billboards and the distribution of urban buildings are all communicated to residents through symbols. In the domain of education, as stated above, people understand and construct the world through education. An exploration of the relationship between urban culture and higher education becomes the

discussion of their relationship with the symbol.

The symbolic interactionism theory provides inspiration for research on this issue. The American scholar, Jonathan Turner (2001), has pointed out the significance of such interaction for social development. According to him, class, nation, family, and religion are ultimately and merely the reflection of interaction between human beings. The society is ultimately composed of and maintained by individual action and interaction. The formation of urban culture space is the result of the interaction between the consciousness of social groups and material space of the city. On the one hand, it is the interaction between different people and, on the other hand, interaction between human beings and the material existing environment. Symbol plays the role of mediator during this process. Social interaction produces and maintains social phenomena and one has to understand the former in order to comprehend the later. Evidently, the mediation of education is needed during this process. The features of urban symbol space determine its relationship with higher education.

The originator of symbolic interactionism, G. H. Mead has provided more inspiration in his researches on this issue. According to him, the interaction between different people is through the "symbol" as a mediator and, on this basis, he initiated the symbolic interactionism. Many social behaviours do not only include the interaction between the physical bodies, but also that between the subconscious. During the stimulus-response process, human beings are very conscious of the responses they may provoke through their gestures. When a gesture has the same significance for the sender and receiver, it assumes meaning and becomes a symbol. Social significance is built on the response to other people's behaviours. The symbolic interactionism starts from the expression of logical meaning and appearance of self-consciousness and goes deep into the formation of social power and institutionalization, imbued with many modern social philosophical ideas. The response towards the symbol includes a whole proceeding of reactions towards the specific object in a specific environment, including awareness, perception, attention, attempt and action. The distinction between the symbol and the sign is a feature in the process. He defines the symbol as "significant gestures" by human beings and the sign as "non-significant gestures" by animals, making a distinction between human beings and animals. The understanding of symbols is the understanding of "me" by "I", where "I" represents the freedom and creativity of the individual, enabling him to exist with self-consciousness. However, "me" represents the social aspect of the individual and is the individual's attitude towards other people. These attitudes become what "I" thinks of before taking action. The dialogue between "I" and "me" is exocentric and multidimensional. The socialization of the individual is to familiarize the individual with social communication through the mediation of language and other significant gestures (Ding, 2008).

To come back to the topic of this article based on the inspiration from Mead, it is very important and significant to explore questions like how the urban symbolic space is extended, how the way of symbolic interaction has changed under such an influence and how such changes react to higher education, with the ongoing internationalization of modern cities.

Some scholars have done researches upon the components and socio-cultural connotation of city symbols from different perspectives. Du Jin has pointed out that there are three levels in the symbolic system of urban space. These are the vocabulary level, syntax level and paragraph level. At the vocabulary level, there are city symbols composed of homogeneous elements. City symbols, which consist of various kinds of elements with arbitrary organization, are on the syntax level. At the paragraph level, city symbols are not only heterogeneous, but also well organized. Different symbols at different levels convey different meanings. The image symbol resembles the content it represents in terms of their image; the indicative symbol shows causal relationship between form and content, but it takes logical reasoning to figure out what it refers to; The emblematic symbol has gotten rid of the causal relationship between form and connotation, becoming a kind of social tacit agreement. Therefore, the interpretation of such symbols must be on the basis of a profound understanding of the local history and culture (Duan, 2002). Then, it becomes obvious that, in such an order, there is a gradual separation between the significance of urban space and its expression form. This process is the interaction between the symbol and the subject. Education is produced in the city symbol by the separation of the symbol's form and significance, because its function of understanding and interpreting the city symbol is realized exactly through the comprehension, interpretation and construction of the city's history and culture.

Zhu (1995) has pointed out, in his study, the heterogeneous components of the urban symbol space. There are six types of symbol spaces: nomadic space (mythology), route space (religion), square space (science), territory space (history), street space (language) and dream space (art). To understand the city through symbol space, the urban space should also include the above-stated six types, and the corresponding counterparts are the country park, the street, the square, the yard in the city, the street and the city park (1995, p.102-103).

There is no doubt that it is a very inspiring research to understand the cultural connotations of urban space, like mythology, religion, science and history through its discrete components, like the park, street and square. However, what kind of city landscape is higher education, which plays a very important role in the development of modern city, corresponding to other forms of urban symbol space, which mythology, religion, science and history and so on correspond to? This issue cannot be ignored in researches on urban symbol theories and should be explored from the perspective of symbolic interaction because, in the continuity of the production of urban culture by symbolic significance, education plays a crucial role.

The way of interaction between city symbol and human beings and their urban space has experienced great change with the ongoing internationalization of the modern city. It is, to a certain degree, this kind of change that promotes the internationalization of higher education.

Firstly, the internationalization of higher education is produced by the city, the expansion of the domain of symbolic interaction and the separation, and even, to some extent, the break between the form and significance of urban culture space.

With the internationalization of modern cities and the rapid development of science and technology as well as human beings, urban space construction and communication has experienced profound change. The symbolic interaction organizes people's life in the broadest domain, bears advanced culture and enables them to communicate. However, under such a background, people's choice of behaviours becomes more complicated than before, because representations of symbolic space, which cross time and space, start to enter into the everyday life of modern citizens. The most obvious feature is that symbolic interaction becomes more instant and its expression of the significance of urban space forms is multivariate. That is to say, the significance and form of symbolic expression are strange to a certain extent. The replacement of significance becomes frequent and variant, making it difficult for people to understand urban symbols. Against such a background, higher education, as the stimulus for symbolic interaction, should play its due role. The interaction of symbols requires the educated to act as interpreters of the significance of urban symbolic space in order to promote the representation of the urban symbols' significance, construct cultural community in the city and form distinctive urban culture. Traditional higher education obviously cannot cope with the complexity of urban symbols in cosmopolitan cities. The cosmopolitan city is in dire need of constructing the urban culture which is at the same time constant, energetic and significant for the continuity of tradition at a time when it is experiencing a clash and fusion of native and foreign cultures. Under such conditions, higher education also has to be internationalized and its role of constructing urban culture space should be realized through shaping the subjects which create and understand the urban symbol space and the cognitive mode for symbolic significance.

Secondly, the internationalization of the city, the change of the way of symbolic interaction and the acquisition of new methods for the representation and expression of urban space symbols all help internationalize higher education.

The internationalization of the city develops in parallel with new technologies, which develop and constantly change the way of life of humans and the traditional symbolic interaction. Interaction between individuals has changed. In order to understand urban culture, human beings need to understand more about the whole city's culture tradition and new appearance through symbolic system of greater complexity. The individual's social status, roles and personalities are also represented by a certain aspect of urban symbol. The reason for such a change is that the virtualization of the comprehension of symbolic significance has appeared.

Zhu (1995), has pointed out in his study on the evolutionary history of Western and Chinese symbol space that Chinese symbol space, has experienced four stages, namely nomadic space (mythology), territory space (history), street space (language), and dream space (art). In contrast, with the West, it has experienced nomadic space (mythology), route space (religion), square space (science) and dream space [art] (1995, p.77). Putting aside the

differences in types and specific features, in terms of its evolutionary sequence, it can be noted that, on the one hand education is permeated in various types as stated above; on the other hand, higher education has become the point where Western and Chinese cultures converge in the internationalized modern cities.

The evolution of the above mentioned symbolic spaces, finally, merge into modern internationalized education. Different from the cognitive mode of the visual symbols, like the country park, city streets and city park, the fusion of modern Western and Chinese symbols happens in higher education in the modern cities and its cognitive and expressive mode become even more virtualized. This kind of virtualization is realized mainly through modern technologies. For instance, the popularization of the computer and internet in everyday life has given human beings new social experiences and provided them with a new and open platform for communication and activities. People's understanding of city symbols, to a certain extent, has endowed them with modern ways of thinking. The indirect and vague symbolic interaction has satisfied many people's needs to enable them to escape from reality and give them a sense of elusiveness. The causal relationship between the "emblematic symbol" and the objective world has completely broken down. Against this background, higher education should shoulder the responsibility of controlling the symbol's cognitive mode. In the internationalized cities the fusion of various kinds of symbol space types requires the mediation of higher education. On the one hand, the representation of the symbol, whether in a direct way or through the virtual world of the internet, need to be constructed by the educated. On the other hand, the communication of urban symbol significance, whether through traditional face-to-face approach or the virtual indirect ways, makes education indispensable. Apparently, with the city's ongoing internationalization, the types of symbol space tend to homogenize and this appeals to the parallel internationalization of higher education as a way of representing and communicating symbolic significance with the application of technologies, which will, finally, conduce the fusion of Western and Chinese elements in urban culture.

Thus, the symbol space is produced by the fusion of Western and Chinese cultures in modern cities and, at the same time, its production is conducive to the internationalization of higher education. The implicitness, fluidity, continuity, identifiability and other features of urban symbol space develop with the internationalization of the city and its education.

The Significance of Urban Symbol Space: An Influence on the direction of Development of Urban Culture Construction and Internationalization of Higher Education

As an invisible source of dynamism for higher education internationalization, urban symbol space in the modern internationalized cities plays a very important role in the construction of urban culture and the development of higher education and such role is represented by urban education symbol.

Due to the richness, convenience and effectiveness of the symbol, it has rapidly become the most common and important way of expression and thinking. Modern citizens rely more and more on urban symbol space. Lefebvre has stated that "those who use space will enable the world to change" (2009, p. 193). In the internationalization of cities, only those who understand and are able to use symbols in the urban culture space can change the world, and urban education symbol plays a crucial role in it, which is represented in the following aspects.

Firstly, urban culture continues through the construction of urban education space. The city symbol is the feature, which can represent the city's culture and the iconic thing, which has inheritance value, gives very strong impression and evokes a sense of pride. Many cities have such kinds of icons. They have weathered with the passage of time, embody the city's soul, and gradually become the ineffaceable symbol of the city. They represent the culture, fame and generosity, spiritual power and ecological environment of the city. To a large extent, they reflect the magnetism and the profoundness of the city, becoming its concise identification card (Liu, 2008, p.112)

Education represents the profoundness of a city's culture through constructing education symbols with international significance, such as the educational and cultural square, which represent the internationalization of education in the city. Public education facilities, like library and e-reading rooms, and the talents proficient in foreign languages and international cooperation are the inheritors of urban culture and build culture space for themselves and their future generations.

Secondly, the gap between form and significance which is caused by the rapid change of the symbol is

bridged through the construction of urban education symbol, promoting comprehensive development.

If everyone engages himself/herself in coping with the significance of those abused symbols, he/she will tire themselves death. Thus, the citizens keep the principle of economy through compression. To be specific, it is to condense the symbolic system of a certain place and time, turning the three-dimensional into two-dimensional. In this way, the various signifier and signified and the complex relationship between them are all simplified in this system in order to use the limited signifiers to refer to all the signified, at the same time, retaining all stable signified. (Yang, 2001, p.153)

As stated above, the ultimate goal of education is to promote comprehensive human development. The form and significance of symbols separated when the internationalization of the modern city speeds up the process of symbolization, evokes in the modern citizens a sense of fragmentation and futility.

The complex and speedy change turn the scenes and messages received into fragmented and fluid pastiches. Then, the panorama becomes more and more elusive. Therefore, urban experience is, on the one hand, a sense of structural wholeness and, on the other hand a fragmented disorder (Wang, 1998, p. 300)

The construction of urban education symbol is, on the one hand, that of the urban landscape, which is significant for the internationalization of education and, on the other hand, the establishment of the citizen's symbolic cognitive mode, namely infusing the symbolic cognitive mode, which fits in with modern city internationalization, into higher education. The latter process is just the above mentioned simplification of the signifying system. It adapts human beings to the development of the modern city, who, in return, accelerate the development of the city.

In summary, urban culture space promotes the internationalization of higher education in the form of symbolic interaction. From this perspective, "we will have a more profound understanding of education: culture is represented by its symbolization, while the symbol is exactly the carrier of the content of education" (Liu, 2008, p.14). Against such a background, the theoretical exploration of urban symbol space and its construction is of great practical significance.

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Pepper Culture in Rural and Urban Areas of Hunan Province

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Abstract: Pepper is an indispensable dish for people in rural and urban areas of Hunan Province, China. However, it is not only a kind of dish, or flavouring, but also a kind of culture, the essence of life, and a yearning for Hunan people who are not in their hometown. Pepper has influenced generations of Hunan people. Girls in Hunan Province are even called “spicy girls”. This paper used empirical study method to analyse the unique character of Hunan people growing under the pepper culture of Hunan Province. Through the analysis of literature and data collected, and individual interviews, it was found that the main character of Hunan people are hot-tempered, enthusiastic, courageous, bold and straightforward, hard-working, patient and unremitting, which play an important role in the development of the individual and the society.

Key words: Pepper culture; regional culture; character; empirical study; Hunan people

Introduction

Pepper is an annual or perennial herb, rich in vitamin C and vitamin A, and contains capsaicin, with ovate lanceolate leaves and white flowers. Most of the fruits are like the brush tip; there are also lantern shape, heart shape and so on. The fruit is green when immature, but mature into red or yellow. It is, generally, spicy, for food and medicinal purposes. Pepper is recognized as people’s favourite condiment. It not only has its flavour, but also add colour to dish. The main characteristics of many domestic famous dishes are spicy, hot with bright colours, such as Sichuan cuisine, Hunan cuisine and Guizhou cuisine. Pepper is also rich in a variety of effective ingredients, trace elements and minerals required by the human body. There is protein 1.6g, fat 0.2g, carbohydrate 4.5g, crude fibre 0.7g, calcium 12mg, phosphate 40mg, iron 0.8mg, carotene 0.73mg, oryzanin 0.04mg, nicotinic acid 0.03mg, riboflavin 0.03mg, vitamin C 185mg in per 100 grams fresh peppers. The content of vitamin C in pepper is the first in vegetables.

According to research, the earliest pepper grew in tropical rain forest of Latin America, which was introduced to Mexico at the end of fifteenth Century. After Christopher Columbus discovered the Americas, pepper was brought to Europe, and then spread to other parts of the world. It was introduced into China at the end of the Ming Dynasty. At first, it was regarded as ornamental plant and drug. Since appearing on the menu, it set off a wave of hot, and lasted until now. Although pepper was introduced into China for about 400 years, it spread all over China soon (Figure 1), which made the northern region which was mild spicy or basically not spicy, become a new moderate spicy area. What is more, for the components of pepper, it has the effects to dispel cold and rheumatism. As soon as it was introduced into China, it became very popular in Sichuan Province, Hunan Province, Yunnan Province, Guizhou Province and so on, because these areas of China are hot and humid in summer, but cold and dry in winter. In addition, these places are suitable for pepper planting, which produced the custom to eat pepper. At present, China’s pepper planting area is about 1 million 420 thousand hectares, with an annual output of 130 billion kilograms, ranking first in the world.

Figure 1: The distribution of the degree of pepper eating in China

(The red areas are the hottest pepper eating areas)

Pepper has become a fashion in our life, because it is not only a kind of dish, but also a kind of positive cultural

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carrier. Pepper is the highlight of soul and will. Mao Zedong, the founder of the People's Republic of China, once said, "If you can't eat pepper, you can't take part in revolution", which has its reason, for someone who wants to eat pepper should have certain psychological endurance, and eating pepper is also in the exercise of a person's psychological endurance. Imagine a person is suffering hot with brain oxygen deficient and upset stomach when he eats pepper, but he will eat it again during the next meal. What kind of the spirit is it? It is a spirit of fearlessness.

Figure 2: Pepper as a dish

Figure 3: Hot pepper sauce, cayenne pepper, and pepper

Pepper is widely distributed in China, but different regions combine pepper with local culture, showing different regional characteristics. Figures 2 and 3 show different kinds of pepper dish. This paper mainly analyses the influence of pepper on Hunan people's character. Because of Hunan people in rural and urban areas like to eat hot pepper, it forms pepper culture. For it can live in the valley; the original tenacity of pepper itself is amazing. Under the influence of pepper culture, Hunan people form unique character, such as hot-tempered, enthusiastic, courageous, bold and straightforward, hard-working, patient and unremitting. In the following, this paper will analyse these characters respectively.

This paper aims to show pepper culture in rural and urban areas of Hunan Province, and make people know pepper culture and Huxiang culture. What is more, the main character of Hunan people growing under the pepper culture and the influence of this character on the individual and the society are revealed, which will let people know more about Hunan people and Hunan culture, especially some Hunan celebrities who contribute to the development of Chinese history and society, arouse people's interest in Hunan culture and Hunan people.

Literature Review

Hunan people have a long history of planting pepper, and their way of eating pepper is rich and colourful. Throughout history, it has formed part of the dietary characteristics of Hunan people, which is normally hot. If there is no pepper in the dish, there is no appetite for Hunan people to have dinner. Li (2003) introduced the composition and function of pepper, and the extraction and utilization of effective substances of pepper and its prospects for development.

As the saying goes, Hunan people are not afraid of spicy dishes, Guizhou people are not afraid that the dishes are spicy, Sichuan people are afraid that the dishes are not spicy. Since pepper was introduced into China, it has become popular in the whole country. Especially in the area where people like eating spicy food, pepper has not only become a part of essential daily diet, but also integrated into local culture. What is more, the unique regional cultural connotation of pepper has been created, and it has its special geographical features. Pepper has hot, straightforward cultural connotation, also implying vitality and gladness. In a research on pepper culture, Wang and Zhang (2008) pointed out that pepper culture was the characteristic culture of Hunan Province and was a good tourist resource. This paper also revealed the significance of the development of Hunan pepper culture tourism and the content of pepper culture of Hunan. Zhang and Zhu (2013) proposed that pepper was not only a favourite dish, but also had a profound influence on ethnic identity, aesthetic orientation and cultural trends.

For Hunan people, planting and eating pepper gradually forms pepper culture. Pepper culture is the cultural characteristic of Hunan Province, which is integrated into all aspects of their life. Pepper culture is not only about the pepper diet culture, such as famous Hunan cuisine, but it also forms a kind of spirit, such as hot,

positive. There are many poems, words, songs, articles etc. about hot pepper, which have revealed positive, optimistic, energetic, lively mental state. Besides, there are many studies on pepper, pepper culture and the character of Hunan people. Fu (2001) referred to the relationship between pepper and the character of Hunan people. Zhou (2007) analyzed the hot formative factor of Hunan cuisine from the aspect of geographical environment and climatic factor, spirit cultural element, economy and circulation factors. Zhang (2010) studied hot character of Hunan folk songs, which revealed its cultural background. Yu and Chen (2013) researched modern Hunan people's character and its influence factor. Liu (2015) analyzed pepper character of three women writers on the aspect of Huxiang Culture through their experience and works. Yang (2016) discussed character of Hunan people according to Hunan dialect, and analyzed the forming reasons of character of Hunan people from aspects of geographical environment and climate, evolution and migration of ethnic groups and regional culture in Hunan.

These studies are primarily about the nutritional value of pepper, but also refer to pepper cultural research in rural and urban areas of Hunan Province and, finally, proceed to research the relationship between pepper culture and the character of Hunan people. Previous studies on the factors influencing the character of Hunan people found, among other factors, pepper as just as one of the factors with studies on pepper accounting for just a small portion of such articles. Pepper and pepper culture have close relationship with Hunan People, therefore, this paper will use an empirical study method to analyse pepper culture in rural and urban areas of Hunan Province, and the specific character of Hunan people growing under pepper culture with some daily phenomena and representative figures. The aim is to make more people understand the culture of Hunan Province and Hunan people.

Methodology

This paper used empirical study method to classify and analyse the literature and data collected. Through research, it was found that there was literature on pepper, the composition and function of pepper, pepper culture, and Hunan cuisine. However, there was limited literature on the character of Hunan people. The available literature on character of Hunan people was mostly on the factors affecting the character of Hunan people, among which pepper was an essential factor.

Meanwhile, some Hunan people were interviewed about their opinions on pepper and pepper culture, and whether pepper had any influences on their character. Through interviews, it was found that almost all the people liked to eat pepper. They indicated that if there is no pepper, they will have no appetite for a dinner, and also they like the hot taste of pepper. Obviously, they think that their character is affected by pepper and spicy food.

Results

This paper used an empirical study method to analyse the unique character of Hunan people who were growing under the pepper culture in rural and urban areas of Hunan Province. Through literature review and interview, it was found that there was a close relationship between the character of Hunan people and pepper with its shape, colour and spicy taste, which has impelled Hunan people to form the character of being hot-tempered, enthusiastic, courageous, bold and straightforward, hard-working, patient and unremitting. These characters play a very important role in the personal and social development of the people.

The concrete analysis of the main findings are as follows.

Hot-tempered and Enthusiastic

When it comes to the topic of the character of Hunan people in rural and urban areas of Hunan Province, the first words that come to mind are hot-tempered and enthusiastic. "Hot-tempered" is a commendatory term when it is used to describe the character of Hunan people, which means Hunan people do things with positive, optimistic, vigorous and resolute attitudes, bold and unconstrained and do not stick at trifles. Females in Hunan Province also have this kind of character. Therefore, girls in Hunan Province are called "spicy girls", because they are easy to get along with and generous.

Women in Hunan are capable and hot-tempered. Their irrationality makes them seem rude, unreasonable, and not afraid of trouble; they dare to turn the whole world upside down. However, their amazingly cool nature makes them able to do things well and dare to do things. They are also reasonable and fair, understand the general situation and take care of the overall situation, capable of surviving dangerous situations. They can do things well and deal with family and work conflict perfectly. When they are dissatisfied with their families, they speak out directly. When they are angry, they still help their family members.

They like to handle things as quickly as possible. They can help their husbands by advising them on their businesses. If their husbands do something wrong, such as failing in their businesses, they lose their temper and scold their husbands angrily. However, after venting their anger, they will give advice and provide suggestions or even handle things themselves, to help their husbands get out of trouble. That is the "spicy girl", who is hot-tempered, but enthusiastic and considerate. What is more, if a friend of a "spicy girl" has a quarrel with her husband and is wronged, the "spicy girl" will protect her friend and even scold her friend's husband.

Men in Hunan Province are also hot-tempered and enthusiastic, but their performance is different from that of the women. They seek to prevail over others and are more concerned about face-saving. They hate people who say they cannot do something successfully. So, they get angry at people who say they will fail at doing something. They always make up their minds to prove that they can succeed. No matter how difficult the situation, they try their best to succeed. They want to prove their capabilities and do not want to be ridiculed. They remain faithful to friends. When their friends are in difficulty, they take the initiative to care and help them even if their help is not solicited. If their friends are in trouble, they do not hesitate to help them get out of trouble.

The language of Hunan people has short, fast, straight and high tones. In view of this, Hunan people tend to have a high pitched voice. When talking with others, it sounds like quarrelling. The closer the relationship between people engaged in a conversation, the higher the tone of voice. Because of this, when people do not understand the culture of Hunan people, they may feel puzzled as to why one can quarrel and still have a happy expression on their face. However, for those who understand Hunan culture and pepper culture, they become suddenly delighted. Just like the colour of pepper, Hunan people are as enthusiastic as fire. Hunan people like to use modal particles, such as "da", "luo", "sa", which adds to their degree of enthusiasm.

The greetings by young people of Hunan to their good friends are quite special, such as "I haven't seen you for a long time. Where the hell are you?" "You dead guy! Where the hell are you?" People who do not understand pepper culture of Hunan are not familiar with the hot-temper of Hunan people and may be angry with these greetings, because they may consider that as a scold. However, Hunan people think it is very friendly and intimate.

When strangers ask for directions, Hunan people of all ages and both sexes will offer directions in much detail. Sometimes, they even lead the way if possible. Hunan people are hospitable. When relatives, neighbours and even a chance acquaintance visits them, they warmly welcome them, make tea, take out fruits, prepare desserts and offer all the food they have at home, in order to entertain the guests. Meanwhile, they chat heartily with the guests and with a high tone of voice. They care about the health of their guests, their family members and are ready to help as much as possible. Moreover, they ask guests to have dinner with them and serve them with the best dishes they have.

Hunan people dare to say "no" and are particular about right and wrong. If they decide to help you, they put in all their efforts and are very considerate. Hunan people like to help other people. Years ago, there was a joke about poor people who helped the rich. Hunan people were not rich, but they invested tens of billions in Huizhou and Zhuhai in Guangdong Province, Beihai in Guangxi Province, and Hainan Island in Hainan Province. This was described by economists as the poor helping the rich. A notable representative of Hunan people, who liked to help other people was Lei Feng, who came from Wangcheng County of Hunan Province. Lei Feng was ready to help others and serve others wholeheartedly and selflessly. His spirit affected the moral sentiments of generations of Chinese people.

From the above analysis, we know that Hunan people are really hot-tempered and enthusiastic, which are embodied in their attitude towards family and friends as well as in their style of speaking, behaviours and other attributes.

Courageous, Bold and Straightforward

Hunan people in rural and urban areas of Hunan Province are happy without spicy food. No matter how hot the peppers is, they dare to eat it. They eat pepper whenever they want to. Under the influence of pepper, Hunan people have formed a courageous, bold and straightforward character.

During the Agrarian Revolutionary War period, in order to preserve strength, the main force of the Chinese Workers' and Peasants' Red Army withdrew from the north and south Soviet Area (Red Army's bases during the Second Civil War) of Yangtze River and reached Shanxi-Gansu Soviet Area. This event lasted for two years, and was known as the Red Army's Long March. The long march is a great wonder in human history. When the Red

Army withdrew, they went through more than 40 counties (cities) in Hunan Province. Hunan people were not afraid to sacrifice their lives or being put into prison. They, therefore, led the Red Army, stood sentinel and performed guard duties, undertook laundry and cooking and resettled the sick and wounded. Meanwhile, a large number of the youth joined the Red Army. Hunan people are not afraid of danger and, enthusiastically, supported the Red Army, which encountered an extremely hard and bitter struggle at Kuo Min Tang.

Hunan is a magical land, where many people who drive the wheels of Chinese history were born. When looking back into history, the character of Hunan people, such as their courage, boldness and straightforward approach to things, were embodied incisively and vividly. A famous official in the late Qing Dynasty, Zeng Guofan (1807-1872, played a key role in suppressing the Taiping Rebellion and creating the era known as the Tongzhi Restoration). He was only a scholar who did not know how to lead the troops to war, but he dared to train the Xiang-army and personally led the soldiers onto the battlefield. The Xiang-army, which he led, reflected this kind of character. The rise of the Xiang-army inspired a vast number of young people in Hunan to join the army. From the northern expedition to the Agrarian Revolutionary War, from the Anti-Japanese War to the war of liberation, from the war to resist U.S. aggression and aid Korea until today, countless Hunan men have died in battle. They inherited the "Xiang army" story with their own flesh and blood.

Another example of the bold and courageous character of the people of Hunan is Tan Sitong (1865-1898), who devoted all his life to reforms and believed that it was only through industrialization and commerce as well as adopting the political system of the western bourgeoisie that China could become prosperous. He publicly proposed to abolish imperial examination, establish schools, exploit mineral resources, build railways, run factories, and reform bureaucracy. Later, he participated in and led the reform movement of 1898 to reform the system and eliminate maladministration. However, this reform movement failed, and he faced a fatal disaster. Although he had the chance to escape, he chose not to runaway. He said all political reforms were made through bloodshed. He was determined to pursue his reform agenda against feudal forces at the peril of his life. He became known as the first person to have died for reforms.

This character is influenced by pepper. Hunan people love to eat pepper and have, as a result, formed a courageous, bold and straightforward character. They are, thus, able to do things that other people do not dare to do and where the possibility of success and popularity are greater.

Hard-working, Patient and Unremitting

As the saying goes, "A side water and soil raises a side people". Hunan people in rural and urban areas of Hunan Province like to eat pepper and have developed the characters of hard-work, patience and unrelentlessness that are embodied in many literary works and revolutions. There was a common saying that the three largest populations who are the most stubborn in the world were Irish people in the United Kingdom, the Prussian in Germany, and Hunan people in China. If Hunan people set a goal, they work hard to accomplish it. In Hunan Province, if a person is in difficulty and complains to his relatives and friends, they often say, "hold it", which means endure the difficulty.

In history, Zuo Zongtang carried a coffin into Xinjiang in his seventies and, finally, took back Yili and Xinjiang, China. Cai Songpo resisted 100,000 enemy forces (Yuan Shikai's army) with three thousand soldiers. Chen Tianhua committed suicide in Tokyo by jumping into the sea in protest against Japan, and thereby woke up compatriots. These three men reflect the character of Hunan people, who are hard-working, patient and unremitting. Due to this kind of character, Hunan people have always pushed the times forward in the critical period of modern China.

Under the influence of pepper culture in rural and urban areas of Hunan Province, Hunan people do not only like to talk about revolution, but also like to embark on revolution. During the period of wars, Hunan people's character of diligence, patience and unrelentlessness proved most incisive. Mao Zedong once said, "If you can't eat pepper, you can't take part in revolution". It seems that pepper has something to do with revolution.

Mao Zedong also said, "we should have the determination to achieve victory and the courage to surmount every difficulty". He praised the great determination and courage of the Hunan people, indicating that it is not only for the enlightenment of human evolution and outlook on life, but also a focus on realistic struggle. He promoted a spirit of persisting to the end with what one has begun, in the face of difficulties by being fearless,

courageous, and indomitable, with persistent enterprising spirit and dauntless spirit. This spirit reflects the distinctive character of Mao Zedong as a revolutionary. It is also a precious outlook on life and values in the Chinese national culture. Mao Zedong was born with the cultural character of Hunan. It is a remarkable feature of Hunan people that one has to go right to the end with what one has begun with tenacity, hard-work, patience and unrelentlessness.

Ding Ling, a Hunan woman writer who was born and grew up in Hunan, reflected the distinctive Huxiang Culture, such as hard-work, patience and unrelentlessness. Because her father died when she was still young, Ding Ling and her mother suffered and had to depend on other people. Her mother's strong-will and bravery influenced her deeply. She made a decision to change her destiny through her own efforts. She studied hard and made outstanding achievements. Unfortunately, when she was 27 years old, her husband died, she had to raise her child alone and for a long time she even did not tell her mother that her husband had died.

The character of hard-work, patience and unrelentlessness of Hunan people are widely known and admired. It has been passed on from generation to generation. Because of this kind of character, there are many heroes in Hunan province.

Discussion

The goal of this research is to examine the character of Hunan people growing under pepper culture in rural and urban areas of Hunan Province. Firstly, this paper introduces the ingredients and nutrients of pepper and its origin. After pepper was introduced into China, Hunan Province became one of the areas to plant and eat pepper. This has resulted in the establishment of a relationship between pepper and the character of Hunan people, to some extent. Through literature review and interviews, it was found that, under pepper culture in rural and urban areas of Hunan Province, Hunan people have formed the characters of hot-temperedness, enthusiasm, courage, boldness, straightforwardness, hard-work, patience and unrelentlessness.

The previous studies this paper referred to were about the nutritional value of pepper, pepper culture and the relationship between pepper culture and the character of the people. Studies on the factors influencing the character of Hunan people did not consider pepper culture as a very important factor. Since pepper and pepper culture have close relationship with Hunan People, and most of the previous studies did not establish this relationship, this paper uses both literature review and empirical study methods to analyse the relationship between pepper culture and the specific character of Hunan people growing under pepper culture. In this paper, some daily phenomena and historical figures are used to prove the specific character of Hunan people growing under pepper culture.

Conclusion

The unique character of Hunan people growing under the pepper culture in rural and urban areas of Hunan Province has been examined. It can be concluded that the main character of Hunan people is hot-temperedness, enthusiasm, courage, boldness and straightforwardness, hard work, patience and unrelentlessness, which play an important role in promoting individual and social development.

Pepper culture in rural and urban areas of Hunan Province occupies a very important position in Huxiang Culture. It can be said that there is no complete Huxiang culture without pepper culture. Also, food is closely related to people's character. Because Hunan people like to eat pepper, they have a pepper culture, which has influenced the character of the people in terms of their hot-temperedness, enthusiasm, courage, boldness and straightforwardness, hard work, patience and unrelentlessness.

Character is essential to a person's success. Hunan people believe that no matter the kind of trouble you are in, you must never give up, you have to be hard-working, patient and unremitting in order to be successful. Character determines behaviour and destiny. Due to these characters, it is not difficult to understand why there are so many heroes in Hunan Province.

In the tide of history, Hunan people often can turn back the powers of darkness and promote the progress of history. Because Hunan people are hot-tempered, and enthusiastic, they have the power of action; Hunan people are courageous, bold and straightforward, which enable them to dare to do things without the fear of losing their lives; Hunan people are hard-working, patient and unremitting, which make them hold on till the last minute, and, finally, do things successfully.

The character of Hunan people makes them play an important role in the development of history. Historically, Hunan heroes have come out in an endless stream,

especially in modern times, such as Wei Yuan, who is known as the first Chinese who opened his eyes to the world. He proposed the idea that China should learn from foreigners in order to compete with them and realize the transformation of Chinese social trend of thought around the Opium War. Zeng Guofan who was a scholar, but trained the famous Xiang Army, and became victorious over the Taiping Heavenly Kingdom Movement. Zuo Zongtang, who was famous for recapturing Xinjiang from tsarist Russia, and thereby safeguarding China's territorial sovereignty. Huang Xing was an important leader of the 1911 Revolution, who personally fought in the uprising and was known as "the standard Hunan mule" (indicating a person who is stubborn). Some have even said that without Huang Xing, there would have been no Republic of China. Mao Zedong, who led the Red Army to victory in the Counter-Japanese War and war against aggression, and thereby safeguarding China's territory and sovereignty, leading to the establishment of the People's Republic of China in 1949. Besides, there are so many Hunan people who played important roles in the social development of China, such as Tan Sitong, Cai E, Liang Qichao, Liu Shaoqi, Peng Dehuai, He Long, Luo Ronghuan, Su Yu, Huang Kecheng, Chen Geng and Cai Heshen.

The character of Hunan people does not only promote the development of the society, but are also essential to the development of the individual. Mao Zedong loved to read and this helped him greatly during the war. No matter how hard the condition was, he kept reading. He used theory to guide practice and linked theory with practice, leading the Chinese people to gain national independence and founded the People's Republic of China. It is this character of hot-temperedness, enthusiasm, courage, boldness and straightforwardness, hard work, patience and unrelentlessness that enabled him to be a great leader of the people of China.

Meanwhile, Hunan people in rural areas do not only eat pepper, but also plant pepper, while Hunan people in urban areas only eat pepper. Therefore, rural people have more direct feelings about pepper, and their character relating to pepper culture are more prominent than urban people.

This paper provides some evidence on the relationship between Hunan pepper culture and the character of Hunan people. It should arouse further interest in the study of Hunan people.

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Emotional Control Ability and Interpersonal Relationship of City Undergraduates

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Abstract: Undergraduates do not only need to study to acquire knowledge, but also need to pay attention to interpersonal communication. The university period is an important turning point for socialization. If undergraduates are not able to control their emotions, that could cause problems during their interpersonal communication. It could affect their own mental health development and even harm others and society, as a whole. In this study, a questionnaire survey was conducted among 213 undergraduates from Guizhou University of Finance and Economics. The main results show that, first, there was a significant difference in emotional awareness between religious undergraduates and non-religious undergraduates. Secondly, there was a significant difference in undergraduates' interpersonal relationships between males and females. Lastly, emotional control ability of undergraduates is positively related to their interpersonal relationships. As a result, establishing good interpersonal relationship through better emotional control will help undergraduates to form and develop healthy personality traits.

Key words: undergraduates; emotional control ability; interpersonal relationship

Introduction

College students are the ones who will facilitate social development in the future. Therefore, their lack of good emotion control and interpersonal relationship will not only be an individual problem, but also a social problem. Therefore, it is important to shape the personality of undergraduates before they leave campus and enter the bigger society. Cities are more complicated than rural areas and easily influence people's activities. College students come from everywhere, and it is not easy for them to get along with each other, especially for those who are coming from rural areas. College is a small society and if college students' ability to self-adjust and self-control is not strong, it would affect their interpersonal relationships, and this would have adverse consequences.

Literature review

Mayer and Salovey (1999) indicated that the ability of emotion management is an individual's ability to regulate and appropriately retrieve or escape from certain emotional constraints. In other words, it is the ability to correctly recognize, select, and understand one's emotions and that of others, and the ability to consciously guide, adjust and control in order to move towards the direction of healthy development. Zhang et al. (2013) believed that the ability of emotion management is an individual's ability to find positive emotional strategies to cope with emotional discomfort when they are experiencing negative emotions. Qu (2015) consider the ability of emotion management as the ability to obtain the expected and positive emotional state through conscious and purposeful self-regulation which, by their own efforts, individuals encounter against the development of negative emotions.

According to the research results of Li (2016), there is a difference in emotional understanding and utilization by gender, Female students' emotional comprehension and ability to utilize their emotions were significantly higher than those of male students. Also, in terms of the main factors, the results of female students were much higher than those of the male students. Meng (2012) believed that students' ability to manage their emotions could be affected by the economic condition of their family, to a certain extent.

Li (2012) divided interpersonal relationship into two parts, namely interpersonal interaction and interpersonal relationship. Interpersonal interaction refers to an individual's communication and interaction with others in daily life. There are two kinds of situations, which are communication adaptation and communication disorder. Interpersonal relationship refers to the individual's ability to live together with other people for a long time; There are two aspects of relationship, which are get along with and feel intense. Zou (2014) argued that cognitive bias,

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affective disorders, and lack of mobility were the important causes of interpersonal conflict among most college students. He (2013) summarizes the situations that would directly influence interpersonal relationship in the dormitory into ten, namely injury to others' self-esteem, language conflict, bad habits, selfishness, noise during rest time, seeing things differently, doing things with less synergy, sarcasm, taking other people's belongings without asking and ignoring other people's feelings.

The research of Lo and Zhu (2016) shows that interpersonal relationship is positively related to negative cognition and emotional regulation. The status of interpersonal relationship can be predicted by negative cognitive emotional regulation. Therefore, the emotion regulating ability in emotion management ability is related to interpersonal relationship. Wang (2014) stated that interpersonal relationship is more and more satiated with the continuous progress of science and technology. There are real interpersonal relationships and virtual interpersonal relationships. There was a significant positive correlation between real interpersonal relationship and four dimensions of EQ. There was also a significant positive correlation, but in lower levels, between virtual interpersonal relationship and three dimensions of emotion perception, emotion understanding and emotion utilization.

Based on the literature review above, a hypothesis is proposed.

There is no significant relationship between emotional control ability and interpersonal relationship of city undergraduates.

Methodology

Participants were recruited through random selection of freshmen to seniors in Guizhou University of Finance and Economics, Guiyang, Guizhou province, China. A total of 250 questionnaires were issued and 213 out of 250 of the questionnaires were returned, representing a response rate of 85.2%.

Table 1: The Basic Demographic Characteristics of Participants

		N	%
Gender	Male	78	36.6%
	Female	135	63.4%
Minority	No	128	60.1%
	Yes	85	39.9%
Religion	Non-religious	148	69.5%
	Religious	65	30.5%

The basic demographic characteristics of the participants are presented in Table 1.

Instruments

Scale of Emotional Management Ability for Undergraduates (SEMAU). The SEMAU was designed by Meng in 2012. It comprises 22 items and consists of 5 dimensions, namely regulating ability, performance ability, awareness ability, comprehension ability and application ability. Each is rated on a 5-point scale (1 strongly disagree – 5 strongly agree). Examples of items are: "I know the reason why my emotion changes." and "When something goes wrong, I try to find some reason to comfort myself so as to reduce my inner disappointment." The higher the score, the higher the level of emotional management. The Cronbach's alpha coefficient was 0.829 and the correlation coefficient of each dimensions was between 0.411 – 0.619.

Scale of Undergraduates' Subjective Factors Affecting Dormitory Interpersonal Relationship (SUSFADIR). The SUSFADIR was designed by Li et al. in 2012. The SUSFADIR comprises 25 items and consists of 5 dimensions, namely interpersonal security, interpersonal expectation, interpersonal tension, interpersonal revenge, and interpersonal anxiety. Each item was rated on a 7-point scale (1 very inconformity – 7 very conformity). Examples of items are: "I think roommates are not as friendly as I think." and "I feel isolated in the dormitory." The higher the score, the higher the level of influence of subjective factor. The reliability coefficient of the total scale was 0.900 and the correlation coefficient of each dimensions was between 0.54 – 0.91.

Results

First, the overall emotional management ability of undergraduates was 3.627, which is higher than the average score (See Table 2).

Table 2: Summary of Emotional Management Ability of Undergraduates

Item	M±SD	Average scores
Regulating ability	21.36±3.955	3.56
Performance ability	21.03±3.660	3.505
Awareness ability	14.71±2.180	3.677
Comprehension ability	11.32±1.876	3.773
Application ability	11.38±1.817	3.793
Total scores	79.80±11.466	3.627

There is no significant difference in emotional management ability

among college students by gender (P > .05).

There was a significant difference in the dimension of comprehension ability among different nationalities (P < .01). See Table 3.

Table 3. Comparison of Emotional Management Ability Among Undergraduates by Nationalities

	Han（M±SD）	Minority（M±SD）	*t*	P
Regulating ability	21.48±4.334	21.18±3.770	.608	.544
Performance ability	21.16±3.320	20.80±3.498	.74	.460
Awareness ability	14.82±2.470	14.55±1.651	.947	.345
Comprehension ability	11.59±1.876	10.91±1.810	2.65	.008**
Application ability	11.23±2.045	11.60±1.390	-1.553	.122
Total scores	80.31±12.433	79.02±9.852	.841	.401

Note: **p<0.01, *p<0.05

Then, there was a significant difference in the dimension of awareness ability by religion (P < .05). See Table 4.

Table 4. Comparison of Emotional Management Ability Among Undergraduates by Religion

	Religious（M±SD）	Non-religious（M±SD）	*t*	P
Regulating ability	21.58±4.680	21.26±3.605	.556	.579
Performance ability	21.86±4.838	20.66±2.948	1.853	.067
Awareness ability	15.28±2.027	14.47±2.205	2.531	.012*
Comprehension ability	81.60±13.517	11.36±1.694	-.455	.649
Application ability	11.65±1.709	79.01±10.391	1.378	.158
Total scores	11.23±2.248	11.26±1.857	1.418	.171

Note: **p<0.01, *p<0.05

Second, the overall score of subjective factors among college students' interpersonal relationship was 3.308, higher than the average score, as shown in Table 5.

Table 5: Effect of subjective influence factors on interpersonal relationship of Undergraduates

Item	M±SD	Average scores
Interpersonal security	11.17±3.894	3.723
Interpersonal expectation	27.09±5.681	4.515
Interpersonal tension	16.22±5.750	3.244
Interpersonal revenge	16.25±6.265	2.708
Interpersonal anxiety	11.96±4.853	2.372
Total scores	82.70±18.456	3.308

In Table 6, there were significant differences in each dimension of the subjective factors affecting interpersonal relationship among undergraduates based on gender (P < .05).

From Table 7, there were also significant differences in four dimensions of the subjective factors affecting interpersonal relationship among undergraduates based on nationalities except interpersonal anxiety (P < .05).

There were, however, no significant differences in each dimension of the subjective factors affecting interpersonal relationship among undergraduates based on religion (P > .05).

Table 6: Comparison of Subjective Factors Affecting Male and Female Undergraduates' Interpersonal Relationships

	Male（M±SD）	Female（M±SD）	*t*	P
Interpersonal security	13.5±3.530	9.8±3.428	7.52	.000***
Interpersonal expectation	24.55±4.305	28.56±5.871	5.714	.000***
Interpersonal tension	18.37±6.469	14.98±4.900	4.016	.000***
Interpersonal revenge	17.50±7.131	15.53±5.608	2.091	.038*
Interpersonal anxiety	14.04±4.697	10.76±4.542	5.007	.000***
Total scores	87.9±19.687	79.6±17.045	3.246	.001**

Note: *p<0.05, **p<0.01, ***p<0.001

Table 7: Comparison of Subjective Factors Affecting Han and Minority Undergraduates' Interpersonal Relationship

	Han（M±SD）	Minority（M±SD）	*t*	P
Interpersonal security	10.69±3.974	11.91±3.673	-2.258	.025*
Interpersonal expectation	26.09±5.966	28.60±4.880	-3.222	.001**
Interpersonal tension	15.18±6.334	17.79±4.318	-3.574	.000***
Interpersonal revenge	15.16±5.996	17.89±6.338	-3.181	.002 **
Interpersonal anxiety	11.61±5.034	12.49±4.545	-1.305	.193
Total scores	78.7±18.788	88.6±16.303	-3.985	.000***

Note: *p<0.05, **p<0.01, ***p<0.001

A Pearson correlation analysis of emotional management ability and subjective factors affecting interpersonal relationship among undergraduates shows that there was a significant negative correlation (P < .05), as shown in Table 8. Therefore, there is a positive relationship between emotional management ability and interpersonal relationship among undergraduates. Thus the stronger the emotion management ability of college students, the more harmonious the interpersonal relationship in the dormitory. On the contrary, the weaker the emotional management ability, the worse the interpersonal relationship in the dormitory.

Table 8. Pearson Correlation Analysis of Emotional Management Ability and Subjective Factors Affecting Interpersonal Relationship

	Regulating ability	Performance ability	Awareness ability	Comprehension ability	Application ability	Total scores of emotional management abilities
Interpersonal security	-.093***	-.091**	-.106	-.126**	-.058*	-.111**
Interpersonal expectation	-.404*	-.287***	-.391***	-.285**	-.295**	-.399**
Interpersonal tension	-.105**	-.044***	-.073**	-.028**	-.034**	-.026**
Interpersonal revenge	- .040**	-.030**	- .044	-.013**	- .017**	- .013**
Interpersonal anxiety	-.029**	-.066**	-.112**	-.025*	-.009	-.055**
Total scores of interpersonal relationships	-.159**	-.063**	-.165*	-.055**	-.071**	-.126**

Note: *p<0.05, **p<0.01, ***p<0.001

Lastly, according to the results above, it could be argued that emotional management ability of college students is positively related to interpersonal relationship at the dormitory. The linear regression analysis was conducted with emotion management ability as the independent variable and interpersonal relationship as the dependent variable. It showed that emotional management ability can predict the subjective factors affecting undergraduates' interpersonal relationship negatively, meaning emotional management ability can predict interpersonal relationship positively (Table 9).

Table 9: Regression Analysis of Effect of Emotional Management Ability on Subjective Factors Affecting Undergraduates' Interpersonal Relationship

Independent variables	Dependent variable	R^2	β	F	t
Total scores of emotional management ability	Total scores of subjective affecting factors of dormitory interpersonal relationship	.566	-.526	26.423*	-4.850*

Note: *p<0.05, **p<0.01, ***p<0.001

Conclusions and recommendations

Conclusions

Emotional management ability

There was a significant difference in the dimension of comprehension ability of emotional management ability among nationalities. That is, the comprehension ability of Han nationality students is higher than that of Minority Nationality Students. The result may be attributed to the fact that the living conditions of Han students afford them

the opportunity to make more choices and to interact with others in society. Frequent exchanges and interactions make Han students better at communicating than minority students. In addition, minority college students usually think in their native language. Thus, there are two thinking patterns in their mind when they are interacting with others. It, therefore, takes more time for them to translate what others say subconsciously, thereby reducing the ability to communicate and comprehend others.

There was also a significant difference among students on the dimension of awareness ability of emotional management ability based on religion. That is, students with religious beliefs have higher awareness ability than those without. Comparing people with religious beliefs to those without religious belief, faith enables them to have more time to reflect on their daily lives. Using Christians, for instance, who usually pray every day and go to church to confess every Sunday. Therefore, they have more time to reflect than the other students, and it is a disciplined reflection. Therefore, people with religious beliefs are more likely to perceive their emotions or other people's emotions.

Subjective factors affecting undergraduates' interpersonal relationship

There were significant differences in each dimension of subjective factors affecting interpersonal relationship among undergraduates by gender. Generally speaking, the scores of dormitory interpersonal relationship of male students is higher than that of female students. The reason for this result is that male students are more aggressive than female students. Male students are more dominant and there is a greater chance of they engaging in conflicts than female students. Besides, male students are more directly or less concerned than female students when they encounter abuse or sensitivity. Female students have high interpersonal expectations, because their social status leads them to rely more on groups and persons they trust.

Also, there are significant differences between the Han nationality and minority college students in the subjective factors affecting students' interpersonal relationship. The reason for this result is that dietary habits, or ethnic culture is different for minority college students. There are different opinions about the causes of anxiety and repulsion. For instance, "Hui" people consider pigs as sacred in their community, which is inconsistent with the other ethnic groups. Therefore, different people would be in conflict while living together. Minority college students are more enthusiastic, more honest, more mature in personality, thus differences in living habits are inevitable.

Lastly, based on the results above, emotional management ability of college students will influence students' interpersonal relationship. There was a significant positive correlation and the predictive value is 56.6%, meaning the stronger the emotion management ability of college students, the more harmonious the interpersonal relationship in the dormitory. On the contrary, the weaker the emotional management ability, the worse the interpersonal relationship in the dormitory.

Recommendations

Anger is only one letter short of danger. Therefore, people should not only manage their own emotions, but also to care about other people's emotions. Although it is not easy to change one's emotions, since it is already a part of one's personality, as a result, it requires the support of families, schools, and one's own self to manage. Having a positive cognitive and objective evaluation and attribution would have a positive effect on college students' mental health. Therefore, we can improve the emotional management ability of college students in the following ways.

Group counselling

Group counselling enables members to gradually become open, seek themselves and explore themselves in depth. In an open, tolerant and sincere atmosphere, people can overcome fear, not only by finding people they can trust, to vent their negative or positive emotions, but also to understand the importance of emotional management.

Physical exercise

Proper exercise can help us distract attention. We can have enough time to think carefully, thus avoiding impulsive and irrational behaviour. At the same time, it can also give us avenues to vent our negative emotions and temper our patience. Proper exercise does not only help us to get healthy, but also enables us to gain an open mind.

More reading

College students could be infected by positive emotions whiles reading, gaining positive energy, shifting their attention from the context of annoyance, opening their minds and becoming peaceful. Of course, reading cannot be a short-term task, it needs to be done over a long time. It would be more beneficial for college students to read alone and together.

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城市化与城市伦理的构建

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摘 要：城市化是从传统乡村社会向现代城市社会转型的伟大变革，是传统社会向现代社会进化的必然路径。其外在表现为城市的不断扩张和乡村的不断衰退，其内在表现为以传统血缘、地缘观念为纽带的熟人社会向以现代职业观念为纽带的陌生人社会的转型，表现为传统宗法伦理向现代城市伦理的转型。当代中国如火如荼的城镇化进程改变了中国，也改变了世界，但是，物质形态的改变明显占优，精神层面的转型尚显滞后，而后者才是城市化的本质。未来中国新型城镇化应该强调以社会主义核心价值观引领当代城市伦理的构建。

关键词：中国；城市化；新型城镇化；城市伦理

当前中国正处于转型的关键时期。这种转型是多维的，涉及整个社会的经济基础和上层建筑，包括经济、政治、文化及社会方方面面。其中，经济的转型是主导和龙头，这从改革开放以来，尤其是近十多年出现的所谓“中国制造”、“中国速度”、“中国模式”、“中国现象”可以证明，中国经济发展的质和量及其对中国和世界所产生的深刻影响举世瞩目。而当前中国经济增长最大的红利无疑是如火如荼的新型城镇化。截至 2017 年底，中国的城镇化率达到 58.52%，并且，这一数字仍以平均每年 1.2%的速度在快速增长，显然，中国已经不再是传统的农耕社会。这种城镇化转型外在表现为人口的迁移和城镇建筑的扩张等物质层面的变革，内在表现为社会格局和利益关系的调整，以及由此导致的社会价值体系、道德观念等意识层面的潜移默化，进而导致的政治体制、社会治理方式等管理层面的演变。反过来说，价值体系、道德观念、政治体制、社会治理方式的变革也必将反作用于城镇化和整个经济发展的速度和质量。本文仅从道德层面探析当前中国新型城镇化进程的影响因素及其影响机理。

一、城市、城市化及城市伦理

城市是相对于农村而存在的概念，二者统一为社会整体。英语中，“城市”叫 city，“农村”叫 village，二者组合而成为 civil，意为“公民”，进而演化出 civilization 这个词，意为“文明”。

中国是一个传统农业大国，农村是主流的社会形态，城市是农村的补充。中国古代的“城市”一词，如《韩非子·爱臣》所说“是故大臣之禄虽大，不得藉威城市”，实际包含“城”与“市”两个概念。“城”就是城郭，属于军事设施，用以保护在其内聚居生活的君和民，如《吴越春秋》所言：“筑城以卫君，造郭以卫民”。而“市”就是指一种商品交换的活动和交换场所，如《易·系辞下》所谓：“日中为市，致天下之民，聚天下之货，交易而退，各得其所。”依此可见，早期的“城市”功能主要是防卫和商品交易，兼为农村的政治中心。中国古代社会以农为本，重农轻商，男耕女织，耕读传家。农家的优秀子弟通过科考或举荐进入仕途，来到城市，但他的根始终在农村，老了还要告老还乡，父母去世了要回乡守制丁忧，当官虽然风光，城市虽然繁华，但一切都是过眼烟云，城市终究只是一个工作场所和临时居所，最终还是要衣锦还乡。也有的农村人来到城市经商，经济上大富了，但政治地位仍是末流，获利以后，最好的办法就是在农村的老家广置田产，继续其世代耕读传家的生活。因此，中国古代的城市始终只是广大农村的核心和补

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充。

随着时代的推移和社会分工的细化，“城市”的功能也不断调整与增强，“城市”的防卫功能和政治功能逐渐弱化，其经济功能与居住功能日益强大，“城市”一词的内涵日渐丰富。《中国大百科全书》给“城市”定义为：大量异质性居民聚居，以非农职业为主，具有综合功能的社会共同体。这是从经济和社会学角度的定义。事实上，不同专业的学者从各自不同的学术视角对“城市”的认识是完全不同的，如帕克就认为城市不单单是一种物质现象，也不能简单理解为人的构筑物，而应该将城市理解为一种心理状态，是各种传统和风俗所构成的有机整体。对城市的这种理解就超越了地理学、社会学和经济学各自对城市所作的表层界定，而直接指向了城市的深层本质：人的内在状态。

“城市化”是一个动态的定义，描述了从传统乡村社会向现代城市社会转型的过程。因此，“城市化”或者“城镇化”是一个现代意义的概念。这种转型是多维的，因而不同专业的学者对于“城市化”概念的理解也是多样的，它至少包含以下几个层面：

第一是传统型的城市化概念。认为城市化是指随着产业经济向城镇的集中而发生的农村人口向城镇转移的过程。

第二是现代型的城市化概念。这种定义在传统定义强调人口转移、职业转业和产业集中的基础上更加突出了都市文明和现代生活方式的扩张。

第三是后现代型的城市化概念。这种定义特别突出强调生活方式转变和都市文明渗透等深层内涵。至于传统城市化定义中以人口、地域和生产要素集中作为城市化的标准则表示怀疑。

横向来看，不同的学科对于城市化概念也有着不同的理解：

地理学主要研究地域与人类活动之间的关系。在地理学家看来，城市是一个地域范围，是人类经济、政治、文化等要素密集分布的空间。因而地理学的城市化概念则主要是指城市范围的扩大。表现在两方面：第一是区域范围内城市规模的扩大；第二是城市数量的增加。

经济学的视角则是站在城市与经济的关系上来定义城市化。在经济学中，城市的主要特征表现在工业生产的集中。因此，城市化的过程就被理解为农业人口转变为工业人口和生产要素向城市转移和集中的过程。

社会学的研究对象是人与人之间的社会关系或者说社群网（即人与人之间的关系网）。对社会学来说，城市是一种在社群网的广度、密度和深度上独具特征的共同体。因此城市化在社会学中是指社群网的广度不断扩大、密度日益降低和人际关系逐渐趋向专门化与单一化的过程。

人类学的研究对象则是社会规范，在他们看来，城市首先意味着一种生活方式。那么城市化的过程就是生活方式的转变过程，即由乡村的生活方式转向城市生活方式。这种定义也是为其他学科所普遍接受的，虽然社会规范的概念十分抽象并且在度量上非常麻烦。

上述不同理解，恰好说明了“城市化”的多维特征，也说明了城市治理的多样性和复杂性。“城市化”表现为城市建筑的扩张和人口从乡村向城市转移的过程，涉及社会整体格局的变迁和各阶层利益关系的调整，其本质是“人的城市化”，是传统乡村伦理向现代城市伦理进化的过程，是现代城市文明向传统乡村文明的革命。因此，对城市的价值判断与道德引领是城市化进程中的最大变量。

伦理是指人与人及人与自然的关系和处理这些关系的准则。不同的社会有不同的伦理准则，传统乡村社会有乡村伦理，现代城市社会有城市伦理。乡村伦理是指在乡村社会背景下人与人及人与自然的关系和处理这些关系的准则，城市伦理是指现代城市社会背景下人与人及人与自然的关系和处理这些关系的准则。具体而言，城市伦理包括城市市民之间的关系、城市管理者与市民的关系、城市管理者与城市建筑的关系、新城区与历史街区的关系、城市与城市的关系、城市与乡村的关系、城市公共区域与市民个人空间的边界等等。

二、传统城市与传统伦理的特点

中国是一个传统的农业社会，男耕女织、自给自足、安土重迁的小农经济培育出以血缘、地缘为纽带的小农关系型社会，费孝通先生把它叫“熟人社会”。人与人通过这种血缘和地缘关系联系起来，构成一张张关系网和一个个关系圈子，大家非亲即故、沾亲带故。背景和关系是熟人社会的典型话语。民间“熟人好办事”的说法，正是对熟人社会的一种朴实表达。时至今日，社会上各种老乡会、同学会、战友会、宗亲会等民间非正式组织异常火爆，没有

这种那种关系的也要人为地组织关系网，搞团团伙伙，吃吃喝喝，大家相互支持与照应，你投我一票，我拉你一把，白道黑道，在社会上大行其道，表面看好像有利于工作的开展，是好事，但实际上这是传统农耕社会思维方式借尸还魂，有悖于现代城市公民社会的公平正义原则，与现代城市社会是背道而驰的。

（一）传统城市的特点

1. 政治功能压倒经济功能。西方传统城市大多由商业推动，兴起于繁华的港口或其他交通枢纽地区。中国传统城市则大多由政治推动，政治的需要是城市的首要功能。传统中国是一个集权社会，权力集中的地方就成为人口集中的地方。费孝通先生说：“城市是权力的象征，是权力的必需品。”[1]在城里居住的人首先不是一般市民，而是拥有特权的各级官僚以及与之有血缘关系的亲属和有从属关系的仆役，以及为他们的生活提供保障的手工业者和部分商人。封建集权有严格的等级区分，传统城市的规划也严格依照等级制度进行分区和建设。例如：北京城的规划由内而外分为宫城、皇城、内城、外城几个层次，外城服务内城，内城服务皇城，皇城拱卫宫城，北京是全中国的政治核心，宫城是北京城的核心。其它城市也是参照这个规制而建。因此，中国传统城市大多都有一环、二环、三环等环线，人们戏称为“摊大饼”。

2. 城市的封闭性。为了实现城市的政治功能，中国传统城市都具有强大的防卫功能，都有坚固的城墙、城门、护城河等，既可以防范敌人的入侵，也可以防止臣民对统治者的反抗，因此传统城市具有封闭性。直到改革开放初期，中国的城市仍然是具有封闭性的，城市和乡村存在明显的差别，叫剪刀差。

3. 城市数量稀少。古代中国是世界上少有的几个疆域极其广阔的国家，占了整个亚洲的大部分。与之形成鲜明对比的是中国城市的密度却不高，只有在少数地理环境优越，人口稠密的地方才可能见到较大的城市。原因在于中国自古便是典型的农业国家，以小农经济为主，众多人口散居在大片土地上上从事体力劳动，不能集中起来。在这样的背景下即便出现商品经济，那也只是对自然经济的一种补充，自身成长不起来。同时，城市出于政治目的而建也注定了城市不会大面积的出现，只能出现在集权者所处的地方。

（二）传统城市伦理的特点

如前所述，传统中国属于典型的乡村社会，即便是城市，也只是乡村社会的补充，传统城市没有孕育出成熟的市民社会，因而也没有形成西方成熟的市民伦理与市民精神。中国传统城市伦理与传统乡村伦理大同小异。

1. 等级观念。政治功能在中国传统城市中占主导地位就意味着必定有一套特定的伦理体系来规范市民（一般意义上的市民）的生活。事实上，中国传统社会就是一个政治和伦理高度统一的社会，政治伦理化，伦理政治化。中国社会在政治上具有明显的“家国同构”色彩。家庭是以伦理关系来维系的，国家应该以政治制度来维系，但是传统中国的国家制度在很大程度上可以视为家庭伦理关系的推演，即所谓的“宗法制”。家庭伦理有着严格的尊卑长幼之分，子女对父母有绝对服从的义务，即所谓“亲亲”，要求父慈、子孝、兄友、弟恭。推演到国家层面，就要求臣民对于天子、下级对于上级要绝对忠诚。所谓“君君、臣臣、父父、子子”。但从逻辑上来说，“父父、子子”可能是“君君、臣臣”的内在根据。统治者们当然意识到了这一点，因此“历代统治者非常重视宗族的作用，把宗族作为维护其统治的桥梁。”[2]中国传统城市因政治目的而建，其布局安排也自然体现与政治相统一的传统伦理色彩。在这样的城市中，尊卑等级是被严格划定的，市民与市民之间的人格并不是对等的，也就无平等可言。一切都严格依照尊卑、贵贱、命令与绝对服从的关系运行。

2. 熟人观念。与城市的封闭性相对应，传统市民的伦理也是局限在“小圈子”中的伦理。城市是一个圈子，由于严格的等级之分，城市内又会出现许多的小圈子。这样的关系圈的核心当然是家庭，圈子内的是亲人和朋友，圈子外的则是外人。对于亲人朋友当然是同甘苦共患难，共同进退；对于外人那就要另当别论，因为他们与自身利益和情感均不相关。圈子内因为以家庭为核心，因而也是有着严格的等级之分的，这在上文也几经论述到了。这样特点就决定了中国传统伦理特别重“义”，这个“义”是指情义，这导源于家庭伦理关系。因而我们至今还觉得中国社会是一个“人情”社会，这是有着深远的历史渊源的。情义首先是要有亲疏远近和等级之分的，所谓“仁者，亲亲为大”，然后才能推己及人，所谓“老吾老以及人之老，幼吾幼以及人之幼”。关系圈之内的情义永远胜过关系圈之外的情义，关系

圈之内的情义也更让人有安全感。旧中国城市里的各种帮会，也属于传统社会的一种“圈子”，帮会内部组织严密，等级分明，帮会内部讲究“义”字当头，帮会议事的场所大多叫“聚义堂”。

3. 农本观念。中国传统城市数量的少和密度低就意味着城市人口占总人口的比重小。同时，城市人口中主要也不是从事商品生产的商人，而是特权阶层和其亲属随从。广大的农业人口占总人口的绝大多数。因为没有商业作为城市经济的支撑，城市的运行只能依靠农业的支持，城市内的特权阶层也是依靠剥削地租和收缴各项杂税来维持奢侈生活的。农业是国家经济的根本，也是城市得以存在的根本。这样的现实使统治者很早就领悟到了“民为水、君为舟”的道理，并逐渐产生了“民惟邦本”、“使民以时”等民本思想。[2]当然，这里的民不是指独立的个体，而是以家庭、民族、社会和国家为单位的群体。在这样的群体中，个人是不具有独立的自我意识的，他不能单独存在，只能作为群体的一部分而存在。个体的利益和行为更加不能独立于群体的利益和行为之外，因为个体从属并依赖于群体。这就是中国传统的“群体本位”伦理价值观。这样的价值观不仅仅是统治阶级为方便其统治而倡导的，更是为广大民众所深刻认同的，因为几千年的存在使这样的观念在他们脑海中根深蒂固。

三、城市化对当代城市伦理构建的影响

（一）现代城市的嬗变

时代在前进，社会也在不断向前发展，现代城市的出现正是人类文明进步的体现。虽然表面上都表现为人口的集中和城市建筑的扩张，但现代中国的城市化与中国传统城市却有着本质的差别。

最根本的体现在于经济基础的不同。中国传统城市的存在和运行依赖农业经济维系，而农业生产则很明显并不发生在城市，因此，在这个意义上可以说传统城市是农村的补充，是一种寄生物。现代城市完全不同，社会主义市场经济建立之后，城市成为商品生产和交易的首选场所，城市商铺林立，商业活动极为频繁，商业人口占据城市人口的很大部分，商业活动成为推动城市发展的最主要动力。工业城市的兴起则使得城市不仅仅是人口的集中地，也成为了生产的集中地。

现代城市在很大程度上都出现了政治功能让位于经济功能的情况。当然不能否认，城市总处在经济、政治和文化的中心，这种变化是相对于传统城市主要出于政治目的而建来说的。并且，随着市场经济的发展，中国出现了大量的因为经济的兴盛而兴起的城市，特别是在沿海地区和交通枢纽的所在地区，这些城市往往规模较大，人口众多，商业异常繁荣。

另一个特征表现在中国现代城市化进程速度加快和城市化水平的显著提高。截至 2017 年，中国的城镇化率达到 58.52%，表明中国不再是乡村社会。

相对于传统城市，中国现代城市正日益开放，乡村与城市之间、城市与城市之间都能够实现人口的自由流通，不同国家之间的城市也能实现较为自由的贸易和交往。

当然中国城市的这种变化对于市民伦理构建的影响也不全是积极意义上的，未曾经历过的变化也会给人们的伦理观念带来意想不到的冲击。

（二）城市化对当代城市伦理构建的正面影响

重视个体的权利与责任。前文已经分析过，中国传统伦理有一种“群体本位”的价值取向。当代市场经济建立后，每个人都成为了市场中的主体，个人不再只是依附于群体的一部分，而是有了各自的价值。个人的行为和选择也有了天然的正当性。在市场中，个人有权利选择和他人交易和合作，当然也有权利选择分手，一切选择所产生的后果都由自己承担。个人的这种权利和责任是对等的，只要个体意识到他已经脱离了集体而自由存在，他就会意识到这种对等关系。城市化必然带来商业化，这在现代社会中是不可避免的。那么城市化所带来的这种伦理也必然深入每个市民心中，体现在他们工作、学习和生活的各处。

崇尚自由精神。市场经济的最大特征就是自由竞争。城市中的人口在某种程度上来说相对农业人口更加自由，因为农业人口尚有土地可以依赖，城市人口几乎无所凭借，所谓“无恒产者，无恒心”。他们每个人都是自由的，也向往自由，因为他们只有在自由的商业竞争中才能得以生存下去。

追求人格与尊严的平等。传统城市格局依人之尊卑贵贱而设定，现代城市则没有这样的现象，人与人在法律上都是平等的主体，享有相同的权利。他们能在城市中处于什么样的地位和境遇，全由个人的能力而定。市场经济中

的每个人也都是平等主体，这种平等关系影响到政治、文化、生活中的关系。因此“市民社会的内在联系，既不是传统血缘亲情关系，也不是行政的垂直指令性关系，而是内在于市场经济的平等自愿的契约性关系。”[3]

尊重普遍法则。中国传统伦理强调待人以“礼”，这种“礼”是有等级之分的，所谓“礼以别异”，对于不同阶级的人的“礼”不同，在同一阶级中的不同辈分之间也有不同的的交往方式，这都是被严格规定的。出现市民社会之后，社会的秩序则不再由封建伦理纲常主导，而代之以普遍有效的法律。法律这种普遍性的法则不因对象的不同而采取不同实现方式，而是普遍适用，不论现实中人的贫富贵贱，在法律面前均一视同仁。这种普遍的法则也保护了人的共同尊严和基本权利，使每一个人在拥有共同底线的基础上自由发展。市民只有在法律的保护和制约下才能和谐相处，也才能体会到自由。市场经济也只有在这种普遍法则的规约下才能实现良性发展。

（三）城市化对当代城市伦理构建的负面影响

社会转型对市民伦理意识的负面影响表现在三个方面：[4]

1. 伦理标准含混不清。即个人在道德层次、法人层次、规则层次的是非标准变得含混不清。

2. 传统伦理遭到质疑。随着社会失范现象的发生，传统的伦理道德似乎失去了合理性，传统美德遭到质疑，非道德主义泛滥。

3. 缺乏统一的权威性的道德理想。这是由道德教育价值标准的多元化导致的。

中国当代城市化是社会转型的一种集中和典型体现，因而社会转型对市民伦理意识的负面影响也同样是城市化所必然要带来的，在这里就不需要赘述了。

当然，如果能够深层次地分析城市化的本质，同时在立足当代的前提下，对传统的伦理道德观念进行清理，整合传统美德与当代伦理新观念，重新树立一种具有时代特征的伦理规范，那么，这些负面的影响迟早是可以消除的。我们可以认为，我们现在所面临的伦理困惑只不过是新旧伦理相冲突所产生的一种短时间阵痛而已。

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Urbanization and the Construction of Contemporary Civic Ethics

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Abstract: Urbanization is a great change from the traditional rural society to the modern urban society, and is the inevitable path of the evolution from traditional society to modern society. The outward manifestation is the continuous expansion of the city and the decline of the countryside. The internal manifestation is the transition from an acquaintance society with traditional blood ties and geographical concepts to a strange society with modern professional concept, also is the transition from traditional patriarchal ethics to modern civil ethics. The process of urbanization like a raging fire in contemporary China has changed China and changed the world, however, the change of material form is obviously dominant, and the spiritual transition is still lagging behind, and the latter is the essence of urbanization. In the future, the new-type urbanization in China should emphasize the construction of the contemporary civic ethics with the socialist core values.

Key words: China, urbanization, new-type urbanization, civic ethics

中国“城中村”与非洲“贫民窟”的伦理诉求比较

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摘 要：“城中村”和“贫民窟”虽然是两个不同的称谓，但有着相似的特征：承载着弱势群体的生存空间。其提质改造问题不仅是一个规划建设技术学科问题，更是一个重要的伦理学问题；每个规划建设具体方案不仅反映城市经济发展实力，其背后更蕴涵着道德价值立场，是审视城市社会公平正义状况的一面镜子，是检验政府与社会良心的试金石。本文试图从认识中国的“城中村”和西非加纳的“贫民窟”的发展困惑出发，类比分析对弱势群体关怀所面对的类似问题，提出规划建设中应遵循公众参与、以人为本、公平正义、可持续发展等伦理诉求。

关键词：城中村；贫民窟；伦理诉求；解决对策

城市化是21世纪初全球发展的主旋律，未来20~30年内全球城市化的增长仍将继续。据联合国2014发布的《世界城镇化展望》报告预测显示，到2050年世界城市人口将再增加25亿，城市化率由2014年的54%（39亿）上升到2050年的66%（人民网，2014）。这一预测证明越来越多的人为了美好生活愿意来到城市，正如联合国副秘书长、人居署现任执行主任克洛斯（Joan Clos）说，“无论是国内还是国际移徙，95％的人都出于经济原因或者为追求更好的生活而进入城镇地区。”（联合国人居署发布， 2016）。快速城市化所带来的城市人口高增长，城市政府不得不面对因住房、基础设施、交通、能源、就业以及教育和卫生等供给不足而引起的诸多挑战，“城中村”或“贫民窟”问题出现在所难免。因此，为了城市的善，为了城市所有人生活的美好，用城市规划合理配置城市的有限资源时，首先需要伦理价值审视。选择符合以人为本，人人生活得有尊严，兼顾公平与效益，协调人与环境和谐发展等基本的伦理价值诉求，并注入特定的时代内涵，应成为各国研究城市社会发展的永恒话题。

一、中国“城中村”现象的认识

（一）“城中村”的特征

“城中村”，英文名称：urban village，这一概念出现在中国人视野的时间并不长，

它是近30年来中国大陆地区在城市化过程中出现的一种特有的阶段性产物。从它初始形成的表象来看，是因城市化推动对城市土地需求旺盛而形成的。原先分布在城市周边的农村土地逐渐被城市政府征收为城市土地，高楼大厦接踵而至；而失地村民的原村落居住地多因拆迁、安置等复杂且转变成本较高的问题而被搁置，并逐渐演变成城市中廉价的居民区，其中的村民、居住地、就业等问题仍保留着农村的管理体制。目前“城中村”的内涵也随着城市化进程赋予了新的解释：一种低租金社区。相对于内城来看，滞后于时代发展步伐，居住条件简陋，生活水平低下，游离于现代城市管理之外的边缘社区，它也成为外来移民首次或第二次的落脚点，具有多元文化混住特征，但它为城市化带来的城市外来劳动力的生存成本的降低起了特定的作用。

目前中国城市数量已达655个，每个城市都得到了较好的发展。但由于城市化过程中的资源受限，发展不平衡，几乎每个城市都存在着不同形态特征的“城中村”，承载着城市弱势群体的居住区功能，基本特征相似：其一，人口混杂。“城中村”由村民、市民和流动人口混合构成，这里丰裕的城市物质生活与落后的村民价值观念和社会管理体制形成强烈的反差。其二，城市规划滞后。空间形态和内部功

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能与周围城市环境格格不入，违法违章建筑相当集中，街巷狭窄，房屋密度大、拥挤，采光通风条件差。其三，基础设施不完善。各种管线杂乱无章，存在严重消防隐患；卫生设施不足，村容镇貌不整洁；文化、休闲、娱乐、健身设施和场所等严重不足。最后，经济收入主要依靠非正规经济维系，本地村民主要靠村集体经济分红和村民违规出租土地及房屋，以及村内各类非正规经营项目；外来人员主要靠打工来维持生计，资金结余不多，社会福利保障较少。

（二）中国"城中村"形成的根源

1.社会原因。城乡二元管理体制是促成"城中村"社会现象形成的重要制度约束。所谓城乡二元管理体制，是指分属"城市"和"农村"不同的管理模式。"城中村"从地域上看，属于城市范围，从社会属性上看，属于农村社会管理体制，是城市与农村"二元所有制结构"并行存在、共同发挥作用的"边缘社区"。由于城乡社会不等值，有的城市政府为了降低成本和避免处理相关的社会管理问题，征地中有意避开"城中村"，只偏重于征用城郊农村土地，而不将村民、社区纳入城市管理序列，搞得城不像城，村不像村（谢志岿，2003）。

2.政策原因。其一，中国的城市国有土地和农村集体土地的制度差异性。城市土地的所有权、使用权、经营权、处置权分离，土地出让由政府独家垄断，同时土地用途还受城市规划严格控制，出让费较高；而农村土地属于农村集体所有，不允许集体和村民随意买卖，规划控制不严，土地价格低廉。这样因城乡土地价格悬殊而产生了较大的经济利益驱动，促使了"城中村"违章违规建筑大量存在。其二是城乡社会福利保障制度的差异性。中国"城中村"居民以农民居多，农民身份与市民身份的社会福利保障制度相距甚远，短时间难于实行城乡均等化，农民只能选择条件较差的"城中村"作为落脚地。因此"城中村"的形成焦点在土地，原因在规划管理，症结在体制。（张建明，2003）

3.经济原因。"城中村"村民的经济收入对土地和物业租赁的依赖很大。政府土地二元所有制结构的制度差异，村民可以低价甚至无偿地取得集体土地的使用权，建筑结构简陋的房屋租金或房价低廉，城市发展早中期需求旺盛，致使"城中村"的形成进一步加剧。同时因乱建、滥占现象严重，"城中村"改造的成本不断攀升，村民安置难度较大，也是导致目前"城中村"问题政府难于一时解决的重要原因。

4.文化原因。村民长期来形成的小农意识使其在住宅建设中只顾眼前利益而忽视了长期效益，存在着短期行为和趋利心态，进而促成了"城中村"的形成和长期存在（林燕，2008）。

二、非洲"贫民窟"现象的认识

（一）非洲"贫民窟"共同特征

"贫民窟"又称为贫民区（slum），一般指穷人居住之所，非洲"贫民窟"的贫困问题更为突出。非洲人长期来受殖民统治或宗主国的影响，生态环境脆弱，社会经济发展落后；同时，国内宗派、政党矛盾突出，政权更替频繁，社会发展不稳定。虽然非洲国家独立后，经济有了一定改善，但是城市的外来人口因资源缺乏、贫困、制度等因素限制只能选择居住在一些荒废的地段居住，"贫民窟"因此产生。非洲的"贫民窟"有着相似的特征：人口高度密集，房屋建筑质量较差、简陋，基础设施不足，缺少安全用水、卫生设施以及良好的教育和就业机会，收入低下，犯罪率高等。这些特征因各国历史、社会、经济等背景不同，形成的机理也有差异，本文试图以西非加纳"贫民窟"作为分析对象。

（二）加纳"贫民窟"形成的解释框架

加纳历史悠久，文明古老。"贫民窟"的形成原因是多维且复杂的，本文提出一个多元的解释框架。

1.经济因素：近年来加纳社会经济发展取得较快发展，按世界银行标准，加纳自 2010 年起从低收入国家进入中等偏低收入国家行列（中国外交部， 2017）。但加纳仍属于农业国家，经济基础薄弱，地区发展不平衡，大部分地区卫生和社会基础设施落后，全国约 1/3 的人口生活贫困，收入低于平均水平的 2/3（中国外交部，2017）。加纳的经济落后与西方长期的野蛮入侵，殖民掠夺是分不开的，至今还通过资源直接掠夺或者间接的不平等贸易协定在延续这一殖民行为，致使独立多年后的加纳，虽然炼钢、纺织、水泥、锯木、金属工具、可可加工、橡胶等工业得到了一定的发展，有重要的可可豆、金刚石市场；但工业基础只能靠发展一种或几种面向出口的农矿初级产品，附加

值较低，历史上遗留下来的简单的经济形态还未得到根本性的扭转，缺少完整的产业链、合理的产业结构、核心技术和高端的发展机会，人们就业不充分。

2.土地制度因素：传统的土地制度是村民不得不向城市寻找生计的重要根源。加纳土地共有多种类型：国有土地、委托土地（加纳民众委托归属总统的土地）、凳子土地（属传统部落所有）以及私或家庭土地等，凳子土地仍由部落酋长掌管着。目前传统土地产权制度仍然是加纳的主要土地法律，1992 年加纳宪法承认当时已存在的私人或传统土地拥有权，在传统体制下家庭成员之间进行转让，但不允许自由保有的土地转让（中国外交部，2017）。以传统头人（首领）为主要的拥有或管理土地，出现了土地掌管权人的相对集中，人们拥有土地资源的数量、等级、获利的差别大等现象。因此，大多数生活在农村社区的青年难以获得土地和资金，他们极度贫困，为了生计向城市转移。

3.社会隔离因素：居住隔离是加纳“贫民窟”产生的重要原因。社会隔离方式通常为种族隔离和居住隔离，虽然加纳长期受原宗主国（英国）殖民的血的磨合，从思想上认同了的社会等级、社会隔离的现象存在，社会的种族冲突不是那么激烈，但因贫富差距的加大导致居住隔离是加纳社会隔离的重要因素。独立后的加纳人们开始离开世代繁衍生息的丛林、 河谷、草原，向发展较快的城市或公路两边聚集，由于种族、宗教、生活习惯、文化水准或财富差异的原因，相类似的人集居于特定的地区，他们搭起低矮的棚屋，简陋的木屋，做些小生意，或者给别人打临工，但就业机会不足，很难彻底摆脱贫困。不相类似的集团之间则彼此分开，产生隔离作用，有的甚至产生歧视或敌对的态度。

4.自然环境因素：生存条件的改善对自然条件的依存度高。加纳的粮食产品主要有玉米、薯类、高粱、大米、小米等，经济作物主要有油棕、橡胶、棉花、花生、甘蔗、烟草等。这些都是靠天吃饭作物，人们对大自然的敬畏和依存度较高。同时加上长期受西方殖民统治与资源掠夺，生态系统极其脆弱，从多年来的厄尔尼诺现象使非洲气候反常产生的影响可以看出：非洲大约每 4-7 年出现一次旱灾，对粮食生产影响很大，导致南部非洲农作物减产 20%-50%，2007 年西非地区暴雨成灾，粮食严重大降，许多农民颗粒未收（黄贤金等，2013）。因此，自然条件的高依存度，严重影响了加纳的发展，大多人难于摆脱贫困的厄运。

三、中国的“城中村”与加纳城市“贫民窟”的类比

综上所述，中国的“城中村”和加纳城市的“贫民窟”的成因各异，或为城市发展过程中的阶段性产物，或为社会发展的初级阶段不可规避的现实问题，但透视二者的类比分析可知：“城中村”或“贫民窟”既是一种空间形态，也是一种社会形态，更是一种政治经济形态。它们有着类似的功能：即城市社会中弱势群体的聚集区；有着相似的特征：贫困（相对贫困或绝对贫困）、落后、自身改变能力不足。存在着以下相似的根源。

（一）农村推力。一方面有愿意流向城市的农村人口，且劳动力廉价。虽然目前中国的农村人口基本温饱解决了，但由于城乡差别的存在，现阶段大多数农民很难靠农村经济富裕起来，愿意进城打工改善生活；加纳的农村人口大多因土地不足和生态脆弱，很难在农村生活下去，不得不离开家乡拥向城市。另一方面，农村经济发展，既为城市早期发展形成了原始积累，又因其经济作物为城市工业发展供给原材料,以此形成了城市化进程的推力。

（二）城市拉力。城市发展的早期，劳动密集型工业和服务型第三产业都需要大批廉价的、技能要求不高的操作者，农民进城满足了相关产业发展的人力需求；同时，城市的基础设施相对较为改善，有利于带动农村劳动力进城。

（三）正规就业机会供给不足。城市人口过快增长率与城市经济发展速度滞后的矛盾，劳动力市场不能提供足够的正规就业机会，导致缺少知识、资金、技术、社会资源等外来进城者不得不流向非正规单位寻找工作或自谋职业，他们时常出现显性或隐性的失业状态，收入很难保障，极易成为城市的贫困群体。

（四）城市政府失灵。政府因经济实力、管理体制、发展问题等条件的制约，在推动城市进程中，难以兼顾城市失业或低收入群体的社会保障问题，以致于“城中村”、“贫民窟”的形成和蔓延不能有效阻止或者加以改善。

（五）社会资源拥有的不平等。社会资源

主要包括物质资源、关系资源、文化资源等，

这些资源的拥有既受社会成员自身努力的影响，又受社会发展水平和社会分配体制的制约，它们在城市不同社会阶层之间的分配是不相同的，特别是“城中村”、“贫民窟”的贫民是社会底层，不得不长期生活在脏乱差的“城中村”、“贫民窟”环境中，自身难以改变现状。

四、伦理价值诉求

城市规划从一定意义上说，是对城市空间利用的规划，是城市资源的优化配置；其实质是不同权利与利益群体博弈的结果，它不仅是一个规划建设技术学科问题，更是一个重要的伦理学问题。“城中村”、“贫民窟”是否改造、如何治理，应兼顾经济发展和社会稳定的大局，而不是基于单一主体和目标去谈论抽象的公正，存在多元的伦理价值诉求。

（一）公众参与的平等观

公众参与是在相互尊重、理解、信任和关心的基础上让众多社会主体积极参加到与他们的生活环境息息相关的政策和规划的制定与决策中来，保证规划的公平、公正和公开，使规划能切实体现公众的利益要求。从伦理学角度讲，公众参与则更多的是强调代表不同利益主体的阶层和各个社会成员关心公共事务和公共目标的一种价值诉求活动。公众参与的思想之源主要包括尊重、关心、平等、宽容，中国传统文化有着深厚的底蕴，儒家提倡“仁者爱人”的思想是尊重人、关心人的崇高境界。“己欲立而立人，己欲达而达人”、“己所不欲，勿施于人”（杨伯峻，2006）是孔子的将心比心，推己及人的施仁政方法，是理解人、谅解人、强调平等宽容的博大胸怀。儒家文化虽然离我们年代久远，但早已融入到我们的生活中。中国和加纳的城市政府都是为广大民众谋发展的政府，都致力于实现自由和公正，尊重人权、自由和尊严。这为建立“仁者爱人”的公众参与的平等观提供了政治基础。

公众参与应作为一种规划制度，规划师应是沟通各种利益群体的协调者、咨询者、沟通者，全面参与面向社会思维的规划活动。正如保罗.大卫杜夫（Paul Davidoff）在1965年发表的“规划中的辩护论和多元主义”(Advocacy and Pluralism in Planning)中所说：每个规划师都应为不同社会群体的利益代言和辩护,特别是社会弱势群体的利益通过规划师的辩（论）和（维）护，将会合适地、恰如其分地得以反映（袁韶华等 2010）。公众参与不仅是一种话语权的实施，更应成为一种公众在其权利义务范围内有目的的社会行动，1969 年美国的谢莉·安斯汀(Sherry Amstein)发表了《市民参与的梯子》(A Ladder of Citizen Participation)一文，设想公民全面参与的形式，分析了不同类型的公众参与的属性，如没有参与（被操纵、先教育后执行）、象征性参与（提供信息、咨询意见、政府让步）、公民权利（伙伴关系、权利代表、公民控制），为公众参与实质性的开展提供了行动指南（王丽锟，2012）。

公众参与在“城中村”或“贫民窟”改造中，规划师应充分尊重民意，即兼顾中国“城中村”的村民、租户、社区代表、开发商、政府等各方意见、建议；或者加纳“贫民窟”的贫民、酋长、土地拥有者、开发商、政府等各方利益所求，采用多方式、多途径的沟通、协调与平衡，给予弱势群体充足的话语权与参与权。然后，从技术角度遵循规划的基本原理、规范和标准的前提下，综合与集中多种利益、需求和问题而设计出多个方案，进而讨论、比较、论证，尽量优先解决“城中村”或“贫民窟”民生的实际问题，供政府和业主的选择，确保规划工作成功实施。

（二）以人为本的生存观

“以人为本”的“本”字在哲学上有两种理解，一种是世界的“本原”，一种是事物的“根本”。以人为本的本，不是“本原”的本，应是“根本”的本，是哲学价值论概念，回答我们的生活中，什么最重要、什么最根本、什么最值得关注。中国历史上的人本思想非常丰富，如《论语》中的“天地万物，唯人为贵”；唐太宗李世民《民可畏论》中记载“国以民为本”、“民可以载舟，亦可以覆舟”。城市规划“以人为本”的思想既要体现城市利益群体的诉求，也要反映弱势群体的呼声，处理好经济、社会、环境等发展问题的关系，优先关注民生问题和社会公共利益，最终目的是全面提高人的生活质量。同时也要正确理解公共利益不等于政府利益；公共利益不等于共同利益的实质内涵。

“城中村”或“贫民窟”改造的规划设计方案中解决贫民为生活所需的实际问题是最能

体现以人为本的思想。如优化居住设施，保障水、电、路、能源等工程基础设施的配套；改善提升社会生活质量所需的文、教、卫和娱乐、休闲公共空间等基础设施的缺少或不足问题。在“城中村”或“贫民窟”的规划方案实施中可以分阶段、分步骤，采用不同的经营模式分别配置与建设，让城市市民有平等享用公共产品的机会：如住房问题，可以在质量整体评估的基础上进行提质改造与新修等多种形式，倡导“居住有其屋”的理念，采用租房、购房、自有房等多种供给模式，改善住房条件；基础设施配置问题，可以将它区分为纯公共产品、准公共产品、私人产品等类型，纯公共产品由政府财力配置或者与某些盈利性较强的项目捆绑开发；准公共产品由政府引导，通过市场竞争行为采取微利或保本经营；私人产品按市场供需规律，由市场价格来支配，满足高收入群体的个性化需求。使生活在城市中的所有人既拥有尊严和人格的平等，又能体现促进社会发展的激励机制。

（三）公平正义的价值观

所谓公平正义（中国现代汉语大词典，1999年版）的解释：是指公正而不偏袒，没有偏私，也就是通常所说的公正。一般来说，反映的是人们从道义上、愿望上追求利益关系特别是分配关系合理性的价值理念和价值标准。公平正义的主要内容包括：权利的公平、机会的平等和分配的公平。如中国古代的孔子曾提出：“有国有家者，不患寡而患不均，不患贫而患不安。盖均无贫，和无寡，安无倾”，表现出追求一个公平、均等的社会秩序的强烈愿望，是从社会秩序和分配的角度来论述的。董仲舒从“大富则骄，大贫则忧”（崔涛，2013）的思考出发，提醒圣者应使“富者足以示贵而不至于骄，贫者足以养生而不至于忧，以此为度而调均之”的“均产论”主张（崔涛，2013），是理念和制度建设结合的观念。古希腊的亚里士多德认为：“政治学上的善就是正义，正义以公共利益为依归。按照一般的认识，正义是某种事物的‘平等’（均等）观念。”（亚里士多德，1981）。马克思指出公正的相对性：“一个人在体力或智力上胜过另一个人。因此在同一时间内提供较多的劳动，或者能够劳动较长的时间。从而不同等的劳动能力，所以在承认权利平等、机会平等的前提下还应该承认个体之间差别的存在。”（马克思，1995）

凡有人群且有利益分配的地方，就必然会产生公平正义的问题。从经济学视野看，城市规划是一种资源配置的过程，涉及城市功能的配置方向与规模取舍等问题。“城中村”或“贫民窟”的改造规划是为了解决弱势群体生活的问题，首先应以公平优先为伦理导向，当出现利益相关者之间诉求冲突时，政府首先保证的是处于最不利地位的贫民群体的利益，而不是最有利地位者的利益，注重对弱势群体利益的保护，协调分配公平。正如约翰.罗尔斯为代表的公平正义观所说的：政府在分配社会财富和机会时，应该优先保证“适合于‘最少受惠者’的最大利益”。即使出现不平等的分配，政府的伦理取向始终不能逾越这个底线（秦红岭 2010）。其次，实现规划正义应突出公平的价值目标，进行制度创新，体现机会公平。无论是城市原居民还是外来人口，都应享有平等的市民权利和制度保障，让在“城中村”或“贫民窟”里生活的居民有同等的市民地位，享有平等的竞争机会。最后，构建弱势群体利益表达机制与平台，实现权利公平。政府建立相关机构或者成立社会组织、协会以及诉求表达平台，及时收集弱势群体急需解决问题的信息，分析、论证解决方案，加以公示，以便实现多元利益主体的规划价值认同，使规划的起点具有公平价值取向。

（四）公平与效率兼顾的协调发展观

公平是人与人的利益关系以及处理利益关系的原则、制度、做法、行为等都合乎社会发展的需要。效率是人们在实践活动中的产出与投入之比值，或者是效益与成本之比值，比值大，效率就高，反之则反。关于公平与效率的关系，我们从结果公平的角度探讨，公平与效率存在矛盾，过分强调结果公平，往往会造成效率损失；而发挥物质利益的激励功能，又必须打破收入分配的平均主义，拉开收入差距。从权利公平、机会公平、规则公平的角度分析，公平与效率的关系是可以一致的，公平的制度、政策促进高效率；反之，不公平导致低效率。因此，公平与效率关系问题或谁优先发展问题是辩证统一的，应以发展的观点看待和分析问题，具有时代特征。在经济发展初期，生产力发展水平较低，产品供给能力不足，劳动力供给充分，资本要素稀缺，在公平与效率关系的权衡上可以通过资本的原始积累带动劳动就业，提高产品供给能力，通常会更加重视效率。

进入中等收入阶段以后，一方面，产品供给能力大幅度提升；另一方面，收入分配差距过大会制约消费需求的增长、影响社会稳定。因此为了让社会经济和谐发展，在公平与效率的权衡上要求更多地注重公平。我们反对平均主义，也反对把效率绝对化。因此，公平是效率的保证，只有维护劳动者公平分配的权利，才能保障劳动者利益，公平与效率是可以相互促进的。

"城中村"或"贫民窟"改造规划与建设是社会利益的一次大调整，势必造成各种矛盾冲突，通常公平与效益的取舍问题成了争论的焦点。如从城市总体规划来看：要处理好与"城中村"或"贫民窟"改造相关的长远利益与当前利益，经济效益、社会效益和环境效益的兼顾原则；资源的产业投入效率与城市公共利益设施的配置与协调发展的问题等；从"城中村"或"贫民窟"改造具体方案来看：做好用地调整和基础设施的配置，如土地有效利用率、容积率、绿地率、人均居住面积、造价、人均公共设施拥有量等经济社会指标标准的确定与平衡问题。因此，"城中村"或"贫民窟"的规划建设的好坏是衡量城市兼顾公平与效率的一面镜子。

（五）天人合一的生态观

"天人合一"精神的最高价值取向是"和谐"，是人与自然和谐统一的思想之源。"天"是"自然之天"与"非自然之天"的统一，具有强大的主宰力、完美的德性与自然和谐的秩序；人道源自天道，人必须依顺"天"，而非制胜"天"。人在建构社会秩序中应当寻求人道与天道的和谐。中华道家传统文化主张"道法自然"，尊重自然、效法自然，强调人与自然是一个有机联系的统一整体。《老子·二十五章》中提出"道大、天大、地大，人亦大。域中有四大，而人居其一焉。人法地，地法天，天法道，道法自然。"（任继愈，1985）实质就是说掌握了自然之道并遵循自然之道，就把握了人道、地道、天道，就能实现宇宙和谐、自然之态。尽管古代的"天人合一"思想具有维护封建地主阶级统治服务的性质并带有唯心的色彩，但却实实在在传递了人与自然和谐相处的思想。

人类在处理人与自然的关系中经历了"和谐—失衡—再和谐"的曲折发展历程，其中和谐阶段的主要表现是人们崇拜与敬畏自然；失衡阶段的主要表现是人类征服自然；再和谐阶段的主要表现是人类与自然间的冲突与协调，从中接受了许多的教训与经验。当今"天人合一"的生态意义非但没有丧失，在某些意义上反而更加凸现和深化了，为我们思考生态问题提供了新视域，突破"人类中心主义"与"非人类中心主义"的两难困境。

"城中村"或"贫民窟"的规划建设中，"天人合一"的生态观应是确保社会可持续发展的基点。在改善人居环境时应积极做好一些基础工作：首先遵循自然规律，调查评估自然环境质量，如山体、河道、湖泊、海滩、植被、绿地等，识别生态环境存在突出问题。其次尊重城市发展历史，从"城中村"或"贫民窟"民众最关切的、与城市生活最密切的问题入手，梳理和提出设施条件、公共服务、历史文化保护，传承历史文脉。最次，加强"城中村"或"贫民窟"改造项目的规划引导，协调、优化公共空间、景观风貌和城市环境。最后制定实施措施，在具体的改造规划方案中要有环境保护的具体措施，保护或者修复山体、河流、湿地、植被，选择并优化利用自然资源。

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关于珠三角城市群高品质崛起的思考

贺定修，张出兰，王思煜，范明明

摘　要：城市群尤其是大城市群的发展水平，是衡量一个国家或区域国际竞争力的重要标志。推进珠三角城市群的高品质崛起，具有重要战略意义和现实意义。重点要围绕区域全面一体化和城乡高度融合的目标，深入推进珠三角区域内基础设施、产业、公共服务、社会管理和信息资源的整合和一体化发展；围绕建设智慧城市的目标，着力促进智慧技术在城市关键领域和重点环节的应用，探索适合各自情况的智慧城市营运方式，鼓励多元主体参与智慧城市建设；围绕构建低碳生态城市的目标，制定完善珠三角城市低碳生态化评价标准，抓住生态环境建设中存在的突出问题，大力推进水环境和大气环境整治，构筑区域生态安全体系。

关键词：珠三角；一体化；智慧化；生态化

随着经济全球化与区域一体化进程的逐步深入，国家、区域之间的竞争越来越集中地表现为具有一定国际影响力的大城市、特大城市之间的竞争，特别地表现为人口规模大、经济和要素集聚程度高、国际交往能力强的大城市群之间的竞争。本文立足于打造具有国际竞争力的城市群，把握当代科技、产业和城市发展的新趋势，分别从区域一体化、管理智慧化和低碳生态化三个维度，研究了推进珠三角城市群高品质崛起的价值、思路和措施。

一、深入推进珠三角区域一体化，促进城市功能的高品质提升

目前，我国已经形成京津冀、长三角、珠三角等几大主要城市群，城市群正逐渐演变成强大的整体组合功能群，成为国家经济社会发展，参与国际竞争的重要力量。其中，珠三角城市群以广州、深圳、珠海、佛山、江门、东莞、中山、惠州和肇庆市九个城市为主体，是我国改革开放的先行地区，也是我国重要的经济中心区域，在全国经济社会发展和改革开放大局中具有突出的带动作用和举足轻重的战略地位。国家高度重视珠三角地区一体化发展对全国的辐射带动作用和先行示范作用，于 2008 年出台了《珠江三角洲地区改革发展规划纲要(2008-2020 年)》，随后广东省也相继出台了珠三角基础设施、产业布局、基本公共服务、城乡规划和环境保护等五个一体化规划，从目标任务、实施机制、保障措施等方面科学谋划布局，大胆先行先试，突破行政界限，统筹规划布局，整合各类资源，助力推进珠三角城市群一体化发展，促进城市群高品质崛起。

（一）世界城市群发展的一体化趋势

城市群是在特定的区域范围内聚集相当数量的不同性质、类型和等级规模的城市，以一个或两个特大城市为中心，依托一定的自然环境和交通条件，借助现代的交通工具、综合运输网及高度发达的信息网络，城市之间的内在联系不断加强，共同构成一个相对完整的城市“集合体”。目前，国际公认的以纽约、芝加哥、伦敦、东京、巴黎为核心的几大主要世界级城市群（见表1）。以其人口规模宏大、地域面积广阔、经济要素集中度高、国际交往能力强等特点，已成为世界经济发展的重要引擎，在城市经济和全球经济竞争中扮演越来越重要的角色。

表 1 世界五大主要城市群基本情况

都市圈	总人口数（万人）	面积万 KM²	城市构成
纽约都市圈	6500	13.81	纽约、华盛顿、波士顿、费城、普罗维登斯、哈特福德、纽黑文等重点城市
北美五大湖都市圈	5000	24.5	芝加哥、底特律、克利夫兰、匹兹堡，以及加拿大多伦多和蒙特利尔等城市
伦敦都市圈	3650	4.5	大伦敦地区、伯明翰、谢菲尔德、利物浦、曼侧斯特等城市
巴黎都市圈	4600	14.5	巴黎、阿姆斯特丹、鹿特丹、海牙、安特卫普、布鲁塞尔、科隆等城市
东京都市圈	7000	10	东京、横滨、静冈、名古屋、京都、大阪、神户等城市

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从全球化视野来看，当前，随着全球化和经济一体化的快速发展，城市群之间的竞合关系越来越复杂，在城市群之间进行经济实力较量的同时，城市群之间的一体化趋势也越来越明显，城市合作不断加强。一是区域间的要素市场和资源配置一体化体系逐渐形成。发达的交通条件使生产要素和产品流动加速，从而使城市群内各城市能够摆脱自身资源的有限和市场不足的弊端，得以更好地发展。目前世界主要城市群都致力于建立一体化要素市场体系，逐步形成区域性的资本、技术、信息、人才、产权交易、中介服务等市场，优化了资源要素在城市间配置，在区域内实现了单个城市无法达到的规模经济和集聚效应。二是城市间信息共享机制进一步建立。各城市群致力于推动科技公共信息、政务公共信息、公共信用信息、交通物流公共信息及产品服务标准公共信息等一体化建设，尤其是美国五大湖、东京城市群信息服务一体化趋势更为明显。三是城市间产业特色化、差异化、一体化发展更加明显。如纽约都市圈，形成了纽约以总部经济和高级专业服务业为主导、波士顿以高科技产业为主导、费城以国防及航空工业为主导、巴尔的摩以矿产冶炼工业为主导、华盛顿以旅游服务业为主导的圈内城市产业差异化和一体化发展格局。又如，东京都市圈，形成了东京以总部经济为主导、大阪以生物工程、信息产业为主导、名古屋以汽车、机械为主导的产业差异化和一体化发展格局。四跨区域共同行动日渐频繁。各城市群之间在基础设施建设、环境保护、科技教育等多方面开展共同行动，以此推动城市群全面一体化的发展。

（二）深入推进珠三角地区一体化发展有利于联手打造具有国际影响力的大都市圈

我国京津冀、长三角和珠三角三大城市群，面积只占全国的 3%，人口占 12%，但国内生产总值、固定资产投资和地方财政收入却占全国的 40%，利用外资占全国的 73%，这三大城市群凭借其集聚效应、规模经济和竞争优势，成为经济发展最具活力的地区，成为全国和区域性经济核心地区和增长极。珠三角九市常住人口 5616.39 万人，占全省的 53.8%，地区生产总值 37673.26 亿元，占全省 79%，地方财政一般预算收入 3138.56 亿元，占 69.5%，进口总额 3195.01 亿美元、出口总额 4318.02 亿美元，分别占全省的 96.32%和 95.28%。珠三角九市地理位置相近，产业承接较好、社会文化相融，具有良好的一体化基础和条件，深入推进珠三角九市一体化发展，对打造亚太地区最具潜力和国际竞争力的城市群具有重大的战略和现实意义。

一是有利于联手打造具有国际影响力的大都市圈。都市圈是由若干各具特色的城市组团而成。由广佛肇、深莞惠和珠中江为组团构成的珠三角都市圈，是亚太地区逐渐崛起的具有较强影响力的都市圈。在推动珠三角一体化进程中，加强城市间的紧密合作，构建高品质的城市产业，形成高品质的城市空间布局，建设高品质的人居环境，有利于形成布局合理、功能完善、优势互补、联系紧密的城市群，打造面向世界、服务全国，有较强影响力的、国际性的大都市群。

二是有利于全面提高区域整体竞争力。区域竞争力是综合性概念，包括区域产业竞争力、制度竞争力、体制竞争力、创新竞争力、环境竞争力、文化竞争力等综合反映。在推进珠三角区域一体化框架下，城市间加强紧密合作，打破行政体制障碍，促进要素合理流动，优化资源配置，加强重点区域发展规划、产业发展、区域创新、基础设施建设、环境治理、生态保护、社会公共事务等方面紧密合作，有利于优化区域生产力布局、促进资源要素在更大范围内集聚，促进产业在更高层次上集约化发展，提高城市综合发展水平和服务水平，全面提高区域整体竞争力。

三是有利于进一步增强辐射带动作用。改革开放 30 年来，珠三角地区已成为我国改革开放的先行地区和市场化程度、对外开放程度最高的地区，与长三角、环渤海等地区一起被誉为全国经济增长的“三大引擎”。当前，珠三角地区承载着“为全国科学发展提供示范”、“为发展中国特色社会主义创造新鲜经验”、“成为带动全国发展更为强大的引擎”等重大历史使命。珠三角应在国家战略的高度，进一步发挥辐射带动作用和先行示范作用，带动环珠江三角洲和泛珠江三角洲区域的经济发展，促进形成优势互补、良性互动的区域经济发展新格局。

（三）深入推进珠三角城市一体化发展的对策思路

珠江三角洲改革发展规划纲要（2008-2020 年）》实施以来，广东省出台了珠三角基础设施、产业布局、基本公共服务、城乡规划和环境保护等五个一体化规划，以广州、佛山同城化为示范，积极推动广佛肇、深莞惠、珠中江经济圈建设，加快区域一体化进程。各经济圈建立了区域一体化合作协调机构和机制、高层联席会议机制、部门间工作协调机制、城市间学习考察与公务员交流机制，启动了区域发展规划的编制工作，大力推进基础设施、产业、公共服务、规划建设、环境保护和信息等领域合作。但珠三角一体化工作是一个重大的、全局性的战略工程，不是一朝一夕就能实现的。因此，今后珠三角各市要进一步解放思想、大胆创新、先行先试，深入推进基础设施一体化、产业一体化、公共服务一体化、社会管理一体化等重点领域和关键环节的一体化发展。

1.加强重大基础设施对接。基础设施一体化是珠三

角一体化发展的重要突破口，应加强城市规划建设的协调，加快交通、能源、水利、信息等基础设施建设、整合和对接，实现区域基础设施一体化。重点应加快边界道路的通畅联网、轨道交通的连接成网、以及快捷公交的合理布线布点，加快智能电网建设和油气输送网络管道建设，加强区域饮水、供水、水质保护和污水治理工程建设协调力度，加强区域信息资源整合力度，实现信息资源共享。

2.密切科技和产业合作。近年来，珠三角加大经济结构战略性调整力度，高技术产业、先进制造业发展水平明显提高，现代服务业加快发展，产业集群逐步发展壮大，产业链不断延伸，产业配套体系逐渐完善，以特色产业为基础的产业集群发展模式已成为推动珠三角乃至广东区域经济发展的重要力量。要在各自特色产业发展基础上，进一步加强产业合作，推进产业差异化发展。一是构建产业合作战略联盟。要根据各市资源禀赋、城市功能、产业结构等，坚持特色发展、集约发展、错位发展、互补发展，逐步形成科学有序的产业分工，促进产业链整合，推进珠三角地区产业结构优化升级。二是共同推进区域科技创新。应加强创新资源的合作与共享，联手增强自主创新能力，构建区域创新体系。加强区域高等院校和科研院所的合作，共促区域基础研发能力和技术开发能力的提升。共建区域创新平台，建立健全科技信息和科研设备共享制度，促进区域科技成果转化能力提升。三是推进以园区为载体的产学研合作。将园区作为高新技术产业合作、先进制造业合作、现代服务业合作的重要载体，通过加强园区科技和产业合作，集聚一批创新型领军人才，培养一批高水平研发机构，建设一批创新与投资促进平台，形成一批国家级和国际级的高新技术产业带和新兴产业带。

3.强化社会管理协作。珠三角地区外来人口众多，特殊的人口结构给社会管理带来特有的矛盾和问题，为此，应加强社会管理方面的协作，共同维护区域社会稳定和社会和谐。一是加强流动人口管理协作。加大人口信息采集力度，完善人口信息、刑事及治安案件信息等综合信息查询系统。进一步整合各市、各部门的人口信息情报资源，建立互联共享的大情报信息网络。完善对暂住人口、出租屋人口和厂居人口的登记管理，加强流动人口服务管理。二是加强治安管理协作。整合各市各方面警务信息，建立综合、统一、共享的警务信息系统。完善信息化监控网络，强化警务指挥、调度协调，确保重大警情得到及时有效处置，协同构筑治安防控网络，构筑严密的社会治安防控体系。三是加强环境治理协作。协同构建区域环境监测预警体系，建立区域环境和界河环境同步治理机制，实现区域内河污染、水污染和大气污染的联防联治。

4.推进基本公共服务合作。随着珠三角一体化进程的深入推进，无论从经济发展产生的公共服务需求，还是从群众追求幸福指数带来的公共服务需求，还是从和谐社会建设的要求来看，已经进入了公共服务需求的高增长阶段，要求政府和社会组织提供更优质、更全面、更完备的公共服务。一是加强基本公共服务提供和管理的协作。要加大教育、卫生、医疗、社保、就业等社会公共服务领域的合作力度，如联合举办职业技术教育、实行养老保险转移医保互认等。二是共同探索基本公共服务均等化的新模式。由于各地经济发展水平存在一定差异，公共服务提供还存在区域分割的体制弊端，政府间财政转移支付制度还不完善，因而实现不同城市之间公共服务均等化还有很大困难。可以先通过探索完善市域内基本公共服务均等化，逐步加大公共服务的投入，扩大共享的范围和比重。三是合力推进基本公共服务的专业化、规范化和社会化。鼓励社会组织跨市承包政府的公共服务项目，对环卫、绿化、市政等专业性较强的公共服务，探索引入市场机制，吸纳跨市公共服务专业组织参与竞争，提高公共服务质量。建立跨界区域重大社会公共事务共同讨论机制，扩大双方市民群众对公共服务的知情权、参与权和监督权。

二、大力推进珠三角城市信息智慧化，促进科技、产业与城市发展的高品质融合

智慧城市是以新一代信息技术为支撑的新型城市形态，它充分运用信息和通信技术手段感测、分析、整合城市运行核心系统的各项关键信息，从而对包括民生、环保、公共安全、城市服务、工商业活动在内的各种需求做出智能的响应，为人类创造更美好的城市生活。智慧城市是当前新型城市化和未来城市发展的新目标和新趋势，是未来城市高水平崛起的新引擎。

（一）智慧城市是新兴科技、新兴产业和新型城市化的深度融合

智慧城市简单来说就是“智能+互联+协同+创新”。基于网络技术、通信技术、应用软件开发技术和系统集成技术为主体的新一代信息技术，具有涵盖技术多、应用范围广、与传统行业结合空间大等特点，对经济发展方式转变、社会管理模式创新、城市建设品质提升和公共服务能力提高具有重大作用，是当今和未来科技发展的大趋势、产业发展的制高点，为智慧城市提供强大技术支撑和广阔前景，同时智慧城市建设又反过来推动智慧科技和智慧产业发展，引领产业转型升级。

1.新兴网络技术为智慧城市建设提供了强大的智慧基础设施。以 4G 技术和信号处理技术为代表的移动通信技术的突破进展，为移动宽带的应用提供了技术支撑，大大拓展了智慧城市建设的地理空间；移动互联网作为最便捷、最时尚、最值得依赖的技术和业务，为人

们的智慧生活提供网络基础设施和增值服务内容；移动互联网、物联网、宽带网、广电网的融合发展将重构全球信息通信基础设施，实现人与人、人与物、物与物之间随时随地的沟通和物理世界的便捷管理。

2. 物联网技术为智慧城市建设提供了透彻的智慧感知功能。它是全球公认的继计算机、互联网与移动通信网之后的世界信息产业又一次信息化浪潮。随着智能传感器、物联网大数据处理与智能信息管理、行业应用软件等方面的关键技术的突破，将推动物联网技术与新一代移动通信、云计算、互联网、卫星通信等技术融合发展，物联网将形成一个完全交互式和反应式的网络环境，为智慧城市的发展提供更加透彻的智慧感知。

3. 大数据时代的来临为智慧城市建设提供广阔的应用前景。大数据平台是从各种类型的、漫无边际的数据中，快速获得有价值信息的处理方法或框架。大数据是继云计算、物联网之后 IT 产业面临又一次颠覆性的技术变革。随着大数据时代来临和大数据技术的突破，不仅能解决现实困难，同时也会促使云计算、物联网技术真正落地并深入推广和应用，为智慧城市建设提供广阔应用前景。

（二）国外发达经济体和我国先进城市智慧城市发展的态势

1. 发达国家和地区为刺激经济发展，抢占科技发展制高点，正纷纷加快智慧城市建设。2008 年金融危机后，世界主要经济体为克服经济危机的影响，寻找新的经济增长点，纷纷将物联网产业纳入经济振兴计划，发达国家国际大都市，如纽约、伦敦、新加坡、首尔、日本等纷纷提出各自的智慧城市战略（见表 2），通过新一代信息技术的大发展和大应用，实现智慧技术高度集成、智慧产业高端发展、智慧服务高效便民，完成从数字城市向智慧城市的跃升。

表 2：发达经济体智慧城市建设战略与措施

国家城市	战略目标	战略方向	重点应用领域	措施及成效
英国伦敦	数字英国计划	升级数字网络	智慧网络基础设施	宽带网络全覆盖，重点地区无线网络全覆盖
		信息资源整合分享	智慧商务	通过分享世界顶级的学术和研究资源，打造充满活力的投资环境
		鼓励从英国民众角度提供数字内容	智慧信息服务	科学文化艺术机构开发App应用软件，公众可以轻松接入
		发展智慧民生科技	智慧交通	打造全球最优质智慧交通体系的城市
		完善政府电子政务建设	智慧政务	政府机构，公共事业组织都设立官方网站，提供政务信息和线上服务窗口
美国纽约	连接的城市计划	促进网络服务融合	智慧信息服务	市民服务热线与苹果公司合作开发网络版和移动版，增加服务内容和效果
		建设电子健康记录、智能停车系统	智慧民生	建设电子健康记录和智能停车系统
		促进信息资源整合	智慧政务	整合42个政府部门的55个数据中心，建设“城市商业快递”网站
		网络服务全覆盖	智慧基础设施	开展宽带服务进社区、进校园等计划
新加坡	智慧国2015计划	建立超高速、广覆盖、智能化的通信网络	智慧基础设施	投入10亿新币，建设下一代宽带网络
		强化信息通信技术的尖端应用	智慧医疗	开展远程医疗合作计划
			智慧教育	新加坡未来学校计划
			智慧文化	推广“新加坡记忆”行动，存留住正在消失的关于新加坡的宝贵瞬间和记忆
韩国首尔	智慧首尔2015计划	建设智能绿色城市	智慧能源	二氧化碳减排信息化、智能建筑信息化、绿色交通信息化
		发展全球化创意经济	智慧产业	确立“世界城市电子政府组织”准国际机构的地位
		促进生活方式变革	智慧民生	消除智能信息鸿沟，支援弱势群体的信息化，形成首尔智能信息福利网
		推进政务信息化	智慧政务	推行网上政务环境改革，完善公众网上沟通功能
日本	日本战略2015	推进行政服务电子化	智慧政务	各种行政信息的电子化提供，各种申请手续的在线化和政府之间系统的整合
		推进数字化医疗	智慧医疗	建立云端个人医疗数据库

		推进节能环保	智慧能源	启动“智慧能源共同体”计划和“智慧能源网”战略

（此表根据发达经济体智慧城市建设有关材料整理而成）

2.我国先进城市正借国家政策东风，抢抓机遇推进智慧城市建设。2012 年 6 月，国务院发布《关于大力推进信息化发展和切实保障信息安全的若干意见》提出要提高社会管理和城市运行信息化水平，加快实施智能电网、智能交通等试点示范，引领智慧城市健康发展。2012 年 11 月住建部出台了《国家智慧城市试点暂行管理办法》、《国家智慧城市(区、镇)试点指标体系》等文件，并开始推动国家智慧城市的试点申报工作，住建部已公布了第二批 103 个智慧城市试点，加上第一批 90 个试点城市，全国智慧城市试点已扩大到近 200 个。目前，国家发改委和工信部牵头联合多家部委，正在积极制定《促进我国智慧城市健康有序发展指导意见》，对我国智慧城市建设加强统筹引导，形成建设智慧城市的合力。在国家政策推动下，我国的北京、上海、广州、深圳、武汉、南京、沈阳、杭州、宁波、无锡、佛山等重点城市，纷纷推出智慧城市建设规划，采取切实措施加强智慧城市建设（见表 3）。

表 3：国内先进城市智慧城市建设发展目标及推进措施

城市	战略计划	发展目标	重点工作和推进措施
北京	智慧北京行动纲要	建设宽带泛在的基础设施、智能融合的信息化应用和创新可持续的发展环境的“智慧北京”。	推进城市智能运行、市民数字生活、企业网络运营、政府整合服务、信息基础设施提升、智慧共用平台建设、应用与产业对接、发展环境创新等八大行动计划。
上海	智慧城市建设行动计划	大力推进以信息感知、业务协同、系统集成为重点的智能应用。	推进城市建设管理、城市运行安全、智能交通、社会事业与公共服务、电子政务、信息资源开发利用、“四个中心”、“两化”融合等八大专项建设。
广州	建设智慧广州的实施意见	构建以智慧新设施、智慧新技术、智慧新产业、智慧新应用和新生活为主体的智慧城市“树型”框架，成为中国智慧城市建设先行示范市。	大力推进智慧广州新设施、智慧广州新应用、智慧广州新产业、智慧广州新技术、智慧广州新生活等五大领域建设。
深圳	智慧深圳规划纲要	在全国率先建成信息通信技术基础设施环境国际领先、城市管理运营与民生服务质量明显提高、产业结构与创新能力优化发展的智慧型现代化城市。	实施全覆盖感知网络、高速融合网络、公共服务支撑平台、“深圳云”、信息安全、技术攻关、产业培育、标准化、智慧应用、重点先行等十大工程。
宁波	加快创建智慧城市行动纲要	保持信息化水平全国领先，智慧城市应用商业模式创建和标准化建设走在全国前列。	大力推进智慧城市智慧应用体系、智慧产业基地、智慧基础设施和居民信息应用能力等四大领域建设。
苏州	“智慧苏州”规划	建成国内先进、全球有影响力的“智慧城市”高新技术研发基地和国家创新型城市。	建立地理信息共享、综合信息共享、综合决策支持、市政设施管理智能化、智慧大交通综合服务、城市应急综合智慧服务等六大平台；建设智慧民生、智慧卫生、智慧交通、智慧教育、智慧城管、智慧平安、智慧旅游、智慧农业、智能电网等九大工程。
佛山	四化融合、智慧佛山发展规划纲要	打造新兴产业发达、社会管理睿智、大众生活智能以及环境优美和谐的智慧城市。	建设信息化与工业化融合、战略性新兴产业发展、农村信息化、U—佛山建设、政务信息资源共享、信息化便民、城市数字管理、数字文化产业、电子商务、国际合作拓展等十大重点工程。
天津滨海新区	智慧滨海建设中期实施方案	建设“物联化、互联化、智能化”为特征的“智慧滨海”。	实施智慧政府、智慧城管、智慧经济、智慧民生四大工程；建设信息基础设施、新兴信息产业两大高地。

（此表根据国内相关规划和行动计划整理）

（三）促进智慧技术在城市关键领域和环节的应用

智慧城市建设涉及经济建设、社会建设、文化建设、生态建设以及政府自身建设等诸多领域，包括智慧的教育科技、智慧的基础设施、智慧的资源能源、智慧的政府管理、智慧的城市服务、智慧的市民生活等方方面面。珠三角城市在智慧城市建设中，应借鉴国内外先进城市的经验，在重点突破和示范应用上下功夫，抓住智慧城市建设的关键领域，谋划选择具有前瞻性、公共性、示范性、协同性和创新性的项目，加大推进力度，形成良好的辐射带动效应。

1.推进智慧制造，促进制造业与信息化深度融合。智慧制造采用物联网、云计算等“智慧”技术，将各类制造资源和制造能力虚拟化、服务化，是信息化与工业化深度融合后的新型工业形态。智慧制造实现信息技术与制造技术、工业化和信息化的融合发展，对经济转型、

产业升级具有“催化效应”。近年来，长三角先进城市借助发展智慧城市的契机，大力发展新兴信息技术手段，逐渐走上制造业高端化、智能化的发展道路。珠三角城市制造业比较发达，应加快推动以互联网、物联网等网络技术、应用软件和集成电路设计、生产制造信息技术服务等为重点的信息产业发展，全面提升智慧制造水平，大力推动制造业的智慧化、集成化、协同化、敏捷化、绿色化、智能化发展。尤其要大力推进支柱产业的智慧化升级，大力推进两化融合试点区（镇）的工业信息化建设，大力推进园区智慧科技和智慧产业发展，大力推进电子港口和智慧物流建设，为制造业发展提供智慧的生产性服务。

2.推进智慧政务，促进政务信息资源共享和行政流程再造。智慧政务是在传统电子政务基础上，运用云计算、大数据、4G 网络、互联网等智慧技术手段，将各部门分散割裂的业务系统进行整合和集约建设，实行资源的集中化和按需提供，从而解决传统业务系统相互割裂和无法协同的问题，实现信息资源共享和互联互通。由传统电子政务向政务云和智慧政务演变是当前政务建设的一大趋势，国内先进城市如杭州、南京、成都、天津、常州等都已大力推进智慧政务建设，其中，杭州形成了一套工作机制、一套安全技术性能指标、一套工作制度、一套操作规范、一套操作流程，还有一套岗位责任，建设了具有综合性、自主知识产权、协同创新、自主可控信息安全、政府购买云服务模式以及可持续化等六大特色的政务云平台，在提升信息资源共享水平和政府服务效率方面取得较好示范效应。珠三角城市应以智慧政务作为当前建设服务型政府和效能型政府的重要切入点，加快建设政务云平台中心，加快开发统一的政务信息资源共享平台，加快构建网上办事大厅，推动整个政务系统实现资源共享、互联互通、业务协同。

3.推进智慧城管，提高城市管理精细化和科学化水平。智慧城管是在智慧城市的框架下，运用信息网络技术和智慧技术，采用数字城管、智能监控、多维信息采集、协同工作处置、智能督查考评、预警决策分析等手段，构建基于海量信息和智能过滤处理的城市管理新模式，从而达到对城市的智慧化管理。智慧城管有利于弥补城市管理中信息盲区与管理盲点，实现城管信息共享、工作互动、无缝对接，促进城市管理工作由被动向主动、静态向动态、粗放向精细、无序向规范转变。目前，杭州、宁波、苏州等城市已在深化城市管理数字化、推进城管智慧技术应用体系建设、构建智慧管控和应急指挥系统、量化城市管理对象和细化管理行为等方面作了大量探索，提高了城市智能化管理水平。其中，宁波充分利用部门资源，通过部门协同、经验确权、指定处置等模式，走出了大城管宁波模式。珠三角城市应充分借鉴先进城市的经验，努力构建联通共享的城管信息资源平台，构建自动化、全覆盖的城管智能监控系统，构建城管问题智慧化反馈与处置体系，强化现代智慧技术在城市管控中的应用，强化跨部门数据整合和业务协同，强化智慧化处置问题能力，进一步提高城市管理的精细化、智能化和科学化水平。

4.推进智慧民生，为市民提供智慧化和个性化公共服务。智慧民生就是要以市民需求为导向，在医疗、教育、科普、文化、环卫、便民服务等公众关注度高的民生领域，推进广覆盖、易使用的社会事业与公共服务信息化，让市民享受到智慧民生带来的个性化和便捷化服务。目前，上海、天津、杭州等城市围绕智慧民生建设，加大信息技术在民生服务保障领域的应用力度，实施包括数字医疗、数字教育、数字文化、电子账单、社区生活服务信息化平台、智能小区等智慧民生工程，并通过服务云、商业云、娱乐云、教育云、医疗云等数字化方式向社区进行延伸和推广，实现了社区公共信息和电子服务的覆盖推广。珠三角城市应借鉴先进城市经验，以智慧社区建设为依托，大力推进社会事业与公共服务智能化，逐渐形成信息化的社会公共服务体系，使市民享受到更加智能、便捷、舒适和多元化的公共服务，增强广大市民的幸福感。

（四）引导多元主体和多方力量推进智慧城市建设

智慧城市的建设是一个长期复杂的过程，需要大量财力投入，只有建立合适的投资运营方式或模式，才能理清权、责、利的关系，才能让政府、企业、用户及其他机构等加强合作、形成合力、共建项目、共享利益；只有鼓励各行各业多方参与智慧城市建设，大力推进智慧科技在各领域的应用，才能保证智慧城市持续、安全、高效的运营。

1.鼓励多元主体参与推进智慧城市建设。智慧城市建设因为涉及领域、项目和市场主体非常广泛，既有公益性、半公益性项目，也有许多商业运营项目，其投资运营方式也因此呈现多元化，不同行业领域的智慧化建设项目，其建设运营主体和投融资模式往往不同。要借鉴上海、杭州、南京、天津、宁波等城市经验，针对智慧城市建设的不同领域乃至同一领域不同环节，有针对性选择不同的投资运营方式，制定切实可行的建设方案，通过购买服务、建设转移、特许经营、融资租赁和商业建设运营等多种营运方式，推动多元主体参与智慧城市建设。各城市要出台相关政策，加强与国内重大智慧城市营运商的战略合作，签订合作框架协议，提出具体合作项目，有计划地引导电信、广电、IT 及其他智慧城市营运商投资营运智慧城市相关项目建设，深度参与珠三角智慧城市建设，并抓好相关签约项目的实施。

2.盘活引导社会资金推动智慧城市建设。建设智慧

城市投资数额巨大，据专家测算，真正意义上的智慧城市每平方公里投资上百亿元，如此巨额投资不能完全依靠政府的财政投入，必须发挥社会资本的优势，尤其要利用国开行的低息贷款、商业银行贷款、海外资本，同时引导本地民间资本、运营商直接投入智慧城市建设。要制定促进民间资本介入智慧城市建设的相关政策，引导民营资本以独资、控股、参股等方式投资智慧城市建设，尤其要发挥创投基金和产业基金的投资引导作用，引导更多民间产业资本投入物联网、云计算、移动互联网、新一代移动通讯等为代表的新兴智慧产业。

3.鼓励各行业积极参与智慧城市建设。建设智慧城市是涉及众多领域和环节的长期的、复杂的系统工程，由于智慧城市还处于初步发展阶段，在智慧产业的应用方面更需要不同行业的积极参与和配合，各行业要树立智慧发展理念，加深本行业智慧发展的认识，积极参与智慧化升级改造，鼓励智慧产业在本行业的应用，以行业为单位建立虚拟和实体的协同创新机制，并积极推动智慧科技跨行业的应用，增强城市协同创新能力。

三、全面推进珠三角城市低碳生态化，打造高品质生态宜居城市

低碳生态化城市群是在一定地域范围内，遵循自然生态规律，由不同等级、规模和智能的低碳生态城市组成的城市群，是通过构建网络化、紧凑型、生态型、组团式、嵌套式的空间结构，通过建设区域性轨道交通和公共交通走廊，通过低碳生产、低碳设施、低碳生活、低碳消费和低碳保障等措施，形成的城市群经济社会运行体系。当前，随着全球资源能源短缺问题的逐步升级，以及全球气候变暖问题的日渐显露，低碳生态化发展成为世界各国降低资源能源消耗、转变发展模式、谋求城市新竞争力的关键所在，建设低碳生态化城市已成为世界各地的共同追求。

（一）低碳生态化是城市可持续发展的内在要求

良好的生态环境是经济社会得以永续发展的基础和源泉，协调好人口与资源、环境发展的关系，建立人与自然的平衡，是可持续发展战略追求的目标。低碳经济是以低碳发展、低碳产业、低碳技术、低碳生活等一系列经济形态的总称，它以低能耗、低排放、低污染为基本特征，以应对碳基能源对气候变暖为基本要求，以实现经济社会的可持续发展为基本目标。可持续发展就是“能够满足当前需要而又不危及下一代满足其需要的能力的发展”，按可持续发展的理念，推进可持续发展必须做好节能减排和应对气候变化，必须保护生态系统，改善环境质量，必须保证资源，特别是战略资源持续安全供给和高效循环利用，必须促进环境和发展的双赢。只有切实有效地保护能源资源和生态环境，推进绿色低碳的生产生活和消费方式，自然力才能最大限度地持久地转变为现实生产力，城市才有增值潜力，生活才能更加美好。珠三角城市应以建设低碳生态化城市为目标，将环境保护作为重要战略取向优先统筹，将低碳产业作为新的增长点优先发展，将自然资源作为核心资源优先保护，将经济建设与生态建设同步推进，产业竞争力与环境竞争力同步提升，物质文明与生态文明同步发展，才能实现低碳生态化的城市可持续发展之路。

（二）低碳生态化城市的评价标准

低碳生态城市的本质特征是人与自然的和谐相处，核心是依靠技术和制度创新推动经济社会发展方式的根本性变革。当前，我国低碳生态城市建设尚处于起步摸索阶段，通过制定一套完整科学的评价标准，对于明确低碳生态城市建设的重点和方向，指导低碳生态城市建设实践具有重要指导意义和实践价值。目前，国内许多学者对低碳生态城市的评价进行了大量深入研究，周跃云等（2010）认为低碳生态城市群应确立居住环境、社区环境、城市环境和城市群环境及以人为核心的“四层一核心”低碳生态城市群评价体系；朱洪祥等（2012）以东营市为例，基于低碳生态城市的功能定位，提出共性指标和特色指标相结合、核心指标与支撑指标相衔接，核心指标动态调整的评价体系；陈晓晶等（2013）以深圳市为例，构建了一套兼顾通用性与地方特性、先进性与可操作性的深圳市低碳生态城市评价体系，为深圳市生态文明建设提供了量化标准和考核依据。

低碳生态城市评价指标体系构建借鉴国际通用的指标体系研究方法和框架，对低碳生态城市这一总体目标进行分解和细化，形成三个层次。第一层为总目标层，对低碳生态城市的目标和内涵进行分析，认为低碳生态城市应具有低碳发展、生态城市和适宜居住的内涵。第二层为子系统层，即支撑总目标实现的各系统要素，分为资源节约、污染减排、生态优美、环境优化和城市宜居五个子系统。第三层为路径层，是为达到上述分目标的路径选择。在评价指标的选取上，借鉴国内相关研究成果，并结合珠三角城市自然地理、产业发展、城市建设等实际，提出指标体系。在目标值的确定上，应根据国家环境保护十二五规划、珠三角环境一体化规划等确定。“珠三角城市低碳生态化评价体系”如表 4 所示。

表 4：低碳生态城市评价指标体系

一级指标	二级指标	三级指标	2015 年目标
低碳生态化评价标准	资源节约	非化石能源占一次性能源消费比重	11.4%
		单位 GDP 水耗（立方米/ 万元）	≤19.4

		单位 GDP 能耗	降低 16%
	污染减排	二氧化硫排放量	减少 8%
		单位国内生产总值二氧化碳排放	降低 17%
	生态优美	森林覆盖率	21.66%
		建成区绿化覆盖率	>50%
		人均公园绿地面积	>13
		城市空气质量好于或等于二级标准的天数	>95%
	环境优化	城镇生活垃圾无害化处理率	>90%
		工业固体废弃物综合利用率	>85%
		城镇生活废水处理率	>90%
		工业废水排放达标率	>90%
	城市宜居	公共交通占机动化出行分担率	>35%
		人口城镇化水平	>70%

（注：2015 年目标值根据国家和省对珠三角发展相关规划要求整理）

（三）珠三角城市生态环境保护面临难题

近年来，珠三角各市在加快经济发展同时，不断加强环境保护，实施了节能减排减排、治污保洁、珠江综合整治等一批重大工程，取得了明显成效，但与国家和省提出的规划目标相比，仍存在一定差距，尤其是随着经济社会的发展，珠三角生态环境特征正面临新的问题，区域性、复合型、压缩型的生态环境问题日益凸显。主要表现在以下几个方面：

第一，土地资源紧缺状况短时间难以得到根本转变。改革开放以来，珠三角地区尤其是东莞、中山、佛山等地，劳动密集型产业发展迅速，城镇化发展迅速，土地资源严重短缺。据省国土资源厅相关信息显示，目前珠三角地区平均土地开发强度为 16.56%,制造业发达的城市如深圳、佛山、东莞等城市土地资源紧缺状况尤为突出，至 2013 年深圳市土地开发强度已经接近 50%，东莞市已超过 43%，中山、佛山也已经超过 30%的国际警戒线。由此可见，这种由粗放型增长方式导致的土地资源相对紧缺状况短时间内难以有效改变。

第二，水资源保护和水环境治理面临巨大挑战。尽管广东省地表水资源、地下水资源和水资源总量较国内其他省丰富,但从广东特定省情来看,潜在的水资源危机相当严峻。首先，由于人口众多,水资源消耗量大,珠三角城市人均占有水资源量很低。目前，珠三角地区人均水资源占有量仅为 1100 立方米/年,远远低于国际公认的 1700 立方米/年的人均用水警戒线。尤其是东莞等常住人口多的城市，人均水资源占有量更少，相关资料显示，东莞多年人均水资源占有量仅为 250 立方米左右（以 825 万常住人口计),远远低于国际公认的人均 500 立方米的严重缺水警戒线。其次，一些城市水体污染日益严重,水质每况愈下,呈现典型的水质性缺水。2010 年珠三角城市水环境功能区水质达标率仅为 64.5%，仍有 11.3%的省控断面属于劣 V 类水体，已出现了严峻的水质性缺水问题。再次，从用水效益方面看，珠三角大部分城市万元 GDP 用水量过高。目前，珠三角城市中，除了深圳之外，用水效益处于相对较低的程度，如 2011 年惠州市万元 GDP 用水量为 104 立方米、中山市为 85 立方米、东莞市为 45.9 立方米，可见，珠三角城市有较大节水潜力，节水力度需要加强。

第三，节能减排压力较大。节能减排是珠三角地区可持续发展的重要支撑，是转型升级的主攻方向，也是优化大气环境、保障群众利益的重大举措。目前珠三角地区减排压力仍然很大，2010 年珠三角地区废水排放量、化学需氧量、二氧化硫排放量占全省排放量的 72.7%、55.9%、46.6%，且目前二氧化硫和化学需氧量通过工程减排的空间已不大,要实现国家下达的到 2015 年广东省化学需氧量、氨氮、二氧化硫和氮氧化物排放量分别削减 12.0%、13.3%、14.8%和 16.9%的主要污染物减排目标，压力十分巨大。从节能方面看，珠三角制造业城市若完成广东省“十二五”单位 GDP 能耗降低指标，存在一定难度。2010 年，佛山市单位 GDP 能耗为 0.664 与全省平均水平持平，东莞市单位 GDP 能耗为 0.691 吨标准煤/万元，高于全省平均水平，且一些容易见效的节能降耗工作已经陆续完成，今后节能空间越来越小。

第四，城乡环境综合整治任务繁重。在工业化发展浪潮中，珠三角地区一些工业化发展较快的城市呈现“村村点火、户户冒烟”的发展模式，数以万计的中小企业扎根分布在镇街和村，大量农贸市场、出租屋、商铺、外来务工人员聚集，给珠三角城乡环境整治带来很多具体问题，如生活垃圾和工业垃圾的收集和装运、垃圾填埋场和垃圾焚烧发电厂选址，农贸市场环境卫生管理、城中村的乱停、乱放、乱摆卖、乱搭建，乡村道路的清扫和保洁、厂区的绿化和清洁，工业危险废物处理，等等，这些都增加了珠三角地区城乡环境整治问题的难度和复杂程度。

（四）推进珠三角城市低碳生态化发展的对策思路

珠三角地区推进城市低碳生态化发展，主要应从发

展低碳产业、推广清洁生产、实行生态环境强制性保护以及深入解决突出环境问题等几个方面入手。

1. 发展低碳产业。发展低碳产业，是促进传统产业升级转型，优化产业结构，积极应对“碳关税”、实现可持续发展的必然选择。目前，珠三角正处在产业转型升级的过程中，为此，应抓住低碳产业发展的有利契机，将发展低碳产业做为珠三角产业调整升级的战略方向，以低碳产业的发展推动产业结构优化升级和新产业的崛起。尤其要发展以新能源、新材料、新光源为主体的“三新”产业，大力发展信息、生物医药、文化及创意产业、现代服务业等低能耗、低排放产业，大力发展清洁技术、家用环保设备、环保服务、资源综合利用等环保产业。

2. 推广清洁生产。清洁生产是循环经济的重要方面，追求的是尽可能少消耗、少排放，达到节能、降耗、减排、增效的多重效果。目前，珠三角九市经贸部门及相关政府部门均已制订了工作方案，共同推进清洁生产计划的实施，推动节能减排技术的应用。应继续调整技术改造财政专项资金的结构，重点投放于节能技术改造、节能示范项目和引入高效节能产品，并加强推行相关培训、表彰奖励，促进企业落实创新的节能设备和技术等工作，同时鼓励金融机构支持节能项目，对节能项目提供信贷，加快推行节能降耗项目建设。应采取强制审核和资源申报相结合的办法，积极推进印染、制革、电镀、洗水、电子、造纸、家具、化工、纺织等行业和餐饮、旅馆等服务行业开展清洁生产。应支持清洁生产技术创新，推广使用资源利用效率高、污染产生量少的清洁生产技术、工艺和成套设备。培育和发展清洁生产技术服务单位，为企业清洁生产审核、技术开发和推广、信息咨询等提供服务。

3. 实行生态环境的强制性保护。一是按主体功能区划的要求，加强对生态环境保护的分类管理。珠三角城市应按照《广东省主体功能区规划》的要求，加快编制各自的主体功能区规划，并按四大类主体功能区制定分类管理的环境政策和评价指标体系。二是加强水、土地和森林资源的强制性保护。严格执行国家和广东省关于水资源保护的各项法律法规，突出饮用水源功能性保护，健全预防水污染和水生态破坏的监管力度，强化饮用水水源区保护和监测，保护水环境安全和水生态平衡。加强土地利用总体规划的修编和实施，合理调整土地利用结构和布局，优先保护具有重要生态功能的林地和湿地，加大天然林和防护林的保护力度，加强水源涵养林、水土保护林和滩涂红树林的保护建设，维护和恢复森林的生态功能。三是健全环保限批政策。新建项目必须通过产业结构调整、腾出环境容量后才批准建设，在项目审批过程中，严把污染物总量控制关、产业政策关、项目选址关和污染防治关，提高准入门槛，强化前置审批，对超过生态承载能力的重污染项目、不符合环境评估要求的工业和建设项目，坚决拒之门外，达到污染防治和总量削减的目标。

4. 深入解决突出环境问题。要围绕低碳生态化城市建设的目标，针对生态环境治理的难题和人民群众反映强烈的热点环境问题，加大环境综合整治力度，常抓不懈、深入推进，持续改善环境质量，使环境更友好、生活更美好。一是深化水环境综合治理。要全面统筹推进水资源和水环境的综合治理保护，为水环境改善提供长效保障。要以珠三角一体化为契机，打破行政区划壁垒，强化跨界河流断面水质目标管理和考核，综合运用行政、经济、法律、公众参与等多种手段，逐步建立健全信息通报、环境准入、结构调整、企业监管、截流治污、河道整治、生态修复一体化的跨界河流污染综合防治体系。二是逐步解决区域大气复合污染。全面实施珠三角清洁空气行动计划，从注重重点行业减排向全面防控转变，从单因子治理向多污染因子综合控制转变，多手段联合推进，稳步提升脱硫成效，全面推进降氮脱硝，协同控制挥发性有机化合物和氮氧化物，大幅减少颗粒物，逐步解决地区污染光化学烟雾、酸雨和灰霾污染。三是构筑区域生态安全体系。从珠三角区域自然环境和经济发展整体布局出发，优先保护“生态高地”，统筹规划区域绿地和区域“绿道”，实施生态同保共育，合力构筑整体联结的生态安全体系，维护区域生态安全。

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香港的去归与大国的兴衰

——纪念香港回归 20 周年

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摘 要：在 19 世纪和 20 世纪两个百年里，在东西两个半球的中,英两个大国的历史上，就香港的割让和回归问题引发了两件轰动世界的历史事件。香港被割让,表明大清帝国的衰落和大英帝国的兴盛；而香港回归,则标志着大英帝国的衰落和新中国在国际舞台上的迅速崛起。决定中英两大国兴衰的主要因素是先进的社会制度、开放意识和创新精神以及由此带来的先进的社会生产力、科学技术和强大的综合国力。自鸦片战争以来将近百年的历程，中华民族在内忧外侮、风雨飘摇的屈辱中煎熬，落后挨打创深痛巨，富国强兵成为国人努力的目标。香港的回归彻底洗刷了中华民族百年来的耻辱,预示着中华民族的统一、繁荣和兴盛的到来。回归二十年后的香港的稳定、繁荣与发展事实，无可争辩地见证了中华民族伟大复兴的征程，再现了东方神话，预示着一个“有中国特色的全球化”时代的到来。香港的回归也昭示出开放意识和创新精神是大国持久兴盛的核心要件。经过半个多世纪的伟大创新和艰辛探索，中国取得了举世瞩目的成就，不仅奠定了民族复兴和国家崛起的根基，而且开创了社会主义建设的新篇章。

关键词：香港割让与回归；大国兴衰；中国与英国；香港回归 20 周年

在 19 世纪 20 世纪两个百年里，在东西两个半球的中英两个大国有关香港的割让与回归问题,一直是世人议论和关注的焦点。世界上最古老最强大的文明国家到大清王朝时为什么衰败到订立城下之盟、割让国土的地步；为什么一个小小岛国能够迅速壮大为“日不落帝国”；为什么国民党蒋介石在第二次世界大战胜利结束之时不能乘势收回香港，而共产党新中国能够顺利收回香港，一洗百年耻辱；为什么一个老牌的帝国主义、统治世界达 1 个半世纪之久的英国会乖乖地将香港拱手交还给中国？香港的回归说明了什么？决定大国兴衰的主要因素有哪些？这是本文所拟探讨的问题。

一、东方不亮西方亮：东方神话的破灭

（一）西方人眼中的中国神话

作为世界文明的起源地和农耕文化的典型，中国创造了以人为中心的儒家文化体系和富庶、繁荣、强大的东方神话。秦、汉、唐帝国的威严，宋代的繁华，清朝的康乾盛世，以及科举文官制度、精美的瓷器、丝绸和敦煌莫高窟的艺术，曾经令多少西方人倾倒膜拜。

13 世纪的意大利旅行家马可·波罗在中国游历 17 年，在元帝国生活的 10 多年里，马可波罗曾经出任扬州总督，也出使过越南、爪哇、苏门答腊。根据其见闻写就的《马可·波罗行记》以大量的篇章，热情洋溢的语言，记述了中国无穷无尽的财富，巨大的商业城市，极好的交通设施，以及华丽的宫殿建筑。这本书成书后在欧洲迅速传播，马可·波罗的一句“欧洲君主的生活水平还比不上一个中国看守城门的士兵”，以及马可波罗“东方博览会”展示的象牙、玉器、瓷器、丝绸以及纸币等，掀开了东方神秘的面纱，引起了整个欧洲的轰动。让欧洲人对东方产生无限向往。马可·波罗游记激发了欧洲人此后几个世纪的东方情结，演绎出令西方人向往的“东方神话”和盛行西方的“中国文化热”。

宋元时期，中国的金融、陶瓷、冶金、纺织和制造等行业的水平全球领先，城市化水平大幅提升，宋时世界人口超百万的 6 个城市中，除了君士坦丁堡，其余 5 个都在中国，汴京是当时世界第一大城市。而那时的欧洲，还在黑暗的中世纪里沉睡。当时中国生铁年产量达到 12.5 万吨，而英国 1720 年的铁产量只有 2 万吨。[1] “东方神话”激起了西欧人的无限遐想和前往东方寻求财富的欲望，也是后来新航路开辟的强大诱因。

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对中国的痴迷和中国文化热一直延续到 17-18 世纪。几个世纪来欧洲对中国的艳羡和仰慕，使得中国化成为欧洲人追求的时尚。这种中国化的时尚追求不仅体现在物质化的中国瓷器、丝绸、漆器、茶叶、壁纸、绣帷等上面，也不仅仅体现在典型中国风格的建筑和玲珑剔透的江南园林；而且也体现在日常生活和精神生活上。即令到了中国神话破灭的前夜，伟大的德国思想家歌德(Johann Wolfgang von Goethe，1749-1832)在与艾克曼聊到中国时仰慕之情依然溢于言表：中国人是我们的同类人，“只是在他们那里一切都比我们这里更明朗、更纯洁，也更合乎道德……他们还有一个特点，人和大自然是生活在一起的。你经常听到金鱼在池子里跳跃，鸟儿在枝头歌唱不停，白天总是阳光灿烂，夜晚也总是月白风清。”描述了一幅天人合一、富足安康、悠闲安逸的中国映像，令人心向神往。

（二）东方不亮西方亮：东**方神**话的破灭

然而，在西方盛行几个世纪之久的东方神话和中国美梦在 18 世纪末叶就化为了梦幻泡影。随着 1793 年马戛尔使团访问中国及《英使谒见乾隆纪实》的出版，一度兴盛强大辉煌的中国形象开始变得黯淡和丑陋了。欧洲人发现他们痴迷几个世纪的东方巨人竟是披着华丽蓝布袍子的“泥足巨人”。

继 16 世纪的西班牙、17 世纪的荷兰之后，英国确立了资本主义制度并在 19 世纪三四十年代完成了产业革命，迅速崛起成为世界新的霸主，其殖民地遍及亚洲、非洲、拉丁美洲、大洋洲，号称“日不落帝国”。与新型资本主义西方列强崛起扩张形成巨大反差的是，东方古老的中华帝国却走在封建中世纪的穷途末路上。自嘉、道以降，清朝国势凌夷，已经堕入衰世，但封建统治者却不思革新，仍处在恬然承平、天朝上国的幻觉中。龚自珍一针见血地指出：“承乾隆六十载太平之盛，人心惯于泰侈，风欲习于游荡，京师其尤甚者。自京师始，概乎四方，大抵富户变贫户，贫户变饿户者。四民之首，奔走下贱，各省大局，岌岌乎皆不可以支月日，奚暇问年岁?”，[2] 腐朽的封建制度所带来的王朝骄奢，吏治腐败，兼以天灾人祸横行，所有这些都是导致人民生活水准下降，社会大动乱——盗贼蜂起的导火线。据不完全统计，1796-1840 年间共发生 15 次重大民间动乱，1846-1875 年有 93 次，1856-1865 年有 2332 次，1866-1855 年有 909 次，1596-1911 年有 653 次。[3]

落后就要挨打。1840 年中英鸦片战争是代表东西世界两种制度(封建主义、资本主义制度）的两个大国的第一次较量。与世界“第一工业国”英国相比，中国在 19 世纪中后期，不仅在“总的世界制造业中的份额相对减少，而且在某些情况下其经济绝对地衰退了”。这样，“在 1841 至 1842 年鸦片战争的几次战役中，装甲舰‘复仇女神号’的机动性和火力对中国的守军来说是一个灾难，他们被轻易地一扫而光”。[4]1842 年不平等的《中英南京条约》中香港的被割让便充分证明了大清帝国的衰败和大英帝国的兴盛这一事实。“至鸦片一案，则为清运告终之萌芽。盖是役也，为中国科学落后之试验，为中国无世界知识之试验，为满洲勋贵无一成材之试验。二百年控制汉族之威风，扫地以尽，于清一代兴亡之关匪细也。”[1] 1860 年中英《北京条件》英国对九龙半岛的割占，1898 年中英《展拓香港界址专条》英国对新界的强行租借（ 99 年）更进一步证明了这一点。1895 年甲午战争和 1898 年的瓜分狂潮便彻底证明了封建中华帝国的彻底衰落。与樯橹如云，旌旗蔽日，兴盛和霸权如日中天的英国相较，满清帝国一割香港(1842 年)，再割九龙半岛(1860 年)，又租新界(1898 年)，富庶的长江流域沦为英国的势力范围。“量中华之物力，结与国之欢心”的奴才嘴脸和接下来事事不如人的文化自卑心理便是对此时满清王朝落后挨打、衰微不振局面的最好诠释了。英国割占香港九龙半岛，强租新界的历史是一幅活生生的弱肉强食的历史画卷，在这幅画卷上烙下的是中国落后挨打、忍气吞声的羞耻和英国耀武扬武、恃强凌弱的霸道!

二、**一阳来复**：东**方神**话再现

历史在前进，而每个国家都在重新开始。世界政治、经济发展的不平衡，必然导致大国兴衰地位的禅代更替。19 世纪末 20 世纪初，当大英帝国沉浸在盛世霸主的欢呼雀跃，用“人头做酒杯” 酣饮殖民地的“甜美酒浆”之时，其转衰的征兆便于此时露出了端倪。尽管英国在20世纪的世界舞台上仍算得上一个大国，但其一统天下的昔日荣光已一去不复返，而且其在国际舞台上的影响正江河日下。尤其与新中国的崛起壮大相比，英国的大国地位已经逆转，明显走在下坡路上。造成英国国际地位逆转的契机是两次大规模的世界大战。这两次大战不仅消耗了英国原来积聚起来的巨额财富，而且严重挫伤其经济基础。所以当英国以胜利者的姿态仰首在欧洲时，忽然发现这个星球上冒出了一个比自己强大得多的“巨人”——美国，随着世界经济财政中心越过大西洋来到纽约时，英国只能望洋兴叹满足于中等国家的地位了。

当英国人仍然习惯生活于昔日殖民帝国幻觉中的时候，殖民地却已开始了一场独立运动，其规模之大，速度之快，影响之深远，都给这个衰老的帝国以致命的一击。第二次世界大战后的第一个 10 年内，亚洲绝大多数英属殖民地都成为独立国家；第二个 10 年内，绝大多数非洲国家获得独立。第二次世界大战后几十年间，英国舰船沿着殖民时代相反的航线把一批批英国军队撤回本土的行动便悄然敲响了大英帝国的丧钟。

与英国的衰退相对照，历经磨难、深受欺凌的中华

民族经过几代人的努力,埋葬了落后的封建制度,推翻压在头上的“三座大山”,有如一轮红日,在东方大地上冉冉升起,1949 年社会主义新中国的成立,标志着中华民族的崛起。新中国成立后，面对一穷二白的局面和复杂的国际格局，中国共产党领导中国人民先后进行了社会主义改造，特别是 1978 年改革开放和中国特色社会主义现代化建设的成功推进，中国的综合国力急剧提升，中国的面貌焕然一新。过去贫穷落后的中国一跃成为世界发展速度最快的“火车头”，过去靠天吃饭的农业国家一跃成为世界的“工厂”，“中国制造”、“中国智造”、“中国创造”正成为引领世界经济增长的发动机。

表 1 中、美、英、日历年 GDP(国民生产总值)比较表[5]

（单位：亿元人民币）

年份/GDP	中国	美国	英国	日本
1952年	679	9376.7	171.21亿英磅	
1957年	1068	11384.6	221.05亿英磅	
1962年	1149.3	14458.5	1990	
1967年	1773.9	20556.9	2743.1	
1972年	2518.1	27799.8	3814.2	
1977年	3201.9	37734.1	4886.5	
1982年	5323.4	61617.2	9749	20598.1
1987年	12058.6	176404.2	26162.7	90429.7
1992年	26923.5	349587.5	60608.7	208602.9
1997年	78973	688509.5	112704.5	353349.1
2002年	120332.7	866601.9	133758.8	324320.2
2007年	265810.3	1098648.4	218807.8	342050.
2012年	519322	1007045.1	164859	371032.2
2016年	744127	1090058.	243014.4	323756.6

注:http://blog.sina.com.cn/s/blog_7034bf0001010g2i.html

通过比较中国、美国、英国、日本历年 GDP(国民生产总值)数据，可以看出：

1、中英国民生产总值（GDP）比较：新中国成立之初的 1952 年中国 GDP 大约是英国的 1/3；1977 年中英 GDP 之比大约为 0.66:1；1997 年中英 GDP 之比大约为 0.700:1；2002 年中英 GDP 大约为 0.900:1；2007 年中英 GDP 之比大约为 1.21:1；2012 年中英 GDP 大约为 3.15:1；2016 年中英 GDP 之比大约为 3.06:1。20 世纪末，中国的国民生产总值（GDP）大约是英国的一半，但进入到 21 世纪的前十年，中国的国民生产总值（GDP）已经与英国持平并已经超越，21 世纪的第二个十年，中国的国民生产总值（GDP）则已经是英国的三倍多了。

2、中日国民生产总值（GDP）比较：1982 年中日 GDP 之比大约为：0.26:1；1997 年中日 GDP 之比大约为：0.22:1；2002 年中日 GDP 之比大约为：0.37:1；2007 年中日 GDP 之比大约为：0.78:1；2012 年中日 GDP 之比大约为：1.40:1；2016 年中日 GDP 之比大约为：2.30:1。20 世纪末，中国的国民生产总值（GDP）大约是日本的 1/4，但进入到 21 世纪前十年，中国的国民生产总值（GDP）已经接近、持平和超越日本，21 世纪的第二个十年，中国的国民生产总值（GDP）则已经是日本的二倍多了。

3、中美国民生产总值（GDP）比较：新中国成立之初的 1952 年中美 GDP 之比大约为：0.07:1；1997 年中美 GDP 之比大约为：0.11:1；2002 年中美 GDP 之比大约为：0.14:1；2007 年中美 GDP 之比大约为：0.24:1；2012 年中美 GDP 之比大约为：0.52:1；2016 年中美 GDP 之比大约为：0.68:1。20 世纪末,中国的国民生产总值(GDP)大约是美国的十分之一，但进入到 21 世纪的前十年，中国的国民生产总值（GDP）大约是美国的四分之一，21 世纪的第二个十年，中国的国民生产总值（GDP）则大约接近美国的四分之三。

总之，自 1978 年中国实施改革开放中华民族伟大复兴进程开启以来，中国就进入了全面发展的快车道。随着核弹的成功爆炸,卫星上天,“翻两番” 任务的实现,“科教兴国”战略的实施,综合国力的增强,改革开放的深入,中国特色社会主义道路成为中华民族伟大复兴和东方神话再现的神器，这一切都表明中国在国际上已壮大为举足轻重的大国。

正是在此背景下,1984 年中英终于达成香港无条件如期回归中国的历史性协议——《关于香港问题的联合声明》。正如香港的被割让表征清王朝的腐朽衰败一样,香港的回归彻底洗刷了中华民族百年来的耻辱,预示着中华民族的统一、繁荣和兴盛的到来。2010 年中国国民生产总值（GDP）达到 397983 亿元人民币，第一次超越日本国民生产总值（GDP）364034.3 亿元人民币，成为世界第二大经济体，就标志着中国综合国力的惊人发展速度的里程碑事件。进入到 21 世纪的第二个十年，在以习近平为核心的党中央领导下，中华民族伟大复兴的“中国梦”激励亿万中国人奋发有为，中国特色社会主义事业强劲发展，国民生产总值（GDP）是日本的两倍多、英国的三倍多，接近美国水平。

此外，中国的军事实力也已跃居世界第二，奥运会奖牌稳居世界第二，包括航天等在内的科技实力和水平飞速发展。与之相应，随着道路自信、理论自信、制度自信、文化自信的确立，作为联合国常任理事国积极倡导国际贸易开放体系、成立亚洲开发银行、实施“一带一路”国际开放贸易格局，以及走上小康道路的百姓日常生活中“鼓起来的钱袋子”、“靓起来的服饰”、“热起来的假日旅游”、“长起来的健康寿命”和新四大发明——高铁、移动支付、网购、共享单车的巨大影响和领先地位，万事不如人的自卑感和“东亚病夫”被歧视时代已经一去不复返了。背靠强大祖国的香港自回归以来 20 年也走上了发展的快车道，20 年间，香港生产总值累计名义增长 81%。2016 年生产总值达 2.5 万亿

港元（3200 亿美元），在全球国家和地区 GDP 排名第 33 位，2014、2015、2016 年香港力压新加坡、东京、首尔，连续三年成为亚洲第一、全球排名第三的国际金融中心。[6]

如今的中国游客遍布世界各国，西方媒体对中国的报道铺天盖地，中国人民信心满满、豪情万丈地屹立在世界的东方。新中国成立以来不到 70 年的时间内令世人称羡的中国发展速度和强大国力，回归二十年后的香港的稳定、繁荣与发展事实，无可争辩地见证了中华民族伟大复兴的征程，再现了东方神话，预示着一个“有中国特色的全球化”时代的到来。[7]

三、历史的昭示：大国兴衰之由

世界历史上,大国兴衰沉浮,屡见不鲜。美国著名历史学家耶鲁大学教授保罗·肯尼迪在反思近 50 年世界各大国兴亡盛衰,成败得失的经验教训后指出:大国兴起,起于经济和科技发展,以及随之而来的军事强盛和对外征战扩张；大国之衰,衰于国际生产力重心转移,过度侵略扩张并造成经济和科技相对衰退落后。在我看来,经济和科技固然对大国的兴衰起重大影响,但起决定作用的还是社会制度本身。俾斯麦曾经指出:所有的国家都在“时间的长河”中航行,它们“不能创造或控制时间”,但却“能以不同的技能和经验驾驶航船前进”。[4]在我看来,一国之兴起，主要源于文化自信，而文化自信来自于先进的政治制度、雄厚的经济实力、强大的军事力量、发达的科学技术以及开放意识、创新精神。反之亦然。

（一）雄厚的综合国力

国力增长的速度影响并决定大国地位变化的最好例证是：16 世纪以后世界贸易集中地由地中海逐渐移向大西洋和西北欧，西班牙、荷兰等强国走向衰落，代之而起的是法国、英国、俄国、奥地利、普鲁士等；1890 年后的几十年中，世界工业品集中产地又由西欧慢慢移向世界其他地区，美国、日本顺势崛起。这两个例子说明，经济力量的转移预示着新的大国的崛起。

为什么国民党蒋介石在 1945 年第二次世界大战胜利结束之时不能乘势收回香港(当时蒋介石曾设想由美国出面向英国施加压力来收回香港,结果英军抢先从日军手中接收香港,致使蒋的设想落空),而时隔不久新中国却能以和平方式,顺利收回香港？为什么一个统治世界达一个半世纪之久的大英帝国会乖乖地将香港拱手交还中国?

弱国无外交,便是对这一问题的最好回答。国共两党收回香港问题上的成败表明新旧中国在国际上地位的悬殊:国民党统治的旧中国国民贫困、国力衰败，根本不能与英国抗衡,所以不能收回香港。共产党领导的新中国国力日强、举足轻重,英国已无力较量,所以能够收回香港。正如小平同志所说的:“中英谈判能取得成功,首先是因为我们这个国家是有实力的国家,是兴旺发达的国家,英国不能像对待阿根廷那样对待中国。”英国前首相撒切尔夫人在回忆录中也坦率承认:“因为我们同对手相比力量悬殊,对手又不肯妥协让步,因此香港谈判不是也不可能是英国的胜利”。[8]进入到 20 世纪的中华民族,一阳来复,龙运复兴,拥有实力,所以能够理直气壮收回香港,而英国由盛转衰,日薄西山,所以只得无可奈何,物归原主。

（二）先进的社会制度

正如 19 世纪中英地位悬殊是由社会制度引起的一样,20 世纪中英大国地位的逆转也同样取决于新旧社会制度。因为作为一个大国,其先决条件是具备强大的经济基础和先进的社会生产力（含科学技术),而要使经济基础持续壮大和生产力持续发展就需要有与之相适应的上层建筑和生产关系的不断调整,而当经济发展到顶峰,开始由盛转衰之时,就要适时考虑制度更新。

对照此时的中英两国悬殊地位,不难发现:决定两大国胜败兴衰的关键因素无疑是实力,而隐藏在“坚船利炮”等实力背后的则是先进的社会制度这一决定因素,可以说,制度上的革命和政策上的革新是英帝国迅速崛起的有力保证；相反,制度上的保守落后和政策上的因循守旧则是大清帝国沦丧的致命因素。回顾整个 19 世纪英中兴衰强弱的历史，不难看出先进的资本主义制度以及这一制度所带来的先进的社会生产力、科学技术和强大的综合国力对腐朽落后的封建制度的巨大优势。由此可见，现代社会制度是现代文明最主要的内核，世界上任何一个国家的兴衰都和它的社会制度是否先进紧密相连。

英国在 17 世纪中叶完成了资产阶级革命,在人类历史上率先过渡到资本主义这一先进的社会制度上来。封建制度的推翻,加速了统一民族市场的形成,为资本主义发展扫清了道路；资本主义制度的建立又为英国产业革命提供了重要的政治前提,推动了英国生产力的迅速发展,为英国建立世界工商业霸权和殖民帝国奠定了坚实的基础。作为新兴资本主义国家,英国制定内外政策的一个显著特征是富于革新和开拓精神。以科技为依据的技术革新和产业革命的国内政策与放眼世界、积极拓展海外殖民地和市场的国外政策融为一体,相互促进,相得益彰。

正当西方走出黑暗的中世纪,走上资本主义近代化的道路之时，古老的中华帝国在满清统治下却仍处于封建专制统治最黑暗的时期。皇权专制,官僚昏庸,士习衰恶,学风空虚,是这一时期最显著的特征。

中国人民为赢得民族独立和解放,为自强兴国进行了持久而艰辛的努力,付出了沉重的代价。从洋务运动到戊戌变法再到辛亥革命，从康有为、梁启超、谭嗣同

到孙中山、黄兴,都是中国走出中世纪、走上近代化道路的关键事件和主要人物。直到第二次世界大战中,中国抗日民族统一战线的形成和持久的不妥协的抗日战争对世界反法西斯战争做出的巨大贡献大大提高了中国的国际地位。特别是封建制度的推翻,社会主义制度的确立为中华民族的崛起奠定了坚实的政治基础,并为中国跻身世界强国,在国际舞台上崭露头角揭开了新的一页。通过社会主义改造,中国社会发生了翻天覆地的变化,特别是在邓小平领导下中国人民找到了一条适合本国国情的发展道路——中国特色社会主义道路,通过改革、开放、搞活,进一步解放发展了生产力,激发了全国人民的聪明才智和生产建设的巨大潜力,人民生活水平不断提高,综合国力大大提高。经济方面,自 1952 年以来,中国的工业和农业的年增长率分别为 10%和 3%左右,国民生产总值的年平均增长率为5%~6%,2003年中国的国民生产总值就赶上了英国,2016 年则是英国的三倍多，2010 年中国的国民生产总值开始超越日本，成为世界第二大经济体。在 1983-1988 年的 5 年中,农业的平均增长速度为 8%,工业为惊人的 12%,在 1979-1983 年在世界大部分地区出现经济衰退之时,8 亿中国农民的收入却增加了 70%。[4]就制造业而言,中英相比发生了巨大的反差,1953 年中英两国在世界制造业中所占的比例分别为 2.3% 和 8.6%，悬殊很大；但到 1980 年两国的比例发生逆转,中国增长到5%,而英国降为4%,钢铁产量中国 1980 年达 3700 万吨,1996 年超过 1 亿吨大关,跃居世界第一位,大大超过英国。[4]军事技术方面,从 1964 年第一颗原子弹成功爆炸到跻身几大核强国之列；从陆基导弹到海基导弹；从长城火箭一箭一星到一箭多星,等等,这都表明中国的军事技术和军事实力日益壮大起来。更重要的是：中国人的爱国心、进取心、自信心，面向世界的开放意识和改革创新精神,给整个国家注入了活力,使其持续发展获得了强大的精神动力。与昔日半殖民地半封建社会相比,现在的中国人已挺直了腰杆,面对他国的无理要求可以说“不”了!

相比之下,大英帝国依靠资本扩张和殖民掠夺积累起来的巨额财富和大国地位,在由资本主义列强挑起的两次世界大战的血腥搏斗以及由此而来的分赃争夺过程中被弄得精疲力竭。16 世纪 17 世纪资本主义制度所涌现的勃勃生机到20世纪已经走到了尽头,开始走下坡路了。20 世纪 20 年代,英国的制造业已陷入萧条,1929 年危机动摇了英国衰弱的经济根基,占英国出口 40%的纺织品生产削减了 2/3 ,占出口 10%的煤炭下降了 1/5,造船业遭到的打击最惨重,钢铁生产在 1929-1932 年的 3 年里下降了 45%,生铁产量下降了 53%,英国在全球贸易中所占份额一直下滑,1913 年为 14.15%,1929 年为 10.75%,1937 年为 9.8%,到 1976 年则降至 8.7%。[4] “与劳埃德．乔治时代甚至 1945 年的克莱门特·艾德礼时代相比,目前的英国无论如何也算不上一个泱泱大国,而只不过是一个普通的中等大国罢了!”。[4]德国人把这种现象讥讽为“英国得了‘英国病’”,美国人则认为英国患了“综合症”,即:“好战的工会制度,低劣的管理,政府的‘原地踏步’政策,在文化上对刻苦工作和企业家进取精神持否定态度等混合在一起的综合症”。[4]实际上这是资本主义社会晚期普遍存在的综合症。英国对昔日殖民帝国所持有的幻觉和对国际旧秩序的留恋以及由此表现出来的反潮流的国际行径,诸如“冷战”思维和对共产主义信仰的敌视等等都使得英国在日益变化的世界舞台上摆不正自己的位置,并因此而步步失策。20 世纪殖民地半殖民地国家的相继独立和第三世界的崛起便无情宣告“日不落帝国”时代的结束。

回顾整个 19 世纪英中兴衰强弱的历史,不难看出:先进的资本主义制度,以及这一制度所带来的先进的社会生产力、科学技术、高度自信的文化和强大的综合国力对腐朽落后的封建制度的巨大优势。19 世纪古老的封建帝国与新起的资本帝国较量的结果是中国衰落英国兴盛,20 世纪老牌的资本帝国与新起的社会主义新中国较量的结果是英国衰落中国兴盛,香港的去归便是最好的例证。19 世纪 20 世纪中英两国地位的兴衰及其逆转的历史有力地证明资本主义制度优越于封建制度,社会主义制度优越于资本主义制度。

（三）开放意识与创新精神

16 世纪的中国之所以是“泥足巨人”,其根本原因就是闭关锁国和因循守旧，缺乏开放意识与创新精神。正当西方走出黑暗的中世纪,走上资本主义近代化的道路之时,古老的中华帝国在满清统治下却仍处于封建专制统治最黑暗的时期。实际上，自宋代以后，中国封建社会就开始走下坡路了，表面繁华内隐藏着的是愚昧无知、妄自尊大、闭关锁国和因循守旧，皇权专制,官僚昏庸,士习衰恶,学风空虚,是这一时期最显著的特征。

15 世纪初的一位西方公使在他有关中国的见闻中有这样几句话:中国人认为世界上只有中国人长着两只眼睛，法兰克人是独眼龙，摩尔人都是瞎子，中国人自以为是世界上最优秀的民族。意大利天主教耶稣会传教士利玛窦（Matteo Ricci ，1552-1610)1582 来华，此后 28 年一直在中国传教、工作和生活，其晚年撰写的《利玛窦中国札记》，直白地描述了中国人的傲慢无知和根深蒂固的中国中心论：“他们把自己的国家夸耀成整个世界，并把它叫做天下”。 “不知道地球的大小而夜郎自大，所以中国人认为所有各国中只有中国值得称羡——他们不仅把所有的民族都看成是野蛮人，而且看成是没有理性的动物。”

与19世纪大英帝国革新和开拓精神相比,这时的满清王朝却以妄自尊大,闭关锁国和因循守旧为特征。以程朱理学为治国大纲,视科学技术为淫巧,重农抑商等

都是其具体表现。尽管当时少数的中国士人开始觉醒，提出了“师夷”的口号，并实施了富国强兵的“洋务运动”，但由于其目的在于保教保制，再加上整个统治机器操纵于保守顽固派手中，因此其结局便可想而知。可见仅有器物技艺层面的改良，没有社会制度层面的革命，不仅不能阻遏中国下滑的衰势，而且也不能挽救满清王朝这具僵尸。

自鸦片战争以来将近百年的历程，中华民族在内忧外侮、风雨飘摇的屈辱中煎熬，落后挨打创深痛巨，富国强兵成为国人努力的目标。新中国成立后，通过社会主义改造，中国社会发生了翻天覆地的变化，特别是在邓小平领导下中国人民找到了一条适合本国国情的发展道路——中国特色社会主义道路，通过改革开放、创新发展双轮驱动，从思想观念到具体体制，从经济基础到上层建筑，从生产方式到生活方式诸多方面涤荡着禁锢人们头脑的传统思想，引起了广泛深刻的变化，进一步解放发展了生产力，激发了全国人民的聪明才智和生产建设的巨大潜力，人民生活水平不断提高，综合国力大大提高。中共特色社会主义事业生机勃勃，党和人民更加自信。

同样，促使 20 世纪英国走下坡路的一个更为重要的因素是当它仍然习惯生活于昔日殖民帝国幻觉之中。由于国外殖民掠夺而积聚的巨额财富，在国内形成了大批食利阶层，由此衍生一种妄自尊大的心理定势、浮华懒散寄生的生活方式和保守落后的行为方式，往昔开放进取冒险的精神已丧失殆尽。其结果是导致生产和技术停滞，经济地位在世界上一落千丈。

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The Cession and Return of Hongkong and the Rise and Fall of the Great Powers
——In Memory of the 20th Anniversary of Hongkong's Return to the Motherland

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Abstract: During the two hundred years of the 19th and 20th centuries, the cession and return of Hongkong which involves Britain of the western hemisphere and China of the eastern hemisphere led to four historical events that shocked the world. The cession of Hongkong to the UK indicated the decline of the Great Qing Empire and the rise of the British Empire, while the return of Hongkong to the PRC pointed to the fall of the British Empire and the rapid rise of New China in the international arena. The main factors that determine the rise and fall of the great powers are advanced social systems, opening-up consciousness, innovative spirit, as well as the resulting advanced social productive forces, science and technology, and strong comprehensive national strength. Having suffered tremendous humiliation and sorrow from the domestic troubles and foreign invasions for nearly a hundred years since the Opium War, the Chinese people dedicated themselves to enriching the country and building up the military power. The return of Hongkong ended their past humiliation and prefigured a unified, thriving and prosperous China. Hongkong's stability, prosperity and development since its return to the motherland twenty years ago is an indispensable part of the great rejuvenation of the Chinese nation. It is another oriental miracle, and a signal of the advent of the era of globalization with Chinese characteristics. The return of Hongkong to the motherland also indicates that the opening-up consciousness and innovative spirit are the core elements for the lasting prosperity of great powers. After more than half a century's great innovation and painstaking exploration, China has made remarkable achievements which not only lay the solid foundation for the revival of the nation and the rise of the country, but also open a new chapter of the socialist construction.

Key words: the cession and return of Hongkong, the rise and fall of great powers, China and Britain, the 20th anniversary of Hongkong's return to the motherland

江苏省区域协调发展调查

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摘 要：全国人看江苏省，一片和谐景象；江苏人看江苏省，一片建设景象。江苏省，一个备受争议的省份，拥有全国各省无法比拟的发达经济、稳固政治、繁荣文化，也是迫切需要区域协调发展的地区。一条长江，一道淮河，将江苏省分裂成苏南、苏中、苏北三区。苏中人看苏南人，可比肩欧美日；苏中人看苏北人，可视作东南亚。江苏省所贯彻的区域协调发展造成的影响是苏南、苏中、苏北发展差异愈加突出，经济水平差距越发拉大。南北差距，东西差别，微缩反映在江苏省的区域协调上，而"苏南 > 苏中 > 苏北"的规则正逐步恶化。本文旨在对江苏省的区域协调发展状况进行研究，以苏南、苏中、苏北的农业和旅游业经济为例，分别选取其中具有代表性的农业和旅游业进行调查，最终对其进行总结归纳。

关键词：江苏省；区域协调发展；苏南、苏中、苏北；农业和旅游业

一、江苏省发展状况概述

（一）江苏省总体发展状况概述

如果说上海的发展是敢为天下先的中国改革，那么江苏的发展是既融合了创新体制，又综合了江苏传统发展的优越性。上海曾经是江苏的一部分，但上海是中国的一个特例。江苏和上海不同，它在明清时期所形成的特有发展稳固了全国经济的领衔地位。江苏虽经历过错误的社会主义探索时期，但其在改革开放时代的发展也可以视作为中国奇迹的一种表现。

江苏是全国即将进入现代化的省份，成为中国综合发展水平最高的省份，已步入“中上等”发达国家水平。在中国新常态下，江苏经济增长虽然放缓，但实际增量依然可观，人均发展水平潜藏着进一步提升的巨大空间，同时江苏省经济结构从增量扩能为主转向调整存量与做优增量的深度调整，结构调整孕育新突破，而且江苏的经济发展方式正从规模速度型粗放增长转向质量效率型集约增长，提质增效成为趋势，在此背景下，经济发展动力正由传统增长点转向新的增长点，未来支撑力将呈现多元化。[1]换句话说，这些经济转型现象揭示出江苏省的发展正在由高水平经济向更高水平的经济发展转型。

江苏省作为长江三角洲经济带重要的一环，在全国经济中扮演着领军角色,为长江三角洲地区的经济腾飞提供了强大的后援，也为中国走向国际世界的重要门口。江苏发展的重要表现在于其城市化进程的迅速，它以苏南五市作为依托，逐步向全省延伸。而省内高速公路等交通设施的建设也使其拥有更快的交流与发展。

江苏省在全国不是最大的省份，可却能够在全国中扮演着经济大佬的角色，得益于其得天独厚的地理条件以及深厚的历史文化底蕴。它的发展不一定是最具有改革开放时代精神的，但是其发展中所包含的人文精神和发展轨迹是中央政府最满意的发展。总体而言，它的发展是向前进的，并且是中国经济新常态的领衔力量。

（二）江苏省区域发展状况概述

2014 年，江苏 13 市 GDP 全部进入中国前 100 名，人均 GDP 达 81874 元，居中国各省首位。可这并不代表着江苏省区域发展的协调，只能说江苏省的区域发展相对统一。在 2014 年中国百强县市排行榜中，江苏苏州的县市垄断了前五强，而在排列在前三十位的以南通和泰州的县市居多，而五十名之后的位置仅有寥寥几个徐州、连云港县市所占据。从这个排行榜的排列中，可以相对看出江苏省区域发展存在着差距。

以南京、镇江、苏州、无锡、常州等五市被列入苏南地区，以南通、泰州、扬州、盐城等四市被划入苏中地区，以连云港、徐州、淮安、宿迁等四市也就构成了苏北地区。江苏省属于长江三角洲经济带，但是真正发挥作用的仍旧是以长江以南地区的苏南五市为主。

一道长江，阻隔了经济的交流与发展。就拿南京而言，长江以北的浦口区和六合区与江南南京相比，其发展是天差地别的存在，江北地区几乎是一片建设的光景，而江南地区开始走向了国际化道路。一个城市的区

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域尚且如此，更何况是由城市组成的省呢？江苏在区域发展上的差距安全反映在人民生活水平的差异上，从江苏省人均收入水平来看，苏北地区的人均收入在苏南人民面前相形见绌。在差距的不断突出和利益的驱使，越来越多的苏北人民涌入了苏南地区，为其城市化发展提供了充足的劳动力。

在经济全球化的浪潮中，江苏省的城市化进入了飞速发展的阶段。然而在这一过程中，苏南、苏中、苏北三大区域城市化水平的差异问题一直是江苏省区域统筹协调发展的巨大障碍。苏南、苏中、苏北的城市化无论从外在的排名情况、发展速度情况来看，还是从内在的发展动力来看，都存在一定的差距，但最近几年，江苏南北城市化总体上却是缩小了。

由于差距的存在造成了三者之间互动的可能性，近年来，苏南、苏中、苏北从各个方面开展了一系列的南北合作活动。在这样的互动中，各取所需，共同获利，大大推动了苏南、苏中、苏北各自产业结构的转型升级和协调发展。[2]江苏省需要尽可能地更快发展，只有这样，才能够更好地实现与国际接轨，然而其内部发展最突出的问题是区域协调发展。江苏苏北和苏中的发展虽然伴随着江苏总体经济发展而走上了一个新台阶，却始终在处于着被压抑的地位。

全国人民眼中的江苏最关注的是南京、苏州、无锡等国际知名城市，但更多的人却忘记了扬州昔日的辉煌，南通的近代起源，徐州的历史底蕴，连云港的时代大门。苏南地区和苏北地区都是江苏与邻省交界的地区，其发展只能用戏剧性来表述，这样的问题的确让人深思。十三大市是彼此独立存在的经济体，但却又是江苏这个大家庭不可分割的重要元素。

（三）江苏省产业结构状况概述

江苏省具有相对较高的城市化发展水平，也因此，其产业结构在全国而言都是比较合理完善的。江苏产业结构在改革开放三十多年的发展中已逐步由第一产业、第二产业向第三产业过渡。

改革开放 30 年江苏省产业体系从传统产业部门向现代产业部门演进，其产业发展模式从内向型向外向型演进，其产业成长动力从一元单一驱动向二元共同驱动演进，其产业形态从产业分位向产业融合演进，其产业发展从轻工业阶段向重化工业阶段演进。[3]江苏最大的残疾是贫穷，而残疾最大的隐患是分配不均，而分配不均的重要原因在于其产业结构的不完善、不合理。第三产业等高新技术产业主要分布在苏南地区，而污染比较严重的企业主要分布在苏中和苏北地区。苏南地区依托其丰富的自然资源和人文涵养，并且凭借浙江、上海等强大的经济保障，培育和发展特色产业集群，并且塑造和弘扬区域品牌，构建和利用知识联盟，推进和深化区域创新。苏中和苏北地区就其经济发展的基础条件是显然不如苏南的，虽然南通和连云港都作为沿海经济开放城市，但并未实现最有效地利用。

在中国改革开放的三十多年中，整个江苏产业结构的调整一直在贯彻落实，并且取得了可喜的成果，但在无形中又以区域划分为借口，无形中将产业的布置定了性。苏南人享受的是高品质生活，苏中人和苏北人接触的是污染的环境，但是，这种现象最终为全省的雾霾所打破。

江苏在未来的道路中需要更加坚持以产业结构的调整来促进苏南、苏中、苏北的区域协调发展，大力发展高新技术产业，努力发展服务事业，对农业的生产技术进行革新，对工业建设采取集约管理。产业结构的不合理性最直观的表现在于人均收入水平的高低，其次就是生态环境的保护。江苏是一个大家庭，哪一个人受到伤害都将对这个家庭是致命的。因此，产业需要调整，更需要优化，还需要协调。

二、江苏省农业和旅游业发展状况概述

（一）江苏省农业发展状况概述

农业问题是中国民生发展的热点问题，农业是关系到人民生计的重要产业。我们的生命把握在农民手中，而我们的国土面积是以农村形成垄断。作为第一产业的存在，它的过度发展代表着中国回归到自然经济中，但是，缺少它的发展，第二、第三产业便也就失去了发展的基本，而中国产业这棵大树便也就是面临崩溃的命运。江苏省的苏南地区被誉为“鱼米之乡”，它很成功地把握住了先天的自然条件，并且及时创新新的农业管理模式，使农业得到了长足的发展。但同时，苏南地区的城市化水平过高，对于农业发展存在一定的打击。苏南大城市在偏远地区才存在着农业的迹象，如南京市的农业分布地区以栖霞区、浦口区、六合区和江宁区为主。

苏中地区的水资源不如苏南地区，但也形成自己特有的农业发展模式，也因为城市化水平相对较低，故有足够的土地资源来发展，故而成为江苏省的最主要农业生产基地。而苏北地区正处于投放资金来革新农业生产技术的阶段，作为苏北地区重要的水资源淮河正在面临严重的污染和断流问题，对苏北地区的农业发展造成了很大的阻碍。即使三者均存在各自的农业限制条件和有利因素，但始终改变不了江苏农业在全国农业中的举足轻重地位。江苏位于长江、淮河的下游，全省自然资源丰富，经济发展水平较高。江苏历来是农业大省，但其农业发展仍存在地少人多，人均耕地资源相对短缺，环保压力大等问题。[4]但在改革开放以来，在中央和地方政府的大力支持下，江苏的农业生产力取得了极大的发展，并且依托其自身的社会环境优势、经济环境优势、制度环境优势、技术环境优势走上了农业现代化的发展道路。

江苏农业发展的最直接指标是农业生产效率的不断提高。在江苏这样一个拥有发展农业的绝佳地理环境、社会环境、经济环境、技术和制度环境的地区，其发展成绩是有目共睹的。但其发展最大的阻碍是地少人多以及城市化过快发展而引发的占用耕地等一系列问题。苏南地区拥有技术，却缺乏土地；苏北地区拥有土地，却缺乏明确的管理模式，对资源也未曾实现有效利用。也因此，苏南和苏北地区倘若能够在农业这个产业上优势互补，协调发展，对双方都有很大的积极作用。作为第一产业，江苏农业发展是典型的精耕细作，它的发展存在一定的机械化水平，但由于其地域限制，故不可能实现高度的机械化农业，这种情况下只会造成资源浪费和环境破坏。我们在技术方面受到了局限，故江苏现代农业的发展方向是创新农业管理模式，以管理来不断提高农业生产效率。而管理模式的创新既需要借鉴苏南的农村成功管理经验，又需要苏中和苏北人民在实践中自主探索。

(二)江苏省旅游业发展状况概述

旅游业是现代服务行业的集中代表，也是第三产业的象征。这种产业是“靠山吃山，靠水吃水”经济发展的顶峰状态，与传统农业的自给自足不同，这类产业的目的是为了能够提供给消费者发展需要的服务。以旅游业为代表的中国服务业是中国产业结构调整深化中最具有时代意义的存在，它的进一步发展代表着中国发展绿色经济，追求可持续发展的利益彰显。

江苏山青水秀、人文荟萃，名胜古迹遍布大江南北，旅游资源丰富多彩，加之交通方便、文化发达、物产富庶，自古以来就是中外游人向往的旅游胜地。改革开放以来，江苏的国内旅游和国际旅游一直位于全国前列，是我国的旅游大省。[5]其中，南京、无锡、苏州三市的旅游收入在省内占绝对领先地位，其次为镇江、常州、扬州，随后为南通、徐州、连云港、盐城、泰州、淮安，宿迁排在最后。江苏从来就不缺少旅游资源，但是旅游资源依旧是被苏南地区所垄断。苏南五市以苏州、无锡江南水乡为旅游主要特征，以城市的知名度为依托，大力发展旅游事业。苏南旅游既包含了传统自然风景区，也涵盖了具有时代精神的主题乐园，既重视对传统江南文化的保护与传承，又彰显人们对于体验式旅游的向往与追求。苏南旅游业的发展进步得益于长期历史发展中的良好声誉，同时又对传统旅游业的管理加以正确的引导，不断创新对旅游业的管理模式。先天加后天的努力，苏南旅游业成为长江三角洲旅游业的重要组成部分，也是品读江南文化的重要载体。江苏人的人文、知性、美好、创新、进取的性格和文化以旅游业的形式凸显。

苏中地区以扬州等地旅游资源相对丰富，但由于京杭大运河的衰落，扬州在全省旅游业的竞争中缺少些后劲。而苏北地区以连云港和徐州旅游业发展速度较快，但是，伴随着这些苏北城市在人们心目中地位的降低，再加上位置的偏僻，他们的发展可以说是止步不前，更重要的是景区对于传统文化的保存及保护缺乏动力和积极性，他们也不善于发掘潜藏的旅游资源。在城市知名度降低而导致旅游业停滞的背景下，以南通为代表的苏中城市在缺乏旅游资源的情况下，模仿常州恐龙园的建设，开始兴建主题乐园，为其旅游业的发展拓宽道路。而如同淮安以及宿迁等苏北城市在缺乏旅游资源和城市知名度的情况下，在淮河衰竭的情况下，也走向没落。

苏南、苏中、苏北的旅游业继续沿着这样的道路发展，其最终结果只可能是苏南和苏北的差距逐渐扩大，苏南和苏中差距逐渐缩小。江苏正处于旅游业必须也有条件加快发展的产业升级转型期，必须从战略高度重视旅游业与三区的协调发展问题，这也需要政府的大力支持与培育。但是，旅游业毕竟是第三产业，其更新的速度自然也就很快，苏南地区的旅游城市也开始出现了衰退的迹象。我们所希冀的旅游业的最终目标是实现经济和文化的双赢，既能够为江苏产业结构的升级和转型提供支撑，又能以旅游为符号将江苏文化展示给中国和世界。旅游业的存在能够填补江苏产业结构转型的漏洞，但是，江苏省的旅游业与江苏一样，都在面对如何实现区域协调统一的难题。

(三)江苏省农业与旅游业研究总结

农业与旅游业，分别是第一产业和第三产业，一个是为了满足人民生存的需要，一个是为了实现人民发展的要求。这两类产业都是为人类幸福谋福祉而存在的，其本质目的并没有冲突，只不过在江苏省的区域协调发展上暴露出一些问题。两者在苏南、苏中、苏北的发展分别是“苏中 > 苏南 > 苏北”和“苏南 > 苏中 > 苏北”。苏南地区大力发展现代服务业和高新技术产业，自然在农业方面缺少相应资源，但同时，苏南地区能够及时转换发展模式，推出旅游的新形式——观光旅游、农村文化体验旅游。但是，苏北地区在农业和旅游业上的垫底地位是肯定的，伴随着城市的衰落，其农业和旅游业等很多产业都处于濒临绝境的地位。

苏南、苏中、苏北在农业与旅游业的发展差距反映了对区域协调发展的迫切要求，也折射出对于产业结构转型和升级的呼唤。江苏是一个城市化水平较高的省份，但也局限体现在苏南地区的发展，江苏也是一个向现代服务业高速发展的省份，但也局限体现在苏南地区的发展。苏中地区依托已有的资源，并且在加上创新发展模式，抓紧缩短与苏南地区的发展差距。而苏北地区则是在不断拉开差距。在这样的格局下，若不能统筹区域发展，将有可能导致江苏苏北地区的萧条病、苏南地区的膨胀病，将有可能导致苏中地区的落后病，他们全在江苏这块土地上同时爆发了。然而，促进区域产业转移需要注意两个方面的问题：一方面，要继续通过投资

环境改善落后地区对传统产业的拉力，另一方面要防止发达地区市政府囿于地方利益而在城市范围内转移传统产业的做法。[6]对苏南的防止过度城市化以及对苏中、苏北地区的发展给予支持与保障，是实现江苏省区域协调发展的重要轨道。

三、案例索引

(一)南京浦口区侯冲社区与南通海安县白甸社区——苏南与苏中农业对比

南京浦口区侯冲社区的交流活动是 2014 年上学期南京农业大学工学院学生的课外实践活动，是对其农业发展状况和社区建设的参观活动。侯冲村地处老山北麓、滁河南岸，境内风景秀丽，是永宁镇人民政府所在地。2010 年以来，以侯冲高效设施农业基地、侯冲工业园、侯冲生态都市产业园、永宁镇农民资金专业合作社等产业结构日益鲜明，基础设施日趋完善，产业业态不断优化。村级集体经济收入和农民人均纯收入年均增长 16%和 13.1%，连续三年荣获南京市综合实力百强村。[7]

侯冲社区具有比较明确的机构，其内部保存着侯冲自改革开放实践以来所取得的各项成就的照片，其中影视资源也保存的很完善。侯冲社区在其中正在兴建一系列的高新技术产业园，这个社区的能源供应安全依赖于一大片太阳能发电机。侯冲社区存在着很多蔬菜大棚，专门邀请园艺师来培育新品种，其花卉足够供应整个南京基础设施建设的要求，其中包含了各式各样的花卉、蔬菜品种。侯冲社区正在兴建专门的历史博物馆，用来见证侯冲在经历由衰败走向富强的历史。侯冲社区中已经兴建了农村集体住宅，分布合理，并且供居民的健身等基础设施比较完善，既注重保护水资源，有很关注空气质量状况。

南通海安县白甸社区的交流活动是本人于 2014 年暑期参与江苏省沼气工程和秸秆综合利用状况的调查活动。白甸社区位于白甸镇中心附近，本人所调查的主要是关于其秸秆综合利用的调查。白甸镇以实现可持续发展，维护中华民族长远利益、构建和谐社会为切入口，白甸镇专门建立了节能减排办公室，明确了白甸镇建设节约型社会和节能减排工作的主要目标、工作重点，切实加强面的管理，做到点面结合、层层落实。

秆收贮项目在本县主要存在六个项目，总体而言，建设时间、新置设备、年处理秸秆情况一致，但在某些方面存在差异，如城东镇的项目也存在固化成型项目。但如白甸镇的项目缺少加工的厂房。白甸镇受到交通运输条件的限制，大多数秸秆直接还田或者直接焚烧，它对秸秆的加工处理一般都在露天作业。相对于全县秸秆综合利用水平而言，其效果是很差的。同时，对于秸秆综合利用处理白甸社区文件资料缺少，而秸秆的资源回收力度亟待提高，农民对于秸秆综合利用的响应程度明显缺失。

从南京浦口区侯冲社区与南通海安县白甸社区的对比中可以发现，侯冲的新农村建设对高新技术产业大力支持，并且大力发展花卉等园艺农业，对相关资料的保存和维护都比较完善，对居民生活条件和水平都有所改善，重视生态保护和资源利用。相反，从白甸社区的秸秆综合利用状况可以看出，由于其地理位置的相对偏僻，交通不便捷，便采取了一种不高效的方式来处理秸秆，缺乏相应机构和文献资料，难以查询，其农村建设的落后，从这件事情上可见一斑。

(二)无锡鼋头渚与如皋水绘园——苏南与苏中旅游业对比

鼋头渚景区是国家级景区的代表，也是历史文化遗产景区和山水风景区的典型。它不具备游乐场那样供游客享受游玩乐趣的设施。它所拥有的只是绮丽的山水风景和依托于山水风景的历史文化遗迹。其实无锡作为老旅游城市，其旅游业发展已经开始有了衰落的迹象。但是，作为江苏风景旅游景区的佼佼者，其在发展中既包含了对水乡文化的景仰，也具备了时代文化的激荡。它对于景区中的各项伟人留下的遗迹或住所，都设置了专门人员进行管理以及专门的防护栏，但同时也设置了专门的地区供游客拍照，如最佳摄影点。鼋头渚的一切都是太湖赋予的，它最大的亮点也是唯一能够牵动游客心灵的是太湖游轮。为了满足不同旅游消费者对游轮服务的需求，从而提供了各式各样的游船服务。而专门饲养的江鸥也成为游船服务的一大看点。而景区内伴随着四季季节特征从而开展一系列具有特色的景区活动，如樱花节，螃蟹节。它将太湖、无锡乃至江南的文化全部展现出来了。

水绘园是江海平原上一颗璀璨的明珠。是园以水为贵、倒影为佳，既秀且雅；而其以园言志，以园为忆、并融诗、文、琴、棋、书、画、博古，曲艺等于一园的特色，又足以说明它原来是一座饶有书卷气的“文人园”。它由水文化构成，又代表董小宛与冒辟疆坚贞的爱情，它是一颗江海明珠。

水绘园风景区的游客很局限，以如皋本地居民为主。这座风景园林的建筑规划布置比较完善，与水交相辉映。但是，其中存在着很多的园林建筑以及新建的园林建筑，由于其位置的偏僻，大多数游客都不会来游览，故这些景点就完全被废弃了，尤其是其中的百花园，由于其中缺少专门人员来进行管理，园中混乱不堪。而其中的园林中大多已经废弃，但是其环境较差，安全失去了旅游的那份美感。水绘园附近是游乐场，但其游乐场的建设也不是很符合国家安全规定。水绘园的美好风景仅除了水让人感到宁静，其余的景点几乎可以用脏乱差来形容。

水绘园和鼋头渚都代表着风景名胜区的旅游文化，

也都是江苏水文化的重要载体。它所带给人的是精神文化的强大力量，然而在某些景区因为轻视而踏上了衰亡的道路。很多时候，苏中、苏北旅游事业就在我们的放弃管理中走向了终结。鼋头渚的成功经验在于既能够对鼋头渚传统文化表现足够的重视，又能够将旅游服务视作为商品，不断创新以满足顾客的需要。而水绘园失败的教训不在于其不具备太湖那样的知名度，而在于其所缺失的对待旅游业应当具备的管理态度。服务业的发展是为了提供更好的服务给顾客，而苏中和苏北恰恰忽略了重要的一点。它们的现代服务业之所以落后于苏南，它们在灵魂的赠与上就出现了问题。协调发展更需要的是人心的协调，其次是经济的协调。[8]

四、江苏省区域协调发展总结

同步发展要求的是共同降速或者共同提速，协调发展讲究的是你追我赶的共同发展。既是防止经济发达地区的过分膨胀，也是保证经济欠发达地区能够在险恶的竞争环境中重新发掘经济竞争力。它们之间的关系既包含竞争，也涵盖合作。

而实现区域协调发展的重要举措是实现区域产业结构的转型、优化和升级。区域产业发展是区域经济发展的重要原因，区域产业集群及结构调整升级是促进产业发展的动力，与以往不同的是，现代服务业和战略性新兴产业成为产业发展的新趋势。[9]江苏苏南、苏中、苏北区域协调发展遇到的最大难题是产业发展以及产业结构优化升级。

第二产业集中在苏中、苏北地区，第三产业以及污染较小的第二产业集中在苏南地区。这样的产业结构布局具有一定的合理性，但是，长期这样发展，势必会造成江苏区域发展差距的进一步扩大。从上述案例的苏中和苏南农业和旅游业经济发展对比研究中，可以发现，苏中、苏北与苏南在产业发展上的差距主要体现在对产业缺乏先进的管理经验，无法正视和充分利用其拥有的产业发展资源，缺少技术，更缺少对技术和管理理念的创新，对消费者的需求未能够形成理性的评估。这些差异逐步成为了阻碍江苏产业结构优化升级的重要因素。

这些反映在苏南、苏中、苏北的第一、第二、第三产业发展趋势上的重大问题在改革开放三十多年中也融入了各地区的产业生产经营理念中，成为一种习惯。实现江苏省区域协调发展，就必须将深入到这些地区人民中的思维习惯产生突破性的变革。江苏变化的太快了，世界每秒都在变，倘若苏南、苏中、苏北不变，就势必会是面临巨大的生存危机。协调发展的目的是希望在变化的同时寻找和谐的突破点。苏南地区应当在现有经济发展的基础上，深化改革，深化产业结构的布局，大力发展现代服务业以及战略性新兴产业，注重资源利用和生态环境保护，继续走创新管理模式的道路。而苏中地区需要充分发挥本地区的经济发展资源，优化产业结构布局，引进先进的管理思想，并及时创新技术和思想，以新途径、新形式向全世界人民展示苏中地区的魅力。而苏北地区在走新型工业化特色道路的同时，也需要及时转型产业结构，大力促进现代服务业在本地区的发展，创新农业管理模式，改革产业发展中的不合理因素，将环境保护置放在较突出的位置。

江苏作为一个较发达的经济省份，走得更快一点，为全国的经济发展多做一点贡献，也是责无旁贷的应尽义务。因此，“能快则快”是完全正确的。可是，我们在面对更需要强调江苏省“更好地”发展，“更好地”发展的一个表现就体现在区域的协调发展上。江苏在进入建设主义现代化社会的关键时期，需要在协调发展上作出的努力是加快体制创新步伐，减少行政性指令性的经济调控；其次，加大经济结构调整的力度，以结构调整为中心安排到经济总量的增长；最后，切实推进经济增长方式的转变，把经济发展的支撑基础从主要依靠物质要素的大量投入转到主要依靠技术进步上来。[10]对江苏整体而言，经济发展要“快”，对苏南、苏中、苏北而言，经济发展要“好”和“和”。江苏的天空是江苏所有人民的天空，也是中国人民和世界人民的天空，我们同在一片蓝天下，我们的生命任务是协调。

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女性主义视角下城市居民日常出行的特征分析：以广州市为例

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摘　要：西方学者已经通过实证研究发现女性从私人空间进入公共空间的距离和时间短于男性。在中国的文化背景下对广州市女性居民日常出行的特征进行分析，同样发现女性居民相较于男性居民更高的出行频次、更短的出行距离和时间、更慢的出行速度。其空间隐喻是男性居民从公共空间进入私人空间在活动上由生产活动转为休闲和休息活动，对于女性居民而言，家庭是工作场所由公共空间向私人空间的延续。在东方传统的文化背景下，"男主外，女主内"是普遍的行为规则，然而社会发展到今天，"女既主外，也主内"显然有悖于男女性别平等的基本价值观。

关键词：女性主义地理学；性别；空间；广州

一、引言

女性主义认为人类社会还普遍存在着男女不平等的客观现象，然而这种现象的存在并不会随着时间的推移而自动消失，因此需要社会运动来进行改变。[1] 地理学在长期的发展过程中向来重视空间分析，对女性研究存在较多的偏见。这造成了一种难以回避的后果，地理学的发展中普遍存在性别盲点，从而忽视了人地关系中女性空间行为和体验。[2] 因此，从学科和社会发展的双重考虑，地理学应该接纳女性主义的研究成果，将其与人文地理学的空间和地方研究相结合，对看似中性的地方和空间进行社会性别分析，从而揭示性别空间中的男尊女卑现象，推动社会空间的性别平等。[3]女性主义地理学就是在这种逻辑思路下形成和发展起来的。[4]

女性主义地理学的兴起受到如下几种思潮的深刻影响。[5]第一种思潮是女性主义，19 世纪中期至 20 世纪初期的女性主义运动对女性主义地理学的兴起产生了深远影响。[6]在这一思潮影响下，女性的社会地位在教育、工作和政治活动等多个重要领域得到提高。在此过程中，性别差异的成因、过程和影响受到广泛讨论，性别和社会性别被区分对待。女性主义者普遍认为，社会空间因性别不同而分化出中心和边缘，男性占据着社会空间的中心，而女性则处于边缘地位。第二种思潮是激进主义，它发生在 20 世界 70 年代，对地理学尤其是女性主义地理学产生了重要影响。[7]激进主义学认为，地理学及其它社会科学反映的是统治阶级的价值观，与社会问题缺乏有机联系，主张地理学研究需要引入全新的范式，不仅要对社会问题进行理论解释，而且要能提供指导实践的知识，有学者甚至认为要参与创造公正社会的实践活动。[8]激进主义学派强烈的社会参与精神与女性主义产生了共鸣，因为性别不平等正是社会不平等的重要方面。[9]不少女性主义地理学者采取参与式行动研究的方法，旗帜鲜明地提出女性主义地理学的价值观是为了女性。第三种思潮是人文地理学研究中的文化转向。20 世纪 80 年代以来的文化转向认为应强调文化的内部运作、符号的生产和价值内涵，研究重点是空间构成、空间秩序和空间竞争。但是，女性主义学者并不主张以文化地理学取得女性主义地理学，而是通过女性主义地理学的研究更多地参与社会问题。[10]还有一种思潮就是 20 世纪中期以后女性社会学研究过程中的学科化趋势，旨在以学科化为基本视角，以社会现实为基础，提出问题、确立问题、回答问题，形成女性社会学的知识。[11]

女性主义地理学研究的主要内容包括性别化的家宅空间、女性对公共空间的使用和同性恋的空间主张三个方面。在女性主义者看来，资本主义生产方式的出现对女性的社会地位起到的是负面作用，家庭成为男性工作之后的

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休闲娱乐场所，但是对于很多女性，它则是不停辛苦劳作的牢笼。基于这样的认知，女性主义地理学把研究的重点从公共空间转移到家宅空间。[12]关注女性对公共空间的使用是女性主义地理学研究的重要内容。[13]通过已有的研究可以看到，受制于性别角色以及公共空间安全的考虑，女性对公共空间的使用受到极大的限制。[14]同性恋的空间主张也在人文地理学的研究中融入了女性主义视角。[15]通过空间占有而获取身份认同是同性恋空间形成的重要方式。卡斯特对美国旧金山同性恋社区进行了研究，男同性恋逐步把活动空间从酒吧延伸到街道，从黑夜延伸到白天，并把活动空间从政治、经济和文化等各个塑造成为规模较大的同性恋社区。他的结论是男同性恋对社区空间的塑造源自男性对领地的天然向往，并由此推断女同性恋则没必要塑造自己的社区。[16]然而更深入的研究则表明，女同性恋者也在同样塑造着自己的同性恋社区，然而受制于女性在经济、文化和政治方面的弱势地位，女同性恋社区的塑造过程则更为隐秘和容易受到破坏。[17]

女性居民日常出行相较于男性有哪些特征？这些特征背后的空间隐喻是什么。随着女性主义地理学在全球范围内广泛传播，国内学者就这些问题进行了较多探索。[18-23]国内学者普遍意识到在中国经济社会发生巨大变革的宏观背景下，女性的生活方式和行为空间也发生了巨大的变化，这就造成了性别化的城市空间不断显化。本文借助于时间地理学的基本研究方法，从居民日常出行的时空路径出发，探讨女性居民日常出行的特征及其与男性的区别。

二、数据与方法

研究的数据来源是入户调查，委托广州市某问卷调查公司完成。主要问卷调查的时间是 2013 年 4 月 4 号（清明节）到 5 月 1 号（劳动节）之间进行。5 月 1 号之后，对个别调查地点进行了补充调查，约占问卷总量的 10%。问卷调查在广州市 12 个街道内的 18 个社区内进行。共计回收 1604 份有效问卷，被调查的家庭个数是 1332 个，每个家庭调查一位被访者的户数是 1060 户，每个家庭有两位被访者的户数是 272 户。跨度是 12-75 岁，18 岁以下的未成年人有 16 位，占问卷总数的 1.00%。从性别构成来看，男性居民有 660 位，女性居民有 994 位，男性和女性的比例分别占 41.15%和 58.85%。

居民的出行距离和时间通过问卷调查来完成。每一位居民都被要求详细填写其主要的出行活动，包括出行的时间、目的、交通方式以及地点，出行距离通过出行地点直接的直线距离计算得出。以出行日志为基础，本文对居民出行的时刻路径进行可视化处理，对居民日常出行的时空路径的时间和距离等方面进行计算。通过问卷调查获取居民在日常出行过程中出行地点和出行时间可以更改的难易程度，然后以时空路径的相关特征为基础，分析女性居民相对于男性居民的时空路径特征。

三、日常出行的性别差异

性别是居民的重要个体属性，传统的社会性别角色要求女性在家务劳动中承担更多的分工，这必然会对女性的出行时间和距离产生影响。早在 20 世纪 80 年代，不少学者就已经关注到在西方社会的文化背景下，女性的通勤时间较男性短，通勤距离也较近。[24-26]然而这种差异会不会因为东西方文化的不同而有所改变？本文从日常出行时空路径的视角对这样问题进行实证研究，所不同的是本文采取全天出行活动轨迹进行分析，同时本文对工作日和非工作日进行了区分，从而分析在休息天居民女性居民的时空路径特征，相较于已有的通勤距离分析更为全面。

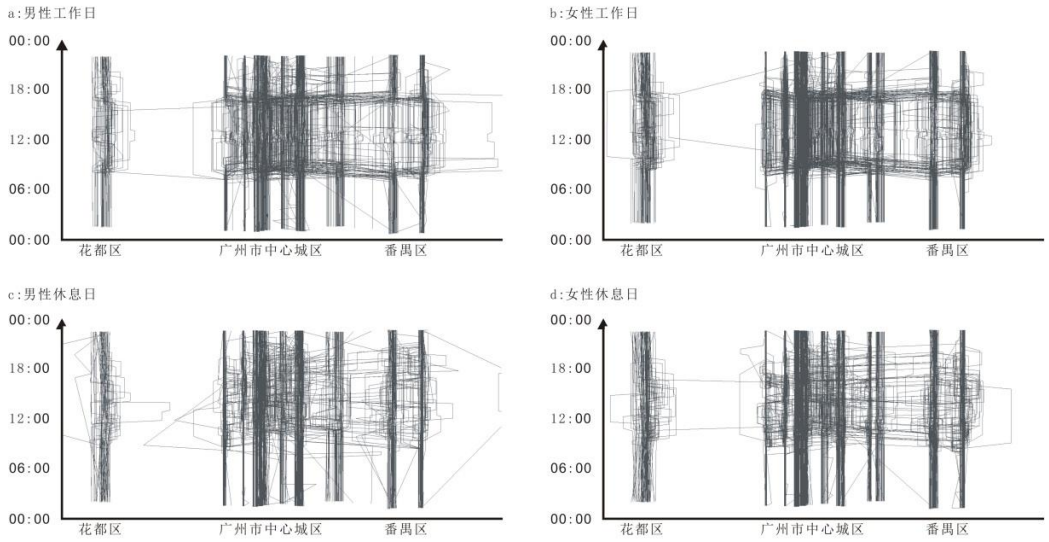

图 1 女性居民和男性居民出行活动的时空路径

广州市女性居民日常出行的频率显著高于男性。从男女性别居民日常出行的频率来看，女性居民的出行频率高

于男性。男性在工作日每天出行的频率为 3.65 次，而女性为 3.81 次，女性居民高于男性居民 4.4%，从休息天的情况来看，男性居民的出行频率为 2.94 次，而女性居民的出行频率为 3.22 次，女性高于男性居民 9.3%。

表 1 居民出行的平均频率、距离和时间的性别差异

性别	出行次数★	出行次数☆	出行距离★	出行距离☆	出行时间★	出行时间☆
男	3.65	2.94	9.41	7.07	68.23	54.73
女	3.81	3.22	7.69	6.26	63.55	53.54

注：★表示工作日，☆表示休息日，距离的单位为 Km，时间单位为分钟，以下其它表格同样情况。

女性居民日常出行的距离低于男性。无论工作日还是休息日，女性居民的出行距离都远低于男性。工作日男性居民的总出行距离为 9.41Km，女性居民的出行距离仅为 7.69 Km，女性居民的出行距离比男性低 1.72Km；这种状况在休息日有所差异，从休息日的情况来看，男性居民的出行距离为 7.07 Km，女性居民的出行距离仅为 6.26 Km，女性居民出行距离低于男性 0.81 Km。从整体上，女性居民日常出行的距离普遍低于男性。

女性居民日常出行的时间也低于男性。工作日男性居民的出行时间为 68.23 分钟，女性居民的出行时间为 63.55 分钟，女性比男性低 4.86 分钟；休息日男性居民的出行时间为 54.73 分钟，女性居民的出行时间是 53.54 分钟，女性比男性低 1.19 分钟。

出行的平均速度是居民当天出行的总距离除以出行的总时间，从出行的平均速度来看，女性居民工作日平均出行速度为 7.26 Km/h，男性居民的平均出行速度为 8.27 Km/h，休息日女性居民出行的平均速度为 7.01 Km/h，男性居民的出行速度为 7.75 Km/h。

四、日常出行性别差异的原因分析

（一）女性居民出行的弹性与刚性

从居民更改出行目的地或出行时间的难易程度来看，整体上男性居民受到的约束程度更高。在人们的一般印象中，女性会更多地受到家庭与孩子的束缚，出行受到限制的程度会高于男性。然而在本次调查中，就具体的出行而言，男性受到的时空约束的程度更大一些。在男性居民的出行地点中，29%的出行不太能更改，42%的出行完全不能更改，两者合计占 71%以上，因此对于男性居民而言，多数出行受到严格的空间约束。相对而言，男性居民在出行时间上受到的约束程度低一些，但是不太能更改以及完全不能更改的比例仍在 55%以上。

女性居民的出行在目的地和时间方面受到的约束程度都略低于男性，超过 28%的出行其出行目的地是非常容易或比较容易更改的，63%的出行目的地是不太能更改或完全不能更改。易更改的比例高于男性，不易更改的比例低于男性。在出行时间更改的难易程度方面，非常容易更改和比较容易更改的比例占 44%，男性仅为 33%，不太能更改以及完全不能男性为 55%，女性仅为 40%。从整体上女性居民在可以更改时间的比例比男性高，在不易更改时间的出行较男性低。因此，女性居民的出行受到的约束程度较男性小。

男性居民在休息日更改出行目的地和出行时间受到的约束程度较工作日有所降低。其中非常容易更改的比例占 8.0%，比较容易更改的比例占 37%，两者合计占 44%以上，工作日非常容易更改以及比较容易更改的比例仅占 21%。23%的出行其出行目的地不太能更改，25.3%的居民其出行目的地完全不能更改，两者合计约为 49%，工作日两者合计在 71%以上。从整体上，男性居民在休息受到的约束程度相对于工作日较低。从居民出行的时间来看，休息日出行时间非常容易更改的比例约占 11%，比较容易更改的比例占 51%，两者合计占 61%以上，相对于工作日仅有 33%的居民其出行时间非常容易更改或比较容易更改。出行时间不太能更改的比例为 17%，完全不能更改的比例为 14%，两者合计为 31%，比工作日低 15%。从整体，上居民在出行时间上受到的约束小于工作日。

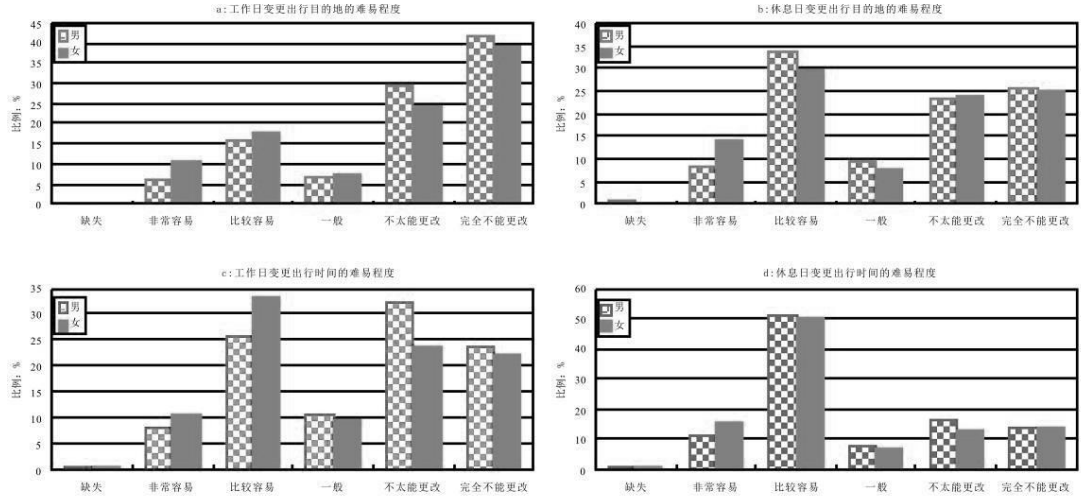

图 2 居民出行时间和地点更改的难易程度及其性别差异

休息日女性居民更改出行目的地与出行时间比男性居民更为容易。在休息日更改出行目的地非常容易的比例为 14%，比较容易的比例为 29%，两者合计占 43%，高于男性 2%，不太能更改和完全不能更改的比例合计占 48%，约低于男性的 0.2%，从整体上女性居民更改出行目的地相对于男性较为容易。从女性居民更改出行时间非常容易的比例占 15.57%，比较容易的比例为 50%，两者合计比例约为 66%，约高出男性 5%，不太能更改和完全不能更改的比例占 27%，比男性地 3%。从整体上女性居民变更出行目的与出行时间相对应男性居民更改更为容易。

总之，从不同的数据来看，女性居民出行活动受到的时空约束程度都要低于男性。如何理解女性和男性受到约束程度的差异是解释女性居民日常出行的距离、时间和速度都要低于男性的关键。由于社会性别角色的差异，男性居民的出行活动的目的更多的属于一种社会化活动。比如工作，而这些社会化的活动在时间和空间方面都比较固定，更改相对困难。相对而言，女性居民的活动家庭化的程度会高一些，比如买菜，而这种家庭化的活动在时间和空间方面都相对比较灵活。因此，调查数据显示女性居民出行活动相对而言更加自由灵活，受到时空约束的程度更小。相较于社会化的活动，家庭化活动要以家庭为中心，所以女性居民的出行频次高于男性，但是出行的距离、时间和速度都要低于男性。

（二）女性居民的时间分配

从社会化和家庭化活动的视角分析女性居民出行活动的时空约束程度，可以解释女性居民出行时空路径相对于男性的差异，但是无法揭示女性居民在社会性别分工方面的弱势地位，从而需要进一步从时间分配的视角来分析女性居民在社会化和家庭化活动分工过程中的不公平性。从男女性别对时间的分配状况来看，男性居民的午休时间约为 58 分钟，女性居民的平均午休时间为 54 分钟；从休息时间的总长度来看，男性居民为 8 小时 10 分钟，而女性居民为 8 小时 16 分钟，男女居民在休息时间的总体差异较小。睡眠时间属于居民的生理时间，可以更改的幅度不大，不会成为影响居民出行的主要原因。从出行时间来看，尽管男性居民和女性居民存在一定的差异，但是差异较小，在 24 小时的时间分配中所占的比例不高，也较难成为影响居民日常出行的主要因素。从家务时间来看，女性居民的家务时间是 2.3 小时，男性居民的家务时间的 2.1 小时。虽然女性居民的家务时间长于男性居民，但是从调查结果来看，比例并不大。从整体上看，男女居民在时间分配的差异较小。这似乎是一个悖论，女性活动的家庭化并没有在时间上体现出来，因为男性也消耗了大致相同的时间在家务活动上。

同时为了消除由于被访者对家务时间的界定所产生的一些差异，问卷还设计了其它问题对家务时间进行佐证。在家务主要有谁来完成时，从总体上 68.89%居民认为家务劳动主要有女主人来完成，仅有 2.37%的居民认为家务劳动主要有男主人来完成。5.17%的居民认为家务劳动主要由家中老人完成，8.04 的居民认为由家庭成员合作完成，每个人的劳动都差不多。约为 1%的居民家务劳动通过请钟点工来完成，还有约 14.34 的居民认为家务劳动是没有固定的成员，还有不足 0.2%的居民选择了其它。

家务活动主要由家庭女主人来完成。由于女性尤其是家庭中的女主人在家务劳动中承担更多的劳动，而与家务劳动相关的各项出行也是女性普遍高于男性。由于有料理家务的需求，女性居民在职业选择及日常出行活动中呈现出与男性居民不一样的规律。从直观上理解，由于女性承担更多的家务劳动，在时间约束方面高于男性。然而，正是由于料理家务的实际需求，女性居民在工作选择时可能更倾向于选择那些时空约束较小的工作，从而得到更多的出行时空自由。因而在调查过程中，发现女性居民的时空约束的程度要小于男性。

性别对居民日常活动的影响还表现在男女居民在家务劳动的认知方面。在下表的调查中“家务劳动主要由谁来完成”，该问题是放在了时间的弹性分配中，实际上该问题是基于家庭为单位的调查。这项针对家庭的问题不应该因男性居民回答还是女性居民来回答而有所差异。尽管一定范围的误差是允许的，但是从统计结果来看，男女性别的差异所表现出的家务工作量认知差异比较显著。从整体趋势上，男性居民的回答与女性居民基本一致，然而依然呈现出一些比较明显的差异。男性居民认为 5%的家务劳动是由男主人完成，而女性居民认为仅有 0.53%的家庭家务劳动是由男主人来完成；男性居民认为由 63.33%的家庭家务劳动有女主人来完成，但是女性却认为该比例高达 72.78%；男性居民认为 9.55%的家庭家务劳动每个人都差不多，但是女性居民认为仅有 6.99%的家庭劳动每人都差不多。因此，尽管从整体男性居民和女性居民都认为女性在家务劳动中承担着主要的工作量，但是男性居民对男性居民的家务劳动中承担的工作量比女性的认知高一些。

表 2 不同家庭主要家务劳动所承担的比例

性别	男主人为主	女主人为主	家中老人为主	每个人都差不多	请钟点工	没有固定	其它	合计
男	5.00	63.33	5.91	9.55	1.06	15.00	0.15	100
女	0.53	72.78	4.66	6.99	0.95	13.88	0.21	100
合计	2.37	68.89	5.17	8.04	1.00	14.34	0.19	100

通过问卷反映出的一个基本事实是女性居民的确承担了更多的家务劳动，但是其时间花费并没有显著高于男性，社会性别角色的不公平性就集中体现在这里。在中国

传统的文化体系中，男主外女主内是一条最基本的价值标准，男性居民的主要职责是通过家庭之外的努力工作来获取家庭所需的经济收入，女性居民则在家务劳动中承担更多的责任。随着工业化的发展，女性同样可以参与到社会劳动的过程中，尽管在诸多方面依然存在不平等的现象，但是女性从家庭空间进入社会空间参与社会劳动已经成为女性居民活动的重要内容。这也就意味着女性居民像男性居民一样参与社会劳动并没有把女性从繁重的家务劳动中解放出来。

在现代城市生活中，虽然完全的家庭妇女所占的比例并不太高，但是即便是职业女性也会在家务劳动中承担多于男性的劳动。在本文的调查中，尽管女性居民的家务时间仅仅是略高于男性，但主要家务活动的工作量由女性来完成。在公共活动空间中，女性居民和男性居民共同参与社会化劳动，当两种社会性别角色转移到家庭空间时，女性要按照这种社会角色的要求从事家务劳动。虽然男性居民也会花费一定的时间在家务上，但整体上已经把家庭转换成出工不出力的休闲活动空间。对于女性而言，进入家庭空间之后，社会性别角色赋予她们的大量清洁和厨房劳动需要逐步展开。与传统农业社会不同的是，女性居民在公共空间从事着与男性居民一样脑力或体力劳动。

五、结论与讨论

女性居民相较于男性居民具有更高的出行频次、更短的出行距离和时间和更慢的出行速度。本文以问卷调查为基础分析了广州市女性居民日常出行的时空路径特征，并与男性居民进行对比，旨在揭示女性居民在日常出行活动中行为特征和性别约束问题。从女性居民日常出行的频率特征来看，女性居民相较于男性居民日常出行的频次更高；从女性居民日常出行的距离来看，女性居民相较于男性居民日常出行的距离更短；从女性居民日常出行的时间花费来看，女性居民日常出行的时间花费也较短；从女性居民日常出行的速度情况来看，女性居民日常出行的速度较慢。

女性居民的日常出行活动更多地受到家庭事务的束缚。从女性居民日常出行活动的时空约束情况来看，女性居民的日常出行活动相较于男性出行的时间和目的地都更为灵活，女性居民出行活动受到的约束程度也更小，相对于男性其出行的时间和地点可更改的程度更改。单纯从出行本身来看，女性居民的出行的确更为自由灵活。然而这恰好揭示出女性居民在日常出行过程中以家庭为中心的特点。从女性居民的家务活动所用的时间来看，女性居民家务时间仅比男性居民高出 12 分钟。但从家务活动的工作量来看，主要的家务劳动实际上由女性居民承担。

女性主义研究的目的并不仅是为了揭露现实生活中的性别不平等现象，同时也是更好地实现性别平等。传统的女性主义研究认为实现性别平等的主要策略在于通过公共政策和资源的配置实现性别平等。诚然，实现性别平等的显性手段需依靠政策、立法和资源配置等显性手段来实现，但是，这些显性手段并不能有效地解决所有的问题，在意识形态领域中发现忽视女性需求的研究同样十分重要。在本文的研究中，女性居民日常出行的诸多特征都指向以家庭为中心的家务劳动，然而实际上她们并不是专门负责家务的全职太太。她们与男性居民一样从事社会工作，家务时间的花费也仅仅是比男性居民略高，但是从家务活动的工作量来看，女性居民的承担了家务活动的绝大多数比例。在我国当前的制度背景下，尤其是对于广州这样发达的一线城市而言，显性的性别不平等制度已不多见，而隐形的性别不平等现象则颇为常见。女性在公共空间获得了和男性一样的工作机会和权利，但在家庭空间的领域，受传统社会思想和社会分工的影响，性别不平等的现象依然较为普遍。而这一问题的解决，将是中国女性地理学研究的重要目标。

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Research on Characteristics of Residents' Daily Travel in Urban from Feminism: Take Guangzhou as an Example

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Abstract: In the eastern cultural context, feminist geography research in china has found social gender inequality and the goal of research is to promote gender equality. Western scholars have found that the space distance and time of female residents spending from private to public space is shorter than male's. Research of gendered spaces of Chinese cities can be taken from the perspectives of behaviour spaces of individual residents and feminist. Our research focuses on the characteristics of female residents in the areas of commuting, shopping, recreation and the comparative study between male and female. Through the empirical study in Guangzhou, the finding shows that compared with male residents, female residents have higher activities frequency, shorter activities distance with time and slower speed. Under the constraints of time and space, the female residents' daily activities are more flexible and freer, meanwhile activity time and places are more likely to change. In the conclusion, the author considers that the female daily activities distance is shorter than male's due to the gender inequality in the division of domestic work.

Key words: feminist geography; gender; space; space-time paths; Guangzhou

城市林业与森林城市创建理论与实践
——以江西吉安市为例

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摘 要：城市林业是以森林为主体，乔、灌、草相结合，与城市建设相适应，支撑城市可持续发展，改善城市生态环境，丰富城市商品供应，对提高城市文化和福利水平的城市森林生态系统和景观系统及其附属工程的经营和管理。是林业与园林的融合、扩大、提高和升华，是现代林业的分支。城市森林则在改善城市环境状况上发挥主要作用，同时，也为城市居民提供一种近自然的景观。本文以江西省吉安市城市林业建设中创建森林城市的实践为例，对中国依托“森林城市”创建活动，建设城市林业的途径和成效进行了分析和总结。吉安市在创建森林城市的实践中，以“文化庐陵，山水吉安”为城市森林建设目标，遵循“文化、低碳、健康、生态、宜居”的理念，构建了“林水相依、林城相依、林路相依、林村相依、林居相依”的城市森林网络空间格局，形成了健康、稳定的以森林为主体的城市生态系统，突出了建设健康稳定的城市森林基质、和谐的森林生态保护体系、发达的森林产业体系、特色繁荣的森林生态文化体系、高效的城市森林支撑管理体系，实现了吉安红色摇篮的绿色崛起。吉安市创建森林城市的实践表明，城市森林建设是中国城市化和生态建设的亮点，反映了现代人回归自然的强烈愿望。全国已有 137 个城市获国家森林城市称号。“创森”活动，已经成为我国城市林业发展的又一引擎，是增加城市绿色 GDP 的有效途径。“国家森林城市”既是一个城市生态文明建设的国家最高荣誉，又是我国对城市生态建设成就的最高评价。可以预见，师法自然，城乡一体，和谐相融，因地制宜，以人为本，尊重科学的城市森林建设理念，将为我国的城市生态文明和生态环境建设带来质的突变。

关键词：城市林业；森林城市；创建；理论与实践，吉安市

城市林业是以森林为主体，乔、灌、草相结合，与城市建设相适应，支撑城市可持续发展，改善城市生态环境，丰富城市商品供应，对提高城市文化和福利水平的城市森林生态系统和景观系统及其附属工程的经营和管理，它是现代林业的分支，也是林业与园林的融合、扩大、提高和升华。[1]城市森林是指在市域范围内以改善城市生态环境，满足经济社会发展需求，促进人与自然和谐为目的，以森林和树木为主体及其周围环境所构成的生态系统，也为城市居民提供一种近自然景观。[2-3]森林城市主要是在城乡（镇）规划范围内，生态系统以森林植被为主体，具有丰富的生态与社会服务功能的城市[4]。而国家森林城市则是在市域范围内形成以森林和树木为主体，城乡一体、稳定健康的城市森林生态系统，服务于城市居民身心健康，且各项建设指标达到规定标准并经国家林业局批准授牌的城市。[5]概括来说，城市森林建设是基础与前提，是一个长期的过程，“森林城市”与“国家森林城市”是这个过程中的两个节点，“国家森林城市”是国家对城市森林建设的认可。[6-8]本文以江西省吉安市城市林业建设中创建森林城市的实践为例，对依托“森林城市”创建活动，建设城市林业的途径和成效进行了分析和总结，为我国的城市化建设及其可持续发展规划提供科学参考。

一、吉安市城市林业与森林城市建设背景

（一）吉安市概况

吉安市位于江西省中部，赣江中游，总面积为 25271 平方公里。总人口 494 万。是孕育庐陵文化的人文故郡。地形以山地、丘陵为主，三面环山。境内溪流河川、水

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系网络酷似叶脉，赣江自南而北贯穿其间，将吉安市切割为东西两大部分。地势由边缘山地到赣江河谷，徐徐倾斜，逐级降低，往北东方向逐渐平坦。北为赣抚平原，中间为吉泰盆地。吉安市境内河流众多，以赣江为中轴，有 30 条大小支流汇入，各河上游植被茂密，山高水陡，水量充盈，水力资源充沛。境内发现的铁、钨、煤、金、萤石、石膏等矿产资源，累计达 55 种，占全省已发现矿种数的 33%。野生动物种类繁多，主要分布于山区和丘陵地带，其中井冈山地区分布较多。主要野生植物有 3513 种，占全国总数的 11%，其中苔藓类 463 种，蕨类 335 种，裸子植物 12 种，被子植物 3154 种。吉安市境内井冈山被誉为“天下第一山”，属首批国家级风景名胜区，是全国旅游胜地四十佳和中国优秀旅游城市；市内还有武功山、青原山、玉笥山、白水仙等 4 个省级风景名胜区，有世界保存最大最完整的古窑遗址吉州窑，以及白鹭洲书院、新干商墓遗址、永丰西阳宫等一大批人文古迹。[9-11]

（二）项目建设的必要性

首先，开展城市林业与森林城市建设是吉安市全面落实科学发展观，构建社会主义和谐社会的必然需要。从江西省的总体布局来看，可以更好的响应和落实江西生态省建设方针，符合“鄱阳湖生态经济区建设”国家发展战略要求，在提升城市品位，改善生态环境，提高城市核心竞争力的同时，也可以促进建设生态文明，进而实现可持续发展的目的。其次，实施城市林业与森林城市建设是推进吉安市社会主义新农村建设的需要，也是吉安市培育经济增长点的有效举措。另外，通过城市林业与森林城市建设过程，依托建设成果，可以推动生态旅游产业发展，适应现代城市发展趋势，满足人们群众精神文化需求。[12-14]

二、吉安市城市林业与森林城市建设理论框架

（一）特点与要求

吉安市城市林业与森林城市建设以倡导生态文化为主要目的，依托森林生态系统为主体，以近自然模式营建绿色、和谐的人居环境。建设过程应同步或领先于城市化进程，而且需要一个长期的科学规划。以建设美丽中国，秀美江西，生态江西重要思想为指导，深入贯彻落实科学发展观；以“文化庐陵，山水吉安”为城市森林建设目标，遵循“文化、低碳、健康、生态、宜居”的理念；构建“林水相依、林城相依、林路相依、林村相依、林居相依”的城市森林网络空间格局，形成健康、稳定的以森林为主体的城市生态系统，突出建设健康稳定的城市森林基质、和谐的森林生态保护体系、发达的森林产业体系、特色繁荣的森林生态文化体系、高效的城市森林支撑管理体系，形成吉安市“文化庐陵，山水吉安”的国家森林城市形象，实现吉安红色摇篮的绿色崛起。[15-17]

（二）规划与建设理念

吉安市城市建设以“文化、低碳、健康、生态、宜居”作为吉安市城市森林建设规划理念。[4]

1. 文化吉安。吉安为历史文化名城，是孕育庐陵文化的人文故郡。在城市森林建设过程中，应传承吉安灿烂悠久的历史文化，同时要积极倡导先进的森林生态文化，打造丰富的森林文化产品，传承文化吉安的城市标志。

2. 低碳吉安。在城市森林建设过程中，积极倡导市民低碳生活，在全社会形成节约能源资源和保护生态环境的生态文明的发展方式和消费模式，把生态保护放在第一位，树立低碳吉安的城市标志。

3. 健康吉安。在城市森林建设过程中，应注重维护城市森林的健康，营造出平民化可亲近的森林，使得森林的城市保健、人体保健作用得以充分发挥，树立健康吉安的城市标志。

4. 生态吉安 在城市森林建设过程中，营造出人与森林的生态和谐关系，人与森林相互依存，树立生态吉安的城市标志。

5. 宜居吉安。吉安天赋灵润，山环水绕，山水城市格局得天独厚。通过城市森林建设，吉安气候条件更加宜人、生态景观更加和谐，是适宜人们居住的最理想城市之一。树立宜居吉安的城市标志。

（三）规划基本原则

吉安市城市林业与森林城市建设过程遵循了统一规划、分期实施，坚持城乡一体化，坚持师法自然、保护生物多样性的原则，坚持保护生态系统多样性、维护生态系统稳定性，强调以人为本、生态优先，满足居民身心健康需求，体现绿色文明、生态文化内涵，因地制宜、突出本土特色，及城市森林建设与现有的城市特点和需求相结合的建设理念及原则。[18]

三、吉安市城市林业与森林城市建设实践策略

（一）明确建设总体目标

吉安市城市林业与森林城市建设突出“文化、低碳、健康、生态、宜居”的城市森林建设特色，树立“文化庐陵，山水吉安”的森林城市形象，建设以“城市绿化为中心、通道绿化为骨架、村庄绿化为亮点、青山绿树为屏障”的城市生态安全保障体系。把吉安的城市森林建设成为健康的森林、和谐的森林、文化的森林。推行“建设红色摇篮的绿色文明 ”的城市森林建设主题。实现“林水相依、林城相依、林路相依、林村相依、林居相依”的国家森林城市建设的目标。建设范围包括整个吉安市行政管辖范围，涉及吉安市所有的 13 个县（市、区），总面积 25259 平方公里。

1．前期目标（2010—2015 年）。这期间遵循建设总

体目标及理念要求，基本形成了以乡土乔木为主体、总量适宜、分布合理、生物多样性丰富、景观优美的城市森林生态网络体系；基本实现“林城、林村一体，林水、林路、林田相依”的森林生态景观格局；使全市的森林覆盖率达到 68%以上，市中心城区绿地率达到 38.0%以上，市中心城区绿化覆盖率 43.0%以上，县域中心城区绿地率达到 39.0%以上，绿化覆盖率 43.5%以上，市中心城区人均公园绿地面积达到 14 平方米以上，县域中心城区人均公园绿地面积达到 13 平方米以上。全市城区乔木种植比例 62.5%以上，城区街道的树冠覆盖率达到 30%以上，城区新建地面停车场的乔木树冠覆盖率达35%以上，城市重要水源地森林覆盖率 75%以上，市民出门 450 米范围内有休闲绿地，使城市的人居环境有显著改善，基本实现城区园林化、郊区森林化、通道林荫化、乡村林果化的城乡绿化城市森林生态网络体系。

2．后期目标（2016—2020 年）。到 2020 年，吉安市将全面建立起功能完备的城市森林生态体系，全市森林覆盖率达 69%以上，市中心城区绿地率达到 39%以上，绿化覆盖率 44%以上，县域中心城区绿地率达到 41%以上，绿化覆盖率 45%以上，市中心城区人均公园绿地面积达到 16 平方米以上，县域中心城区人均公园绿地面积达到 14.5 平方米以上。全市城区乔木种植比例 65%以上，城区街道的树冠覆盖率达到 35%以上，城区新建地面停车场的乔木树冠覆盖率达 40%以上，城市重要水源地森林覆盖率 80%以上，城区内建有多处以各类公园为主的休闲绿地，分布均匀，使多数市民出门 400 米范围内有休闲绿地，建成“林水相依、林城相依、林路相依、林村相依、林居相依”的森林城市，为建设“文化庐陵，山水吉安”奠定生态基础，实现建设吉安“红色摇篮”的绿色文明。

（二）布局国家森林城市工作战略

1．一城带动。通过对吉安市中心城区实现“让森林走进城市，让城市拥抱森林”，从而带动全市的城市森林建设。

2．多点跟进。指吉安市下辖的各县（市）的城区、中心城镇的城市森林建设，在吉安市中心城区的带动下有序进行，从而形成多点跟进的城市森林建设局面。

3．城乡一体。在吉安城市森林建设过程中，要始终贯彻城乡一体化的原则。不仅表现在政策措施一体化，还包括管理一体化、投资一体化、产业布局一体化、机制一体化、建设进度一体化等。

4．四体共建。指共建四大城市森林体系，城市森林生态保护体系、城市森林产业体系、城市森林生态文化体系、城市森林支撑管理体系。

（三）规划城市森林建设方案

按照“林网化和水网化”的城市森林建设理念，开展系统的森林基质建设，丰富的生态廊道建设，特色的景观斑块建设，确定吉安市“一城分五色，多点建三屏”的城市森林建设布局。

“一城”指吉安市中心城区，建设突出点线面相结合，以城市外围山体为生态屏障，以城市水体为生态景观廊道，以道路绿地为景观纽带，以公园绿地为核心，以各组团绿地为面，形成“两江六山抱庐陵”的森林城市布局（两江指赣江、禾河，六山指西陇山、神岗山、天华山、真君山、螺子山、青原山）。“五色”是指在吉安的城市森林建设中，将城市空间划分为五种颜色的空间，包括绿色空间（森林）、蓝色空间（水体）、灰色空间（交通体系、建筑等）、橙色空间（生产、生活、文化、服务、娱乐等）和红色空间（风景名胜区、历史文化古迹等）等多维有色空间，建设内容对应城市森林的四大体系建设，以实现自然生态与人文生态的和谐。“多点”指吉安市下辖的 13 个县（市、区），同步开展城市森林建设。“三屏”指吉安市域内的各类保护区、风景名胜区、湿地公园、生态公益林、村镇防护林等三级绿色生态屏障。

（四）注重森林城市特色与形象定位

在吉安市的城市森林建设规划和建设过程中，力求全面体现“文化、低碳、健康、生态、宜居 ”的国家森林城市特色和“文化庐陵，山水吉安 ”国家森林城市印象。构建“低碳健康，绿色文明”的现代城乡新生活意识，践行森林健康工程，打造“文化庐陵，山水吉安 ”的森林城市新印象，注重“文化、低碳、健康、生态、宜居 ”的规划理念。

（五）城市森林生态基质建设规划

1．道路绿色廊道建设工程。吉安市各级道路总里程 5131 公里，规划期内新增道路里程 287 公里。2010—2020 年，规划完成提升道路绿色廊道面积 35790 亩 ，完成新建道路绿色廊道面积 9350 亩。

2．河流绿色廊道建设工程。吉安市各级河流里程中，适宜绿化里程 2453 公里，包括全市范围内所有及规划期内新增的河渠及重要堤防两侧，河流、湖泊、水库和水塘四周宜林地等可绿化区域。2010—2020 年，完成提升河流绿色廊道面积 12900 亩 ，新建河流绿色廊道面积 5780 亩。

3．城区绿地系统建设工程。包括公园绿地规划、道路绿地规划、生产绿地规划、防护绿地规划、附属绿地规划等。到 2020 年，各县（市）城区平均绿地率达到 41%以上，平均绿化覆盖率达到 45%以上，人均公园绿地面积达到 14.5 平方米以上，多数市民出门平均 450 米有休闲绿地。

4．减灾避灾绿地建设工程。将减灾避灾绿地体系纳入城市可持续发展的战略中，涵盖一级避灾点 、二级避灾点 、避灾通道 、城市救灾通道等。包括吉安市市域及县域的建成区及郊区。

5．城镇立体绿化工程。包括村镇绿化工程，涉及全市的 214 个乡（镇）和 2535 个行政村的建成区及周围。到 2020 年，全市村镇绿化总面积达到 366410 亩，林木绿化率达到 46.4%。另外，吉安市城市建成区和城镇内的各类立交桥、建筑墙面、坡面、屋顶、门庭、花架、棚架、阳台、窗台、廊及各种假山与建筑设施等一切可以利用的空间，到 2020 年，全市立体绿化覆盖率达到 80%。

6．森林提质工程。包括碳汇造林工程，在规划期内，吉安全市共实施碳汇造林工程 106600 亩，规划全市森林抚育 7692600 亩，低质低效林改造 1395700 亩 。

（六）森林生态保护体系建设规划

1．生态公益林建设工程。到规划期末，使全市生态公益林面积（含国家、省、市 、县）达到 1095.38 万亩，占国土总面积的比例达到 28.9%，占全市林地面积的比例达到 41.6%。

2．长江防护林工程。涉及全市 13 个县（市、区），主要建设范围包括沿赣江和赣江支流流域的宜林荒山荒地、火烧迹地、采伐迹地、疏林地、灌木林地以及部分未利用地。工程建设总规模 2422000 亩，其中人工造林（低效林改造）975850 亩，封山育林 1446150 亩 。

3．退耕还林后续管理工程.。退耕还林工程自 2002 年在吉安市实施以来，工程涉及全市 13 个县（市、区）的 113 个乡镇(街办)。工程建设总规模 623720 亩，其中补植补造面积 142720 亩，荒山造林 240500 亩，封山育林 24000 亩。

4．湿地保护工程。到 2020 年，吉安全市天然湿地面积基本维持现状，占用天然湿地面积控制在 1.0%以内，纳入自然保护区或湿地公园受重点保护的湿地面积占全市湿地总面积的 2.0%以上，即在 12.5 万亩以上；人工湿地面积基本做到占补平衡，湿地征占用审批率达到 100%。

5．自然保护区建设工程。到建设期末，森林和野生动植物类自然保护区面积达到 165 万亩以上，占国土面积比例在的 4%以上，省级自然保护区达到 3 个以上，使全市的野生动物的物种及种群有明显增加，生物更加多样。

6．林业有害生物防治及森林防火工程。以高速公路、国道、省道、市级公路等省市级以上道路两侧及河流两侧生态廊道林为重点，兼顾吉安市下辖的 13 个县（区）部分区域片林、经济林、速生丰产林。森林火灾受害率控制在 1‰以下。

7．古树名木保护工程。吉安市市域范围内，树龄在百年以上的大树和树种稀有、名贵或具有历史价值、纪念意义及重要科研价值的树木。吉安市古树较多，市域范围内现有 100 年以上的古树 17845 棵。对全市古树名木安排专人、专项经费进行抚育养护并实行挂牌保护。挖掘古树名木历史文化意义，丰富生态文化内涵。

8．森林健康工程。森林健康是实现人与自然和谐相处的必要途径，用近自然经营理论调整林分结构,提高森林植物抗灾能力，以生态学理论为基础,科学防治林业有害生物,严防外来林业有害生物的入侵，预防控制空气污染和森林防火,减轻环境因素对森林生态系统的破坏，建立森林健康评估标准,树立森林健康理念。

（七）森林产业体系建设规划

1．用材林及工业原料林建设。以遂川、安福、永丰、吉安、吉水、泰和、万安、永新等县为建设重点，其余各县（市、区）共同发展。规划建设以湿地松、杉木、泡桐、楮木、马褂木、苦楝等速生树种为主的工业原料林和用材林基地 2281000 亩 。

2．珍贵树种用材林基地建设。规划营造以楠木、花榈木、樟树、桂花、银杏等为主的珍贵树种用材林基地 306000 亩。

3．林木种苗花卉产业建设。加强林木种苗花卉产业结构调整，提升林木种苗花卉的培育技术，形成以国有苗圃为龙头，多层次、多种所有制协调发展的苗木花卉培育体系，形成一批有特色、区域化、集团化的种苗产业，打造吉安林木种苗花卉品牌。

4．木本油料产业建设。形成以遂川、永丰、新干、峡江、安福、吉安等县为中心产区，其它县（市、区）共同发展的油茶区域化、规模化产业建设格局。吉安市木本油料产业建设高产油茶林面积总计 1360600 亩，油茶建设面积 1301500 亩（其中改造 564500 亩，新造 737000 亩），其它生物质能源树种 59100 亩。

5．名特优经济林产业建设。在规划期内，吉安市名特优经济林产业建设面积总计 1262600 亩，其中茶叶基地建设面积为 248100 亩，中药材基地建设面积 148500 亩，竹林基地建设面积 866000 亩。

6．森林生态旅游产业工程。到规划期末，完善提升国家级森林公园 2 处、省级森林公园 4 处，以及相应的自然保护区、湿地公园等，形成完整的森林生态旅游网络体系，打造成江西省森林生态旅游的重要目的地。

7．林产品加工与产品要素市场建设。在吉安市区建设吉安市林产品要素市场，打造产、供、销一条龙的现代化林产品加工产业化链条，形成具有竞争力的绿色示范企业群体，树立吉安市绿色生态产品品牌。

（八）森林生态文化体系建设规划

1．森林生态物质文化建设。包括森林生态文化村、森林社区示范点、森林生态文化教育示范基地、森林生态文化主题园、、森林文化广场、全民义务植树基地、纪念林基地、吉安森林城市形象工程——市树市花市鸟、森林与树木文化宣传标识工程等。

2．森林生态精神文化建设工程。包括生态伦理观的培养、全民义务植树活动、全民绿色认领、、企业绿

色认领、生态科普活动、“创森”宣传教育、多渠道宣传森林生态、扩大社会参与生态保护决策等措施。

3．森林生态制度文化建设。包括森林生态机构组织体系建设、法律法规体系建设、生态行为守则、低碳吉安计划等。

（九）森林城市支撑管理规划

（1）森林防护体系建设。包括森林防火体系建设、林业有害生物防治体系建设。

（2）林政资源管理体系建设。包括完善森林采伐限额管理、加强调查设计队伍建设、完善森林资源档案管理 、加强木材经营加工管理、加大林地保护力度等。

（3）林权制度改革配套体系建设。首先，进一步完善林业产权制度，推进森林、林木和林地使用合理流转，其次，拓展林权范围，对湿地确权发证，另外，完善城市森林分类经营管理体制。

（4）城市林业科技保障体系建设。建立城市林业科学技术研究开发体系，为城市林业建设提供技术储备；建立健全城市林业科技成果转化体系，促进林业科技与林业生产紧密结合；建立健全质量安全监督体系，提升城市林业发展质量。

（5）森林城市数字化体系建设。包括电子政务建设、建立城市林业管理信息系统。

（6）城市森林建设效果的检查、考核与监测。包括城市森林建设效果的检查、城市森林建设效果的考核、城市森林建设效果的监测等。

（十）树种规划、**森林健康与低碳措施**设计

（1）城市森林建设树种规划。包括道路绿化、停车场绿化、公路、铁路、高速干道绿化、庭园、防护林、水土保持林水源涵养林绿化、特殊用途、城市庭园树种，以及湿生和水生植物等。

（2）城市森林健康经营措施设计。包括健康森林林分结构优化、森林人工抚育、高效立体林业经营、森林生态改造、低质低效林健康改造技术、森林生态采伐技术等。

（3）城市森林低碳措施设计。包括在植物配置中体现低碳理念、“低碳”理念在硬质景观中的体现、低碳材料的选择、可再生能源的推广应用、在施工与养护管理中体现低碳理念、城市森林低碳营造原则等。

（十一）保障措施

城市森林建设是吉安市一项事关全局和长远的战略任务，持续时间长，工作任务重。除严格按照现有的法律法规和规章制度进行建设外，还要进一步解放思想，开拓创新，突出重点，形成机制，从组织、政策、资金、体制、法制、技术、宣教、人才等多个层面建立完善的保障体系。

四、小结

吉安市在创建森林城市的实践中，以“文化庐陵，山水吉安”为城市森林建设目标，遵循“文化、低碳、健康、生态、宜居”的理念，构建了“林水相依、林城相依、林路相依、林村相依、林居相依”的城市森林网络空间格局，形成了健康、稳定的以森林为主体的城市生态系统，突出了建设健康稳定的城市森林基质、和谐的森林生态保护体系、发达的森林产业体系、特色繁荣的森林生态文化体系、高效的城市森林支撑管理体系，实现了吉安红色摇篮的绿色崛起。有效改善城市小气候、防止和减少大气污染，提高农田防护、水源涵养效益，减少水土流失林效益、消减噪声污染，对生物多样性起到保护作用，及对人体也具有保健功能。形成绿色、健康的森林生态系统，也会促进社会经济发展，提供更多的就业岗位，逐步提高全社会的生态环境保护意识，加速农村产业结构调整，促进建设区经济发展，具有良好的文化教育功能和环境景观功能。也增加了林农收入，促进房地产业及旅游业的良性发展。有力助推吉安市成为森林型生态城市，营建良好的城乡人居环境，综合竞争力将得到提升，打造生态旅游首选目的地，绿色GDP比重高，国民经济增长正面效应显著。

吉安市创建森林城市的实践表明，城市森林建设是中国城市化和生态建设的亮点，反映了现代人回归自然的强烈愿望。全国已有137个城市获国家森林城市称号。“创森”活动，已经成为我国城市林业发展的又一引擎，是增加城市绿色GDP的有效途径。“国家森林城市”既是一个城市生态文明建设的国家最高荣誉，又是我国对城市生态建设成就的最高评价。可以预见，师法自然，城乡一体，和谐相融，因地制宜，以人为本，尊重科学的城市森林建设理念，将为我国的城市生态文明和生态环境建设带来质的突变。

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Theory and Practice of Urban Forestry and Forest City Construction ——A Case of Ji’an City, Jiangxi Province

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Abstract: City forestry was taken forest as the main body, and the trees, shrubs, herbs combination, and adapt to city construction, supporting the sustainable development of the city, improve the city’s ecological environment, rich city commodity supply, operation and management of city culture and improve the welfare of forest ecosystem and city landscape system and ancillary works. That was the integration of forestry and the garden expansion, improvement and sublimation, and a branch of modern forestry. Forest city will play a major role in improving the city environment, at the same time, also provides a near natural landscape for the city residents. This paper took the practice of establishing forest city as a case in the construction of urban forestry of Ji’an city, Jiangxi province, to analyse and summarize the ways and effects of building urban forestry relying on the activities of “forest city” in China. In the practice of creating a forest city had been took the “cultural landscape of Lu Ling, Ji’an city forest construction” as the goal, and followed the concepts of “culture, low carbon, health, ecological, liveable”, built a urban forest network pattern of forest and river, city, road, village, house interdependence, the formation of a healthy and stable forest as the main body of the city ecosystem, highlighting the city forest construction matrix healthy and stable, harmonious forest ecological protection system, developed forest industry system, forest ecological and cultural system characteristics of prosperity, city forest support efficient management system, implementation of the Ji’an city green rise, the Communist Party of China had growth and development in this place. The practice of the creation forest city in Ji’an City showed that: the city forest construction is Chinese city and ecological construction highlights, reflects the strong desire of modern people to return to nature. There were 137 national cities had won the title of national forest city. To create forest city activities had become another engine of our city forestry development, was the effective way increase the city green GDP. “National Forest City” ecological civilization construction was a city of the nation’s highest honour, and was the highest evaluation of China’s ecological construction in city. The achievement can be predicted, nature, a harmonious relationship between urban and rural, according to local conditions, people-oriented, respected the concept of city forest construction science, will bring the matter change to a civilized and ecological city and ecological environment construction in China.

Key words: urban forestry; forest city; establishment; theory and practice; Ji’an city

关于全面建设宜居城市的理论探析

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摘 要： 在大力倡导发展低碳经济的背景下正确理解和把握宜居城市建设理论具有重大的理论和现实意义。首先要正确理解科学发展观：是以人为本、为民服务的经济、社会和人的"全面发展"；其次，要正确理解宜居城市建设内涵：是资源系统与其密不可分的外部环境之间的集成效应；再次，宜居城市建设是一项系统工程，要把自然科技、人文科技、社会科技"协调和集成起来"；最后，加快建设宜居城市要"改变我们的思维方式"，用复杂性思维取代传统的分割还原思维。

关键词： 宜居城市；科学发展观；系统工程；复杂性思维

改革开放 30 年以来，我国在经济社会各领域都取得了辉煌的成就，但与此同时，经济活动与生态环境之间的矛盾也在日益激化，资源短缺、环境污染、生态失衡等一系列问题已成为我国经济社会发展的瓶颈。如果我国仍然沿用高消耗、高污染以及以资源环境问题为代价的发展老路，发展将难以为继。胡锦涛同志于 2005 年 3 月 12 日提出来要建设“两型”社会。他说：“全面落实科学发展观，进一步调整经济结构和转变经济增长方式，是缓解人口资源环境压力、实现经济社会全面协调可持续发展的根本途径。要加快调整不合理的经济结构，彻底转变粗放型的经济增长方式，使经济增长建立在人口素质、高效利用资源、减少环境污染、注重质量效益的基础上，努力建设资源节约型、环境友好型社会。”[1]“两型”社会建设思路的提出实际上给宜居城市的建设指明了一个清晰的发展方向。在提倡发展低碳经济的背景下，回顾相关研究文献，正确理解和把握建设宜居城市在新形势下的理论内涵，无疑是一系列具有重大理论和现实意义的课题。

一、正确理解科学发展观：以人为本、为民服务的经济、社会和人的"全面发展"

胡锦涛同志提出的科学发展观——“坚持以人为本，促进实现经济社会和人的全面发展”是对马克思“全面发展”理论的继承和发展。马克思认为：由传统的资本主义（工业社会）的“片面发展”通过社会主义过渡到共产主义（联合共同体）的“全面发展”，“是废除私有制的最主要的结果”。社会主义是向“废除私有制”过度的“革命转变时期”。而“建立在个人全面发展和他们共同的社会生产能力成为他们的社会财富这一基础上的自由个性”是共产主义。[2]“共产主义是私有财产即人的自我异化的积极的扬弃，因而是通过人并且为了人而对人的本质的真正占有……这种共产主义……是人和自然界之间、人和人之间的矛盾的真正解决，是……个体和类之间的斗争的真正解决。”[3]我们认为，这就是马克思提出的科学发展观。其中的“通过人并且为了人而对人的本质（即马克思在该文中讲的“自我意识”）的真正占有”就是“以人为本”的基本涵义，“人和自然界之间、人和人之间的矛盾的真正解决”以及“个体和类（即人同自身）之间的斗争的真正解决”就是指“实现经济、社会和人的全面发展”。显然，这里的“经济发展”指“人和自然之间的矛盾的真正解决”。而且在现实活动中，人与自然之间、人同自身之间、人与人之间的关系或者经济发展、人的发展（人文发展）、社会发展是“三者同时存在”与变发并形成密不可分的一个内在整体（见图 1）。

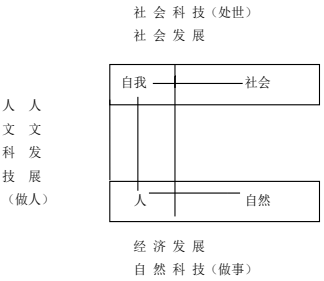

图 1 "科学发展"的内在整体示意图

如图 1 所示，科学发展即全面发展是人通过人的发展（即人文发展）将经济发展和社会发展联系在一起的集成效应。因此，落实科学发展观就是“人通过人的劳动”把自然（经济）因素、人文因素、社会因素整合的过程和结果。正如胡锦涛同志明确指出的，“落实科学发展观是一项系统工程……要把自然科学、人文科学、

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社会科学等方方面面的知识、方法、手段协调和集成起来”。[4]这就深刻地揭示了实践思维及其基本特征。其实，马克思早就说过：“人们在生产中不仅仅同自然界发生关系。他们如果不以一定的方式结合起来共同活动和相互交换其活动，便不能进行生产。为了进行生产，人们便发生一定的联系和关系；只有在这些社会联系和社会关系的范围内，才会有他们对自然界的关系，才会有生产。”[5]也就是说，现实的生产活动是自然界、人文界、社会界“三者”之间相互作用的过程。显然，科学发展（全面发展）不仅仅是一个口号、观点和思想观念，而且更是一个行为、活动和现实过程。因此，只有坚持三者“协调和集成”论才能正确理解并落实科学发展观。

宜居城市建设是一项系统工程（即人的活动），而且加快建设宜居城市是落实科学发展观的必然要求。从理论上来讲，科学发展与资源节约型、环境友好型的宜居城市之间具有同源关系，并在横向上和纵向上存在着密切的联系（见表 1）。从实践上来讲，通过宜居城市的建设，“促进实现经济、社会和人的全面发展”，从而形成目标与手段之间的反馈圆环，从总体上不断地提升发展水平。

表 1 科学发展观与宜居城市建设之间关系表

横向活动 / 纵向过程	自然界	人文界	社会界
	人同自然界的关系	人同自身的关系	人同人的关系
	自然科技	人文科技	社会科技
	“做事”	“做人”	“处世”
资源系统	自然资源	人文资源	社会资源
环境系统	自然环境	人文环境	社会环境
全面发展目标	经济全面繁荣 人与自然和谐	人的全面发展 人同自身和谐	社会全面进步 人与社会和谐

注：示“人通过人的劳动”交互—反馈作用形成为一个内在整体。

如表 1 所示：（1）科学发展观中的“全面发展”目标与宜居城市中的资源系统、环境系统的构成要件同源于世界基本构成的自然界、人文界和社会界。（2）在每一个现实的横向活动中，所有构件的“三者同时存在”与变发并形成为一个整体。（3）在现实的纵向过程中，资源系统、环境系统及其与全面发展目标之间“通过人的劳动”形成反馈圆环，即法国当代哲学家、复杂性思维创立者埃德加·莫兰（Edgar Morin）称为的“回归环路的原则”——“原因作用于结果，结果也作用于原因” “的认识方法”，这样就克服了传统的“前因后果”论。他指出：“所有的事物都既是结果又是原因，既是受到作用者又是施加作用者，既是通过中介而存在的又是直接存在的。不认识整体就不可能认识部分，同样地，不特别地认识各个部分也不可能认识整体。”[6]因此，要从落实科学发展观和建设和谐社会的高度，全面理解和建设资源节约型、环境友好型的宜居城市。

二、正确理解宜居城市建设内涵——资源系统与其密不可分的外部环境之间的集成效应

1. 资源：自然资源、人文资源、社会资源“通过人的劳动”形成为一个系统

如表 1 所示，从横向活动来讲，资源是自然资源、人文资源、社会资源“三者同时存在”与变发的系统。自然资源包括国土资源、矿产资源、能源、水资源、物质设备、经济实力等自然（物质）产品；人文资源包括人口数量和质量、个人生产力、科技生产力、文化生产力等人文（精神）产品；社会资源包括社会体制、组织形式、分工协作程度、和谐氛围、集体生产力等社会（关系）氛围。节约资源不仅体现在横向活动中的三大基本门类即自然资源、人文资源、社会资源，而且要贯穿于生产、流通、消费、保护及其管理的各个环节。谓之全面资源节约观。资源节约是主体（人）的活动，根本问题在于让节约资源理念深入人心，提高全民族的节约意识，在全社会倡导节俭、文明、适度、合理的消费理念，倡导绿色生产、绿色消费等现代生产方式和生活（消费）方式。然而，“试验方案”中的资源，仅仅局限于自然（物质）资源——“能源、水、矿产、林地、湿地、绿地等资源”。但在阐述中又提及到“构建经济体系”、“完善资源产权制度”、“推进资源性产品价格改革”、“完善节能减排激励约束机制”和“创新资源开

发管理机制”等社会资源问题，唯独没有涉及人文资源。可能有人会说，只谈及自然资源是因为他们的“资源”为狭义的。这种辩解是无力有害的。即使是天然资源必须是由“人通过人的劳动”才能变为人工自然资源，而且现实活动中的资源系统本身就是自然资源、人文资源、社会资源由“人通过人的劳动”形成为一个内在整体。显然，处于分割状态的三种资源是相对静止的存在，它们是一种抽象的、没有将可能性转变为现实性的“资源”。如果只提及自然（物质）资源就是撇开宜居城市建设（现实活动）的一种“纸上谈兵”。我们知道，宜居城市建设应该是是资源“节约”型、环境“友好”型，而不是资源、环境型。而“资源节约”是指“人通过人的劳动”的正面效应，即人与自然之间的相互作用而不是指资源本身。凡是“人的劳动”必然是人将人文资源、社会资源“协调和集成”的过程、结果。因此，宜居城市建设中的资源就是由三大门类资源子系统相互作用形成的一个复杂系统。

2．外部环境：自然环境、人文环境、社会环境“通过人的劳动”形成的一个整体。

外部环境指围绕着事件、事物系统的外部世界，即资源系统（包括其三大要素或子系统）赖以存在和变化的外部条件。既然资源系统是一个综合体，其外部环境当然也是一个由自然环境、人文环境、社会环境“通过人的劳动”形成的整体。这种环境整体观，E·莫兰敏锐地提出过。他说：要“把任何事件、信息或知识放置于它们与其环境的不可分离的联系之中，这个环境是文化的、社会的、经济的、政治的，当然还是自然的”，或者“环境是生物的、文化的，还是社会的”[6]（见图2）。

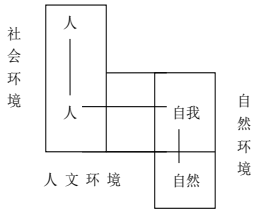


图2 外部环境的构成要素及其交互—反馈作用机制示意图

如图2所示，环境的构成要素，概括起来也分为人与物两个方面。其中的“人”包括人文环境（人文精神和文化情操、价值观念、人格品德等所形成的精神氛围）和人与人之间的社会环境（和谐氛围和团队精神等），都是人和社会在实践活动中营造的；“物”包括物质生活条件和自然生态环境，现实生活中的物质生活条件和自然环境也是人维护和创造的（其中有些自然环境是天然的，也要依靠人们保护和珍惜）。在现实活动中，三类环境“同时存在”与变发着，其中的自然环境是基础，人文环境是关键，社会环境是保障（即“人的社会居所”），并通过人的实践活动使它们“协调和集成”为一个动态系统。这就是环境整体观，是每个人施展才华所必需的环境。其实，从根本上来说，人与自然之间的和谐即生态环境取决于人同自身的和谐和人与人之间的和谐。[7]

人既能创造环境也能破坏环境，环境既能塑造人也能压抑人。长期以来，我们受到“分割思维”的影响，在环境问题上缺乏整体观念。曾经只注重人文精神，忽视物质条件建设；如今却缺少人文关爱和和谐氛围，人文精神“被总体的组织性所压抑”的现象时有发生。在现实生活中，某些管理人员不去营造良好的环境，却将同事或下属视为达到自己私利的一部“机器”，直接地违背了“通过人”与“为了人”相统一的“以人为本”，挫伤了广大民众的主观能动性，造成“整体小于其部分之和”的尴尬局面。

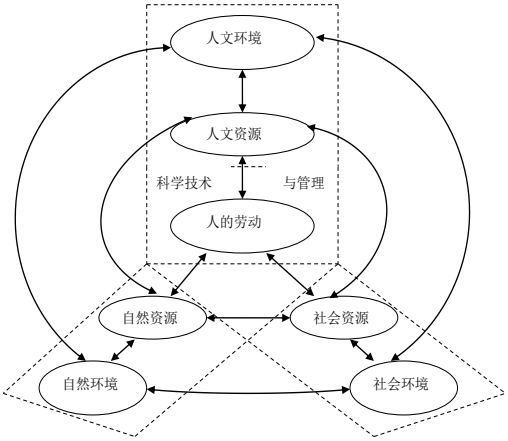
关于环境问题，复杂性思维告诉我们，既不能将对象及其环境（背景）“分割为碎片”，也不能将对象与其环境相分割，而要把“可分割的东西”“插入不可分割的联系之中”，“要求把研究对象连接于其背景、其环境，能够把整体与其每一个部分相联和整体与部分之间的相互作用，还能包容和超越在经验——理性的认识深化的过程中所遭遇的逻辑矛盾。”[6]而且环境是“依靠环境的组织”与“依靠人的环境”交互—反馈作用形成的有机整体。[2]因此，在营造环境时，既要考虑自然环境形成中的人文性和社会性，又要考虑人文环境和社会环境形成中的自然性。否则，外部环境就是被分割的。实际上，包括科技人员在内的人的聪明才智主要地依靠人文关爱和营造和谐氛围来激发，如果仅仅利用物质刺激来调动人的积极性，就是把人仅仅视为一般动物了，或者在物质财富的分配上拉大贫富差距便激发了不和谐因素。因此，在关注自然环境的同时，更要注重发挥多数人的人文精神和切实营造和谐氛围，这就是我国环境建设 “主导多维的整合效应”。[3]显然，这里的“环境友好”是指“人通过人的劳动”的过程和结果，决不是指环境本身。

3．资源系统与其环境由“人通过人的劳动”进行双向交流：宜居城市的形成机制。

宜居城市建设是对象系统与其外部环境之间的密不可分的关系（见图3）。正如莫兰指出的，“事物不仅仅是事物，而且是连接不同部分形成一个统一体的系统；没有封闭的物体，而只有与其环境不可分割地相连的实体，它们只有在被纳入其背景中时才能真正被认识。关于生物，它们相互之间和与其环境之间进行交流，这种交流构成它们的组织和它们的本性本身的一部分。”[4]

如图3所示：（1）现实活动中的资源系统由自然资源、人文资源、社会资源 “三者”由“人通过人的劳

动”交互—反馈作用形成的统一体。（2）同样地，外部环境亦是自然环境、人文环境、社会环境由“人通过人的劳动”形成的整体。（3）资源系统与外部环境之间也是由“人通过人的劳动”发生交互—反馈作用形成的大系统，而且“这种交流构成它们的组织和它们的本性本身的一部分”，即没有资源系统、环境系统内部各个子系统（要素）之间以及资源系统与外部环境之间的“这种交流”，就不可能建成宜居城市。（4）自然资源与自然环境、人文资源与人文环境、社会资源与社会环境分别由“人通过人的劳动”形成为自然类、人文类、社会类宜居城市，类似于自然科技、人文科技、社会科技三大门类之间由“人通过人的劳动”协调和集成为“一门科学”技术一样，宜居城市也是三大门类之间由“人通过人的劳动”交互—反馈作用形成的综合体。因此，“人的劳动”就成为建设宜居城市的根本途径，而且是构建宜居城市三大门类的交集点。



[8]

图 3　宜居城市的组成要素及其形成机制示意图

图示：1.表示“人通过人的劳动”发生交互—反馈作用形成为一个整体。2.三个虚线方框示构建宜居城市的三大门类。

三、宜居城市建设是一项系统工程，要把自然科技、人文科技、社会科技“协调和集成起来”

“唯自然科学主义”经常宣扬“自然科学是唯一正确的知识……人文允许（甚至鼓励）胡说”，“自然科学技术独自能够解决人类面临的所有难题”，“它在经济社会发展中起着决定性作用”。“试验方案”中尽管没有这样露骨的话语，却散发出经济发展全靠自然科技这个“第一生产力”的浓厚气味，完全撇开了人文因素及其存发的“社会居所”。“科学主义”和所谓的“反科学主义”在我国成为一种价值理念，而这种“惟一的决定”和“独自解决”论直接地背离了现实生活。马克思在《政治经济学批判大纲（草案）》一文中谈到“创造现实的财富”取决于一般的科学水平和技术进步在生产上的应用之后，接着指出：“科学发展水平，尤其是自然科学以及随着自然科学一起发展的一切其他科学，又决定于物质生产的发展水平。”显然，这里的“随着自然科学一起发展的一切其他科学”，当然包括“关于人的科学”即人文科学和社会科学，并且与自然科学 一起“将是一门科学”。[3]因为每一个现实活动都是自然科技（“做事”）、人文科技（“做人”）、社会科技（“处世”）“协调和集成”的过程和结果（见图 1）。正如胡锦涛同志于 2004 年《在两院院士大会上的讲话》中指出的，“落实科学发展观是一项系统工程，不仅涉及经济社会发展的方方面面，而且涉及经济活动、社会活动和自然界的复杂关系，涉及人与经济社会环境、自然环境的相互作用。这就需要我们采用系统科学的方法来分析、解决问题，从多因素、多层次、多方面入手研究经济社会发展和社会形态、自然形态的大系统。”因此，“要把自然科学、人文科学、社会科学等方方面面的知识、方法、手段协调和集成起来”。这是党中央领导第一次提出的全面科学技术观，是对马克思关于“一门科学”技术理论的继承和发展，当然也是加快建设宜居城市的根本原则和指导思想。

胡锦涛同志的这个讲话，十分突出了落实科学发展观的根本在于“人通过人的劳动”，或者“一切变化都是由于人的活动”。也就是说，在建设宜居城市的过程中要把自然科技、人文科技、社会科技“协调和集成起来”（见图 4）。

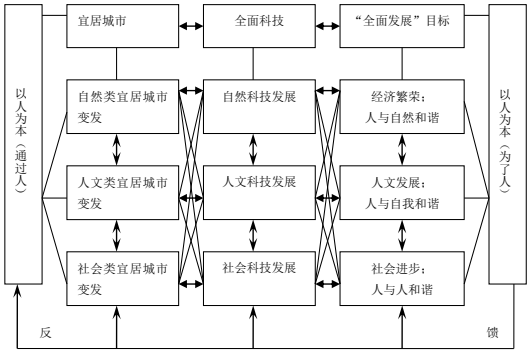


图 4 科学发展观统领下全面科技进步与宜居城市建设关系图

如图 4 所示：（1）宜居城市建设是“依靠人、通过人并且为了人”发展全面科技，实现“全面发展”目标，并形成一个反馈圆环，即任何一处都不能被打断的圆环。（2）宜居城市、全面科技、“全面发展”目标都是分别由各自的自然、人文、社会“三者同时存发”的交互—反馈作用形成的整合体，即“主导多维整合效应”。（3）“三者”中的每一项都是由另一个系统的“三者”交互—反馈作用形成的主导多维的整合效应。如自然类宜居城市的存发是“人通过人的活动”应用以自然科技为主并与人文科技和社会科技交互—反馈作用形成的整合效应。同样地，自然科技的发展和应用也是以自然类宜居城市为主并与人文类和社会类宜居

城市的支撑的整合效应，或者以经济繁荣为主并与人文发展和社会进步为支撑的整合效应。宜居城市建设与“全面发展”目标之间的双向关系，以及其他方面的情况亦是主导多维的整合效应，不再赘述。因此，要按照胡锦涛同志的指示，“采用系统科学的方法来分析、解决问题，从多因素、多层次、多方面入手研究”建设宜居城市这个“系统工程”。

四、加快建设宜居城市要“改变我们的思维方式”，用复杂性思维取代传统的分割还原思维

联合国教科文组织总干事长费德里科·马约尔（Federico Mayor）在为 E·莫兰《复杂性理论与教育问题》专著出版时撰写的“序言”中指出：21 世纪“我们要接受的一个最困难的挑战将是改变我们的思维方式，使之能够面对形成我们世界的特点的日益增长的复杂性、变化的迅速性和不可预见性。……为了实现这一点，我们应该推倒学科之间的传统的壁垒和设想怎样把迄今被分离的东西连接起来。”[6]半个世纪以来，在经典科学的基础上形成和发展起来的“复杂性科学”或“复杂性理论”及其思维方式，是一次具有重大意义的科学革命，它被国际上学界誉为“21 世纪的科学”。

关于复杂性范式的基本要点，E·莫兰在《复杂性思维》一文中认为：“复杂性思维方式是源自于信息论、控制论、系统论和自组织观念并发展了的思想工具，它是不断地往返穿梭于确定性与不确定性之间、基本元素和总体之间、可分割性与不可分割性之间。与传统的简化思维方式比较，复杂性思维方式不是绝对排除前者，而是将它们整合到一个更加广泛和更加丰富的框架内。”因此，“简化范式规定了分解和化归，而复杂性范式要求在区分一切的同时要联系他们。”或后者“要求能够把对象联接于其背景、其环境，能够把整体与其每一部分相联和设想整体与部分之间的相互作用，还能够包容和超超在经验—理性的认识深化的构成中所遭遇的逻辑矛盾。”因此，已经迈入 21 世纪的人们，要自觉地改变思维方式，并将复杂性思维运用于我们所从事的工作或学习，获得又快又好的成绩。

综上所述，我们要在科学发展观的指导下科学地来理解建设宜居城市的内涵，为加快宜居城市建设贡献一份力量。

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On Two Type Social Construction

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Abstract: “Two Type Society” is a low-carbon economy of the concept of native, correctly understand and grasp its theoretical meaning for speeding up the construction of “Two Type Social society” is of great theoretical and practical significance. First we should correctly understand the scientific concept of development, which is the “comprehensive development” of people -oriented, serving the people of the economic, social and human; Secondly, we must correctly understand the “two types of” social construction of meaning, which is the resource system and its external environment inextricably linked the integrated effect; thirdly, “two types” of social construction is a systematic project, which should “coordinate and integrate” the natural science and technology, human science and technology, social science and technology; Finally, accelerating the construction of “two types” society need us to “change our thinking way”——with the complexity of thinking to replace the traditional split / restore thinking.

Key words: “Two Type Society”; Scientific Concept of Development; systematic project; the complexity of thinking

江西省城镇化进程中湿地公园建设的实践与功能提升

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摘 要：湿地公园是具有湿地的生态功能和典型特征的，**以生**态保护、**科普教育**、**自然野趣和休**闲游览为主要内容的公园。**随着城市化**进程和生态文明建设的需求，**湿地公园在我国公园体系中已成**为一种独特的**公园**类型，**在城市生**态环境建设中具有不可或缺的重要地位。**本文**对江西省城镇化进程中湿地公园建设的实**践与功能提升**进行了分析论证，**明确了湿地功能区在城市**环境建设中的重要价值，**指出湿地公园生**态保育区**在城市湿地生物多**样性保护中有极其重要的功能；**湿地生**态系统恢复重建区更是在城市水体水质保护和污水处理中将发挥日益重要的作用；**湿地合理利用区**则可在城市湿地知识科普和湿地景观服务于生态旅游方面做**出有益**贡献。**江西省城市湿地公园的建**设实践表明，**江西省于** 2000 **年开始加大湿地公园的建**设，**截止** 2017 **年**，经国家林业局批准建立的国家湿地公园和江西省湿地办批准建立的省级湿地公园分别有 33 **个和** 58 **个**，这些湿地公园在地域分布的格局上涉及五大河流的源头和上、**中和下游流**经的诸多建制镇。为加速全省和地**方城市化**进程和健康发展提供了良好的生态平台。

关键词：江西省；**城**镇化进程；**湿地公园**；**建**设实践；**功能提升**

湿地公园在我国公园体系中是一类独特的公园类型，它是以水体、湿地为主要构建要素，并对公众开放的公园形式。我国湿地公园的类型形式多样，隶属关系也有所差异。国家城乡建设部于 2017 年 10 月 13 日新修改颁布的《城市湿地公园管理办法》，主要对纳入城市绿地系统规划的城市湿地公园相关申报、审批、验收、评估等进行部门管理。在该《办法》中，城市湿地公园被定义为“在城市规划区范围内，以保护城市湿地资源为目的，兼具科普教育、科学研究、休闲游览等功能的公园绿地。”2004 年 2 月 11 日，国家建设部批准山东省荣成市桑沟湾城市湿地公园为国家城市湿地公园，该公园成为我国首个国家级城市湿地公园；2005 年 8 月，国家林业局印发的《关于做好湿地公园发展建设工作的通知》（林护发[2005]118 号）中将湿地公园定义为“以具有显著或特殊生态、文化、美学和生物多样性价值的湿地景观为主体，具有一定规模和范围，以保护湿地生态系统完整性、维护湿地生态过程和生态服务功能并在此基础上以充分发挥湿地的多种功能效益、开展湿地合理利用为宗旨，可供公众游览、休闲或进行科学、文化和教育活动的特定湿地区域”。2005 年，国家林业局批准建立了第一个国家湿地公园试点——浙江杭州西溪国家湿地公园。经过十多年的发展，截至 2016 年底，我国已建立国家湿地公园 836 处。

江西湿地资源十分丰富，拥有各类湿地共 365.17 万 hm2，占全省国土面积的 21.87%；天然湿地 116.61 万 hm^2，占全省国土面积 6.9%；2006 年，新余市孔目江湿地公园被国家林业局批准为国家湿地公园，成为江西省第一个国家湿地公园。与国家湿地公园建设相同步，2010 年，省级湿地公园建设拉开序幕。从湿地公园建设起步至今，在江西省湿地公园主管部门和市、县政府和相关部门的努力下，省级湿地公园提升为国家级湿地公园的进程快速、健康推进。至 2017 年底，全省已建立国家级和省级湿地公园分别为 33 处和 58 处。

一、湿地公园建设的背景

湿地，是一类水体和水陆交错形态而广泛分布于地表的地貌单元。人们对湿地的好恶评价和看法是复杂的。对于河流和湖泊，由于其是对人们基本生活、生产条件的保障功能，人们通常喜爱择水而居，更有像乌镇等因“枕水而居”而形成的特殊“水乡”。但在人们传统认知中，对那些具有植被丛生、水陆交错、淤泥深厚等特点的沼泽型湿地，则多被看作是肮脏、废弃之地和蚊虫滋生场所。长期以来，这类湿地常常被当作土地整治和改造的对象而挪作他用。

伴随改革开发进程中大规模的城市化、工业园和开发区建设，城市和村镇周边的这类湿地几乎无例外地被作为垃圾倾倒和弃土填埋的场所，由此造成的湿地面积大规模断崖式骤减、湿地生物的灭绝和湿地形态的损毁

成为一种常态。

魏强[1]等通过对三江平原湿地面积减少的驱动因素分析后指出，尽管影响不同国家和地区湿地演变过程的驱动因素存在一定的差异性和特殊性，但综合来看，全球范围的湿地萎缩是诸多直接驱动和潜在驱动因素共同作用的结果，而其中经济增长和人口增长是两个最重要潜在驱动因素，它们的变化不但会直接引发耕地和居住地面积的扩张，还会带来如道路、水坝、堤坝等一系列基础设施的建设，进而作用于湿地演变过程。刘畅[2]等通过对 1980～2014 年 5 个时期影像资料的解译分析后认为，30 多年来，黑龙江省主要天然湿地面积萎缩了 34.4%，消失的天然湿地主要转变为耕地和城市建设用地；有关土地利用的相关政策对黑龙江省天然湿地面积变化也有一定影响。周连义[3]等的研究表明，近 30 年来，南京湿地在时间和空间上都发生了明显变化。其中，乡村内河流湿地变化最大；城乡交错带内湖泊、河流湿地数量变化频繁；城市内湖泊湿地面积变化较小。在空间格局变化方面，城市远郊乡村湿地正逐渐被替代为城乡交错带或城市内湿地，在新城区及交通线周围，湿地通常是受干扰的主要区域。沈哲[4]等通过对上海市湿地管理和保护面临多重问题的分析指出，伴随着快速城市化进程，我国城市湿地的消失和退化趋势难以遏制。根本原因为城市化发展对土地的强烈需求、湿地保护法律保障的缺失、湿地管理体系和基础数据体系的不健全以及市场与公众参与渠道不畅。要摆脱当前困境，必须推动国家层面完善湿地法律，从单一资源的管理体系向湿地综合管理机制转变，为市场力量、社会机制参与到湿地的管理和保护中创造必要的条件。

湿地，无论是作为一类地貌形态还是社会经济层面的一种土地类型，或是生态科学层面的一类生态系统，其作用都是多方面的。它不但具有维护湿地生物多样性的重要功能，同时还发挥调蓄地表水文、调节区域气候、保育周边环境和美化景观格局等多方面的特殊作用。对于城市系统，足够数量的湿地面积和形态多样的湿地类型以及合理的湿地空间格局是城市不可或缺的组成要素。尤其对以楼宇道路等硬化材料为主的城市下垫面来说，城市湿地在增加地表水下渗排泄、减少城市内涝和蓄存区域水资源等方面具有不可替代的功能。近二十年来，我国多数大中城市频繁出现的城市内涝并造成人民生命财产损失的巨大痛楚不能不说是城市湿地减少的直接恶果之一。

面对城市湿地的快速消失带来的诸多问题和弊端，无论从政府层面或是社会各界都给予了高度的关注、深层的反思和必要的应对。

2004 年 6 月，国务院办公厅下发的《关于加强湿地保护管理的通知》（国办发[2004]50 号）明确提出，我国湿地处于需要抢救性保护阶段，努力扩大湿地保护面积是当前湿地保护管理工作的首要任务。对不具备条件划建自然保护区的，也要因地制宜，采取建立湿地保护小区、各种类型湿地公园、湿地多用途管理区或划定野生动植物栖息地等多种形式加强保护管理。该《通知》的颁布，不仅对湿地保护所面临的严峻形势和挑战作了清晰的认识，更在湿地资源保护手段上突破了以自然保护区为主要形式的单一模式，推出了湿地资源分类管理的新路线图。同时，也在动员全社会力量广泛参与到湿地资源保护行动中来开辟了良好的局面。

2005 年 8 月，国家林业局印发的《关于做好湿地公园发展建设工作的通知（林护发[2005]118 号）》，首次就湿地公园的概念、湿地公园在湿地保护体系中的作用和地位、湿地公园建设的基本原则、湿地公园建设申报审批等管理方法做了全面阐释。因此而奠定了湿地公园依法依规管理的重要基础。

2012 年 4 月 11 日，江西省人民代表大会常务委员会颁布《江西省湿地保护条例》；2008 年 8 月 20 日，江西省林业厅颁布《江西省湿地公园管理办法》；2014 年 6 月 16 日，江西省林业厅印发修改后的《江西省湿地公园管理办法》。

二、湿地公园建设过程中存在的问题

随着湿地公园建设步伐的不断加大，这一新型湿地资源保护形式便不断迸发出强大活力，包括江西省在内的各省市自治区的湿地公园建设均呈现快速发展态势。各地湿地公园的申报立项的热情持续高涨，已建成的湿地公园在成效上也得到人民群众的认可和好评。

由于湿地公园建设是在几乎没有前期“模板”的前提上出现的新型保护形式，因此，无论从人才储备、理论支撑、技术积累、队伍建设和管理经验等多方面都表现出“摸着石头过河”探索阶段的诸多不成熟、不规范的不足，部分湿地公园的建设甚至出现失误、低效等弊端。从笔者参与的江西省湿地公园建设立项目和试点验收评审实践看，湿地公园建设存在的主要问题包括：

（一）重申报，轻建设

湿地公园这一新型湿地资源保护形式为我国的生态文明建设提供了一个良好平台。但由于湿地资源类型多样复杂、规划设计队伍专业水平受限等客观原因和指导思想、利益追求等主观原因的驱动，致使湿地公园建设多出现“重申报、轻建设”的问题。之所以“重申报”，或是能够通过“国家级”、“省级”等“高规格”项目的申报立项，为相关管理部门或个人任职业绩评价打出更多的“分值”；或是通过湿地公园的建设融入更多其它的市政建设内容；或是其他更多深层的利益关切。湿地公园建设初期，通过立项的“门槛”相对较低，一旦立项获批试点后，建设步伐却严重滞后，少数湿地公园经 3~5 年后仍无实质性建设内容的推进。进入

验收阶段时，验收材料和必要基础设施显示出明显的拼凑性、临时性，湿地公园保护的成效被严重削弱。

（二）重利用，轻保护

根据国家湿地公园管理办法和湿地公园总体规划编制导则等技术规范，湿地公园实施分区管理。一般湿地公园可划分湿地保育区、恢复重建区、合理利用区、宣教展示区和管理服务区等功能区。其中湿地保育区和恢复重建区是湿地公园的主体功能区。但实际规划和建设过程中，规划单位和建设单位普遍存在对合理利用区的“浓墨重彩”和对湿地保育区、恢复重建区的“轻描淡写”的不同关注度。在这种关注度差异的背后，合理利用区可以融入更多的旅游、休闲等内涵，许多穿越县城的河流湿地更多地被“打造”成河流两岸风光带或休闲娱乐广场，而真正体现湿地公园重要功能区的湿地保育区和恢复重建区却长期得不到应用重视。

（三）重改造，轻顺应

由于大多数湿地公园都是以市县城镇穿越河流和周边溪流为本底，在建设湿地公园过程中，湿地自然形态和水文特征以及湿地生物栖息地环境没有得到应用的保护，相反，不少涉及河流的湿地、岸线等则常常被刻意的、过度的人工化所干扰、破坏，裁弯取直、规整河床、硬化边岸、疏浚河道等非生态改造导致河流固有的蛇曲形态、深浅交替、水陆交错等特征消失，湿地生物栖息地遭致严重破坏。湿地公园建设的目的走向了其反面——湿地资源的破坏。

（四）重所辖、轻协调

除城市湿地公园属城建部门管理外，其它湿地公园主要归属林业部门管理。湿地公园规划和建设过程中，由林业部门规划和建设的湿地公园在涉及湿地其它功能的隶属关系上，与城建、水利、环境、国土、交通等涉水部门的沟通、协调存在一定不足，常常导致湿地公园建设范围与城市总体规划、水利防洪、道路桥梁等部门规划相冲突。一些湿地公园建成后不久就面临国家、地方重点工程穿越、占用、损毁湿地的评估论证，导致一些不必要的行政管理资源浪费。

（五）重自然、轻文化

与湿地自然保护区主要作用和功能不同的是，湿地公园在关注湿地资源保护和恢复的同时，还十分重视对湿地文化的挖掘、整理和创新。要通过“特色”和人文内涵向公众诠释湿地功能和传播湿地文化；在很大程度上，湿地变迁的历史就是人类社会文明发展的历史。湿地公园作为湿地资源保护的一种公益性平台，还应更多地融入“尊重自然、顺应自然、保护自然”的理念和人——水和谐的内涵。水畅则物通，水丰则物盛，人扰则水浊，水清则人兴。一些湿地公园的规划和建设中，对湿地文化或关注不够，或无从挖掘和创新，涉及湿地文化主题时，多与其他文化形式相混淆，不恰当地将地方饮食文化、戏曲文化、民居文化、商贾文化、红色文化、茶文化等牵强进湿地文化的范畴，致使湿地公园对公众进行湿地生态价值教育的功能被严重削弱。

（六）重套路、轻特色

由于编制单位和编制队伍相对集中，致使全省各地湿地公园总体规划的编制相对同一化、套路化。在湿地资源本底调查数据方面，不同区域、不同形态湿地公园的动植物资源名录呈现高度雷同；在恢复重建湿地生态方面，千篇一律且单一化的园林植物充斥备选植物名单，地带性湿地植物则难见踪影；在湿地形态布局方面，大多沿用城区河流——支流——水库模式，其目的大多是满足湿地保育区和恢复重建区的面积约束指标和湿地率指标。实际建设过程中，却以城区河流景观带为建设重点，真正能表现河湖形态、岸线和自然湿地景观的特色未得到充分关注。

2014 年 1 月 24 日，国家林业局办公室下发的《关于进一步加强国家湿地公园建设管理的通知》中指出，“始终把保护湿地生态系统和恢复湿地生态功能放在国家湿地公园建设管理工作的首位，正确处理好湿地保护和经济发展的关系，采取有力措施，切实纠正和杜绝重申报轻建设、重经营轻管理、重干预轻自然、重开发轻保护等现象”。并明确“国家湿地公园湿地率不低于30%，保育区和恢复区湿地面积应大于拟建国家湿地公园湿地总面积的 60%，合理利用区湿地面积应控制在湿地总面积的 20%以内”。由此可以看出，上述前三个问题在全国具有一定的普遍性。以此提出的数量化指标具有较强的针对性和约束性。

三、新时期湿地公园建设的要求与对策建议

从 2005 年我国建立的第一个国家湿地公园和江西省 2006 年获批第一个国家湿地公园（试点）至今已过去十多年的时间。面对上述存在的问题和新时期湿地公园建设的要求，应该在以下一些方面做好调整应对。

（一）坚持“人——水——湿地和谐”和可持续发展的理念。始终把保护湿地生态系统和恢复湿地生态功能放在国家湿地公园建设管理工作的首位。不宜将“以人为本”的原则滥用，尤其是面对自然资源保护和管理这一主体时，应始终坚持“尊重自然、顺应自然、保护自然”的原则。最大限度地保留原生湿地的形态特征、生态特征和自然风貌，维护湿地生态过程完整性。

（二）湿地公园总体规划的编制。应广泛收集相关资料，做好与国土、城建、水利、交通、环境等相关规划衔接，尤其是在国家和区域层面上将湿地公园建设范围纳入“生态红线”的背景下，应科学划定国家湿地公园范围，明确功能分区和建设布局，确保其科学性、前瞻性、严谨性和可操作性，避免随意性。

（三）规划编制坚持流域生态系统整体保护的原

则。与其它自然资源不同的是，湿地资源具有水系连通性、水陆交错性、生物多样性等特殊属性。湿地公园实行功能分区管理，但功能区之间是相互联系和相互影响的，要避免将湿地公园功能区在空间上分割。保障湿地公园范围内水系的连通性和上下游功能区的关联性。

（四）重视保护和恢复湿地的独特性，强调湿地资源的特色保护和多方式多形态利用，避免湿地公园在建设内容、风格形式等方面的同一性。通过“特色”打造精品。目前，江西省国家级和省级湿地公园已有一定数量，但回顾建设成果时可以看出，众多的湿地公园中还没有特别出众并具有鲜明特色和高品质的湿地公园样板。这一现象一方面说明江西省湿地公园建设的差距，另一方面也说明有广阔的提升空间。

（五）从维护湿地生态系统结构和功能的完整性及保护湿地生物多样性的基本要求出发进行合理利用。通过人工适度干预重塑近自然湿地景观，注重挖掘源于湿地的人文资源，在航运、水利、渔业、水产、稻作、垦殖、村落、景观、文化等方面揭示人类生活、生产对湿地的依存关系。通过传承、整理、融合和创新湿地文化，提高公众对湿地生态功能和意义的认识。

（六）深入认识湿地公园在新时代生态文明建设中的重要地位和面临的紧迫任务。2004 年，国务院办公厅下发的《关于加强湿地保护管理的通知》把当时的湿地保护阶段定义为“需要抢救性保护阶段”。十多年过去了，湿地资源的保护现状仍然不容乐观。2010 年国家林业局印发的《湿地公园管理办法》提出了“保护优先、科学修复、合理利用、持续发展”的原则。2017 年 12 月 27 日，国家林业局印发修改后的《国家湿地公园管理办法》中将湿地公园建设管理方针修改为“全面保护、科学修复、合理利用、持续发展”。虽然仅有字面上的小幅调整，但充分说明湿地资源仍然要在普遍性保护上继续做出艰苦努力。

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Practice and Function Promotion of Wetland Park Construction in the Process of Urbanization in Jiangxi Province

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Abstract: The main contents of wetland park including ecological protection, science education, natural wilderness, leisure tour, as well as the ecological function and typical characteristics of wetland. With the process of urbanization and the needs of ecological civilization construction, wetland park had become a unique park type of China. In addition, wetland park also played an indispensable role in the construction of urban ecological environment. This paper discussed the practice and function promotion of wetland park construction in the process of urbanization in Jiangxi province. The important value of wetland functional area in urban environmental construction was clearly defined. It was also pointed out that wetland park ecological conservation area played an extremely important role in the biodiversity conservation of urban wetland. Wetland ecosystem restoration and reconstruction area will play an increasingly important role in urban water quality protection and sewage treatment. The rational use of wetlands can contribute to the popularization of urban wetland knowledge and wetland landscape services to eco-tourism. Wetland park construction in Jiangxi province has been widely implemented since 2000.Till the end of 2017, the number of national wetland park approved by the State Forestry Bureau and the Provincial Wetland Office established in Jiangxi province were 33 and 58, respectively, which distributed in five rivers and many towns along their drainage basin. These construction achievements provide a good ecological platform for accelerating the process of urbanization and healthy development of the province and the local areas.

Key words: Jiangxi province; Urbanization process; Wetland Park; Construction practice; Function promotion

城市新区集体建设用地使用权流转机制研究

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摘 要：随着我国城镇化进程的加速发展，集体建设用地使用权流转已成为提高农村土地经济效益、促进城乡一体化发展的一条探索路径。然而，由于各地不同的文化特征及地理特点，一种统一、通用的集体建设用地使用权流转模式难以适用于全国不同地区。基于舟山市新区用地现状，本文对其集体建设用地使用权流转中适宜流转的土地、主客体的限定以及流转范围限制进行了分析，并通过比较现有的芜湖模式与南海模式，对舟山市的适宜模式进行探讨。同时，建议可以通过严格制定规划、遵循市场调节机制、合理分配流转利益与加强监督管理等措施，改善集体建设用地流转的管制。

关键词：城市新区；集体建设用地；使用权流转；机制

一、引言

如今，农村集体建设用地流转改革已经愈发重要。这是由于我国农村大量劳动力资源到城市中发展，少量剩余劳动力则主要以小孩和老人为主，导致农村土地闲置、低效利用问题严重，居民点布局“小乱散”的现象突出。而通过农村建设用地的流转，可以整合分散用地，进一步促进农村土地集约化规模经营，更有效地利用土地。其次，农村建设用地流转还可以促进形成城乡一体化建设用地市场，保护农民利益并解决土地流转利益分配矛盾。

在实际运用中，农村集体建设用地流转有着重要的现实意义。对于农民，可以维护农民的切身利益，提升农民的生活水平。由于可充分实现土地的经济价值，农民往往能以股利、分红等形式真正增加纯收入。在发达地区，流转收益成为村集体的重要收入来源，是解决农村公共福利的主要资金来源。并且由集体建设用地流转带来的二、三产业发展，还为农民提供了增加收入的机会，有力维护了农民的切身利益；对于政府则一定程度上解决了征地制度造成的权力滥用问题。政府征收集体土地作为一种行政行为具有强制性，被征收的集体土地的所有人和政府在地位上是不平等的。而农村集体建设用地的公开市场化交易可以保证土地供给的双轨制，从而达到集体组织与行政不法征收相抗衡的目的。

目前，我国已经在不同地区广泛开展了试点工作，为今后的大范围农村集体建设用地流转改革提供了可借鉴经验。并且我国相关法律与政策也为集体建设用地使用权流转提供了很大的支撑空间，且具备优化调整的潜力。但是仍存在一些诸如集体经济组织廉价抛售集体土地、企业私下低价购买转让土地等问题。因此，在国家尚无有关农村集体建设用地流转管理办法的情况下，对农村集体建设用地合法流转模式的研究十分必要。

二、文献回顾

我国《土地管理法》虽然承认农民集体拥有集体土地的所有权，但却没有赋予其完整的权益，集体建设用地不得直接进入市场，只能先征用为国有土地才可入市，这样就使得农村集体建设用地流转受到了严格的限制。但在现实中，随着经济的不断发展，多种所有制形式的经济实体不断壮大，农村工业化和城市化速度加快。在经济较为发达的地区，尤其在城市规划区内，土地资源已越来越重要。而为了更公平且更有效的利用农村土地资源，农村建设用地流转成为热点问题，我国政府也已选取了部分城市作为改革试点。此后对于农村建设用地流转的研究也越来越多。研究主要包括农村建设用地流转的意义、必要性[1-3]；农村建设用

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地流转的市场管理与满意度[4-5]等；并随着农村建设用地流转试点的不断建立与发展，学者对于建设用地流转的定价方法以及影响因素也进行研究，包括 NPV 法、博弈论分析法以及内容分析法[6-7]等。

关于农村建设用地流转的可行性，李文谦、董祚继从法律与社会公平角度分析，认为农村集体建设用地流转符合法律规定且可以增加社会公平[8]；刘昌用、卢颖则以重庆市为例论证了土地流转可以增加社会集体效益[9]；牛海鹏等则提出了“双轨制”与“三方制”的入市模式以增加农村建设用地流转入市的实际可行性[10]。而对于土地流转的驱动力也有许多学者进行了研究：陈利根、龙开胜从诱致性制度变迁理论分析了驱动土地流转进行的原因[11]；高艳梅等从社会福利损失以及潜在外部的利润的角度分析了流转的驱动力[12]；胡峰则将流转驱动力分为国家征收征用驱动、农村集体组织转用驱动和农户自发流转驱动[13]。

而建设用地流转仍存在许多问题：在管理方面，吴丹妮认为由于缺乏集体建设用地规范，土地流转行为无法实现有效管理[14]；在立法方面，王晓霞、蒋一军认为，对于“农民集体”的运行原则、构成要素、及产权代表和执行主体的权限地位我国仍缺乏明确规定[15]。

对于农村建设用地流转的宏观政策以及所存在问题，尽管目前我国学者针对不同试点的不同模式进行了研究[16-21]，但对于舟山试点建设用地流转模式仍缺乏研究。因此，本文根据舟山市的地理特点以及其文化习俗，对舟山市适宜的建设用地流转模式进行了探讨。

三、农村集体建设用地流转内涵及各地经验

（一）集体建设用地流转的含义

现如今，在法律上还没有对集体建设用地使用权流转的概念进行明确界定，学界对此也是众说纷纭。土地流转的划分有多种标准，但必须指出，不同类型的流转方式只是从理论上及不同角度出发进行的划分，并非截然对立的形态。土地功能的流转和土地权利的流转通常是一个土地流转行为从不同视角出发的描述。

作为土地流转的一个方面，集体建设用地使用权流转是由于经济社会的快速发展和农业现代化进程的推进，出现的一种以权利主体变动为特征的集体建设用地的利用方式，即集体建设用地使用权权利人将依法取得的集体建设用地使用权依照法定程序，在一定年限内通过出让、出租、联营、作价入股等方式进行流转的法律行为。

（二）集体建设用地流转的形式

我国相关的法律法规严格限制集体建设用地使用权的流转，现阶段我国集体建设用地使用权流转方式主要表现如下：

（1）抵押。抵押的方式可以分为两类：初次流转抵押、再次流转抵押。抵押是土地的拥有者将土地的使用权作为债务的担保，若债务人在债务到期时不能偿还债务，债权人将有权以债务人担保的土地的使用权用于债务偿还。

（2）转让。指已经取得集体建设用地使用权的个人或单位将土地的使用权以一种新的方式出让给新的使用者。它在本质上是土地所有权的再一次转移。主要包括继承、赠与等。

（3）出租。包括初次流转出租和再次流转出租两种。前者指的是土地拥有者将集体建设用地使用权按照一定期限出租给个人或单位，并从中获得相应的租金。后者指的是依法获得集体建设用地使用权的个人或单位将其使用权再次出租给个人或单位，并从中获得相应租金。当前，出租是流转集体建设用地使用权主要方式，主体主要是村集体组织、村办企业或是农民个人，包括场地出租、连厂房一体出租等。

（4）出让。表现为乡（镇）村等集体土地所有者在使用权上设定一定期限，让其他使用者在此期限内使用，并向其收取一定的出让金。本质上属于土地的初次流转。出让使得土地的使用权与所有权分离。土地使用者同时也拥有用益物权，它是有期限的，对土地能够占有、使用、部分处置和取得相应的收益。

（5）入股、联营。是指农村集体建设用地所有者或使用者依法以集体建设用地使用权入股或者作为投入、合作、联营的条件，与其他单位、个人共同兴办乡（镇）、村企业或者其他经济组织，集体获得分红收益的行为。

（6）置换。集体建设用地使用权置换是指对不同地块进行重新配置，置换的前提是这些土地都是经过批准的，可用于非农建设的土地。通过这种方式的置换，集体建设用地使用权会导致使用权人主体的变更。

（三）集体建设用地流转的各地模式

为规范集体建设用地流转，减少集体建设用地流转所带来的矛盾，我国在不同地区进行了集体建设用地流转的探索、实践，并取得了显著成效。在推动城乡一体化发展进程的同时，

有效维护了农民的利益，使农民共享了城市化发展的文明成果。各地试点的模式特点可总结为表 1 所示：

表 1 各地试点模式特点比较

试点名称	所在省份	流转改革目的	驱动方式	流转形式	收益分配规则	土地权属变更	工作内容	农村权益保障措施	政府与市场关系
湖州模式	浙江	解决乡镇企业土地资产处置	自上而下	随着企业改制方式不同而不同	对原承包农户的补偿、土地保护开发、基础设施和公益事业建设及社会保障	规划区内为转为国有，规划区外不变更	土地利用总体规划和乡（镇）、村建设规划以及土地利用年度计划	规定了流转适用的范围、《湖州市区农村集体建设用地使用管理试行办法》	政府与市场并重
芜湖模式	安徽	乡镇政府实施镇域规划、建设工业小区	自上而下	转让、租赁、作价入股、联营联建、抵押	土地流转收益：土地所有者与乡（镇）、县政府按5∶4∶1分配	所有权不变更	在规划所确定的规模内流转，实行计划管理、总量控制	《芜湖市农民集体所有建设用地使用权流转管理办法》	政府主导型
南海模式	广东	农村工业化对建设用地的需求	自下而上	将集体土地进行统一规划，以土地或厂房出租给企业使用	土地股份合作制；以土地或厂房出租给企业使用	所有权不变更	县、乡两级政府统一规划集体土地	《广东省集体建设用地使用权流转管理办法》	市场主导型
苏州模式	江苏	农村集体存量建设用地使用权流转	自下而上	有偿、有限期转让、出租	集体建设用地第一次流转缴纳土地流转收益；再次流转缴纳增值费	规划区内为转为国有，规划区外不变更	统一管理；土地利用总体规划、城市规划；地价管理；收益政府间分配	实行不同用途的最低保护价《关于开展城镇规划区内集体建设用地使用权流转试点的实施意见》	政府主导型
成都模式	四川	推进城乡一体化发展	自下而上	农村集体建设用地指标拍卖	政府公布集体建设用地使用权最低保价；收益归农村集体经济组织所有	产权制度改革，赋予农民完整的权能	统筹城乡综合配套改革；经县级政府审批后，国土局核发同意流转批准书	《成都市集体建设用地使用权流转管理办法(试行）》	政府主导型
昆山模式	江苏	列入富民计划增加农民收入	自上而下	农民自愿组成投资协会或股份合作社投标土地使用权投资建设厂房宿舍出租	农民可以得到 85%的收益，其余归政府管理费	所有权不变更	只指导,不指挥只服务,不介入		政府主导型

四、舟山市农村集体建设用地流转模式

（一）舟山市农村集体建设用地现状

1．集体建设用地宗地数、总面积及分布

舟山是浙江省辖地级市，由 1390 个岛屿组成，总面积 2.22 万平方公里，其中海域面积 2.08 万平方公里，陆域面积仅为 1440.12 平方公里。以不完全统计数据为例，舟山市农村集体建设用地（含宅基地）分布情况如表 2 所示：

表 2 舟山市农村集体建设用地分布情况调查表

地区	土地面积(含宅基地）（㎡）	批准面积（㎡）	建筑面积（㎡）	批准面积（㎡）	宗地数
岱西	563535		469900		4720
岱东	597008.363	555091.6			4185
秀山	508075.16			502275.5	3502
长途	595206.13				5347
定海双桥、岑港	725264.2	638040.9	566417.9	496406.2	6219
双桥街道	700091.9	66728.6	99405.58	51856.58	5810
菜园	184350.76	184350.8	414789.2	414789.2	1593
黄龙	35906.53	35906.53	80789.69	79533.69	139
嵊山	380328.036	380328	855738.1	853226.1	913
五龙	233196.4415	196676.5	524877.3	524902.1	1615
桃花	612094.1	506679.5	673303.5	557347.5	5036

虾峙渔农村	916657.9	654138.3	1008324	719552.1	7079
勾山管理处	418120.5	325153.5	604204.9	482891.8	4967
临城街道	240665.1	220629.1	213931.1	199317.1	1838

舟山市渔农村宅基地“一户多宅”、“用地超标”现象是农村土地利用效率低下的主要原因。因此，开展渔农村宅基地空间置换改革，引导农民集中居住，是促进土地集约利用、解决新区用地困难的重要突破口。

2．集体建设用地的实际用途

除宅基地以外，舟山市农村集体建设用地还包括公益性集体建设用地和经营性集体建设用地，其中，以公益性集体建设用地为主，约有 2000 余亩。根据不完整调查数据，以定海为例，目前集体建设用地的实际用途情况如表 3 所示：

表 3 定海区集体建设用地实际用途调查表

	土地面积（㎡）	建筑物面积（㎡）	宗地数
卫生所	40	40	1
村办公楼	4540	3680	8
公园绿地	94983	3819	20
办公楼	46676	32798	51
村企业	41490	32596	23
大礼堂	19600	9230	13
公园	146139	4911	37
老年活动中心	35258	26363	36
庙宇	160070	112250	51
企业	27770	21923	14
晒场	54612.18	5029	59
学校	73244	71924	24
医院	21972	19895	20
大会堂	259	259	1
总计	726653.18	344717	358

3．集体建设用地利用中存在的问题

（1）陆域面积狭小，可利用土地有限。舟山作为一个地级市，陆域面积约为 1440 平方公里，仅相当于内陆一个县的地域面积。受地形地貌限制，全市可供开发利用的岛屿只占岛屿总数的 31%。岛屿地面坡度大于 15 度的面积占土地总面积的 44.3%，大部分海岛土地为生态防护林，不宜开发利用。地面坡度小于 15 度的土地中，约有 15446 公顷的海涂是海洋生态系统和陆地生态系统的过渡带，是海岛生态保护的重点区域，协调土地开发利用与生态保护任务艰巨。

（2）建设用地布局无法满足新区的用地需求。一方面，现行土地利用总体规划（2006-2020）执行到 2012 年底，新增建设用地指标仅剩 1392 公顷，占规划新增建设用地指标的 18.4%，但由于其布局分散，不能适应各类基础设施建设，海洋产业的用地需求，仅靠新增用地指标，大部分项目无法落地。另一方面，存量建设用地利用效率低下。据调研了解，舟山市几乎没有可供利用的存量集体经营性建设用地，同时却有约 2000 亩集体公益性建设用地处于闲置或低效利用状态。此外，农村宅基地利用方式粗放，用地超标现象普遍。因此，优化整合存量与新增建设用地，是新区发展的迫切要求。

（3）异地公寓式集聚模式难以操作。首先，舟山市存在规划问题。全市缺乏统一的村庄布点规划，本岛也未能明确禁建区、控制区、保留区、集聚区等区域。其次，由于舟山渔农村共有基本农田 34.72 万亩，占全市耕地保有量的 90%以上，导致大片用于渔农村集聚的建设用地难以落实并且受土地区片价制约，渔农村普遍存在土地征用难的问题。在建设资金方面，因为异地公寓式集聚模式所有建设资金均由政府投入，且投入资金很大，而目前政府融资平台相对较少、资金筹措渠道相对狭窄，因此政府资金压力较大，难以承受。

（二）舟山市农村集体建设用地流转的关键问题分析

1．农村集体建设用地上市交易的前景

因为对农村土地用途实行管制和限制，以及国家对城市国有建设用地市场供应的垄断，农村的集体土地价值被极大地限制了。

第一，政府征收农民集体土地变为国有土地，是惟一实现农村的农业用地转变为城市的建设用地的法定方式，即惟一合法的农地非农化的途径。

第二，农村集体建设用地与城市建设用地，即使是相邻的两块地，作为同样用途的土地，但在市场价格和实际收益上，前者的价格会远远低于后者。第三，当前的农村在发展非农经济时，不仅面临着激烈的市场竞争，还面临着“第一桶金”的困境。

综上，当前农村的集体建设用地很大程度上是一种资源，仅有小部分在一定程度上是一种资产，基本不是一种资本。与城市建设用地相比，它本身的价值被紧紧束缚住了。

2．适合流转的农村集体建设用地的界定

舟山市的农村集体建设用地包括农民宅基地、集体公益性建设用地和集体经营性建设用地三类。其中，宅基地占绝大部分，可作为集体建设用地使用权流转的主要组成；集体公益性建设用地主要包括村小学、村办公楼、老年活动中心等公共设施，根据需要也可作为集体建设用地流转的对象；登记在册的集体经营性建设用地几乎不存在，不纳入考虑范围。

3．农村集体建设用地流转的主体界定

流转主体，是指农村集体建设用地流转过程中发生权利、义务关系的双方。根据流转可分为初次流转和再次流转，流转主体亦可分为初次流转主体和再次流转主体。

按照初次流转的定义，初次流转的主体应为农村集体土地所有者和意向使用农村集体建设用地使用权的单位和个人。但在现行法律法规框架下，集体土地所有者的界定并不明确。

再次流转主体，指集体建设用地使用权人和意向使用土地的单位、个人。如将初次流转中意向使用土地的单位和个人扩大到境内外所有经济组织和自然人，那么再次流转中意向使用土地的单位和个人应包括任何单位和个人。对再次流转主体中的农村集体建设用地使用权人的辨识，应警惕借放开集体建设用地流转市场为名义，将使用权人随意扩大化。

4．农村集体建设用地流转的客体界定

流转客体，是指流转双方权利义务所指向的标的物及其物权。与流转主体相似，可分为初次流转客体和再次流转客体。

初次流转客体，指集体土地所有者所有的现实的乡镇村办企业、宅基地等集体存量建设用地和已经依法批准的乡镇村办企业、宅基地等新增建设用地，及对其享有占有、使用、收益和处分的权利。

再次流转客体，指使用权人依法取得的乡镇村办企业、宅基地等集体存量建设用地，及对其占有、使用和收益的权利。同再次流转主体一样，再次流转客体也应以“允许集体建设用地流转”政策出台之日为时间节点，分为存量客体和新增客体。

5．农村集体建设用地的流转范围限制

在农村集体建设用地使用权出让范围上，无论是国家还是农村集体经济组织基于公共利益的需要，还是集体经济组织外企业、社会组织等基于开发建设、产业发展的目的，均可以纳入农村集体建设用地使用权出让范围之内。

（三）舟山市农村集体建设用地流转的适宜模式探讨

针对舟山市渔农村集体建设用地现状及其产业、经济发展状况和特点，建议舟山市农村集体建设用地流转可综合借鉴政府主导型的芜湖模式以及地方推动型的南海模式。具体可根据市内不同发展水平的乡镇（例如本岛和离岛之间），因地制宜选择适合自身特点的集体建设用地流转方式，避免搞“一刀切”。

1．芜湖“保权让利”模式

在舟山市产业发展条件一般、土地流转需要政府推动的乡镇，建议以参考安徽芜湖的“保权让利”的农村土地流转模式为主。

从产权的角度来看，芜湖模式突破了建设用地的流转以国家征收为前提的现状，农村集体建设用地可以在不改变集体所有权的前提下进行流转，所有权和使用权相分离，实行建设用地使用权有偿、有期限、有流动制度。

从政府和市场的角度来看，首先，政府为集体建设用地进入市场创造了条件，对集体建设用地初次流转和再次流转中的具体程序做了比较明确的规定。其次，芜湖模式由政府主导的，主要表现在：第一，芜湖模式是在政府规划所确定的范围内流转。第二，乡镇政府是集体建设用地流转中的组织者和交易主体。第三，政府土地交易价格进行严格的控制。

从利益分配角度来看，县、乡、集体经济组织按照 1∶4∶5 的比例进行利益分配，按地价对土地使用者或承包经营者进行补偿。但是在集体建设用地流转过程中，政府给予农民的补偿与征地补偿相当。

综上所述，芜湖模式是“保权让利”模式的典型代表，即在保持集体建设用地归集体所有前提下进行流转，突破了现行的法律法规。同时，芜湖模式对集体建设用地流转的具体程序的规定也为集体建设用地进入市场提供了条件。但是芜湖模式也有其不合理之处，即农民处于“无权利”的地位。

2．南海“土地股份制”模式

在舟山市产业发展条件较好、农民有较强土地流转意愿的乡镇，建议可参考广东南海的“土地股份制”的农村土地流转模式。

为解决集体建设用地缺乏的困境，南海区

政府探索出了一种新的模式，即农村土地出租开发模式，实现了农民、村集体、政府和开发商的共赢。南海的土地股份制最大的特点就是政府减少了对产权的干预并且使得集体建设用地流转的收入集中在了集体的内部，使得农民可以分享土地升值带来的利益。

从产权的角度来看，南海模式没有改变集体建设用地归集体所有的性质。并且地方政府减少了对产权的干预，一定程度上使得产权得到了更好的保障。

从政府和市场的关系来看，第一，政府正视了农村集体建设用地隐形市场的合理性，为其流转提供了合法的渠道。第二，政府承认了集体经济组织的土地产权收益主体和市场主体地位的合法性，摆正了政府定位，即监督管理。

南海模式对集体土地实行连片开发由于前期投入成本较低，深受当地政府和开发商的欢迎。同时，农村土地租用开发模式，由于给予了农民可靠的土地增值收益保证，也得到了农民的认可。此外，农村土地集约连片开发促进了土地的节约、集约利用，提高了农村土地的配置效率，也通过集体土地的连片开发改善了南海区的商业环境，吸引了更多的大型商业企业入驻，促进了南海区的产业升级转换以及经济发展，实现了就地城市化。

但是在制度实施的过程中也存在诸多的不完善。首先，过于庞大的集体经济实力给集体经济的运行和资金的有效管理带来一些隐患。其次，南海模式中土地是按规划进行流转，该政策只是解决了存量集体建设用地的流转问题，如果要增加建设用地，则要受到政府的年度指标和耕地占补平衡的限制。再者，本质未摆脱“集体所有制困境”。

3．芜湖模式和南海模式的比较分析

芜湖模式和南海模式存在许多不同之处，但是二者最大的不同集中在政府征地和建设城乡建设用地统一市场的利益权衡不同，表现出来即为两种模式中政府介入市场的程度不同。

（1）政府和市场的关系

芜湖模式中地方政府直接对农村土地产权进行干预，一方面政府为集体建设用地进入市场创造了条件，但更重要的一方面则是政府干预了市场不仅影响了市场的资源的优化配置，而且使得农民处于无权利状态，在利益分配中处于劣势地位。

（2）利益分配中农民的权益保障

政府对市场的干预直接影响了土地产权带来收益分配，改变了农民和集体经济组织对土地的财产权利关系。芜湖模式下农民和集体经济组织的土地产权被置换为接受征地补偿权，农民和集体经济织对农村集体土地非农收益的所有权由享有“权利”到“无权利”，农民处于被动的无权利状态。南海模式政府减少了对产权的干预并且利用股份制的形式使得集体建设用地流转的收入集中在了集体内部，使得农民可以分享土地升值带来的利益。

（四）小结

综上，舟山市农村集体建设用地的流转宜采取乡镇政府主导型的芜湖模式和经济发展驱动型的广东模式相结合的模式，汲取两者在试点工作中的有益经验，结合自身发展特点，逐步推行当地集体建设用地流转工作。例如，经济发展较好的区域可考虑借鉴广东南海模式，需要乡镇政府支持的区域可借鉴芜湖模式。

五、结论与建议

近年来，随着我国经济不断发展，各地区为发挥土地最大经济和社会效益，结合其地区的经济特点及地区文化，对农村集体建设用地流转形式进行了不同的尝试，如南海模式、苏州模式等。通过本文的上述分析，像舟山市，宜综合芜湖模式和广东模式以进行集体建设用地流转工作，实现建设用地有效利用，促进舟山经济发展。

但总体来看，在宏观方面，我国对农村集体建设用地流转的管制仍有值得改善的方面。其一，通过诸如确立集体建设用地使用权的物权地位、《集体建设用地使用权流转管理条例》等严格的规划、用途管制，可以替代我国目前对集体建设用地流转的限制，以更小的损失实现对耕地的保护和对土地市场的宏观调控。其二，应遵循运用市场调节机制对集体土地资源进行合理配置的原则，并合理分配流转利益，兼顾国家、集体和原建设用地使用者，以充分发挥集体建设土地资源的配置效率。其三，国家相关部门加强监督管理，保证市场的公平竞争和正常运行。总之，只有同时得到地区居民的支持以及国家的扶持，农村集体建设用地流转才能更好更快地发展。

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A Study on Right-of-Use Transfer Mechanism of Collective Construction Land in City New Districts

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Abstract: With the accelerating development of urbanization, the rural collective construction land use right transfer has become an exploring means to increase the efficiency of rural land using and promote urban and rural integration. Because of the divergent cultural characteristics and geographical features in different areas, however, a unified and common mode for rural collective construction land transfer cannot fit all areas in China. Based on the current situation of land in Zhoushan City's new urban district, this study analysed the suitable land, the definition of transfer subject and object and the range in its collective construction land transfer. In addition, by comparing the Wuhu mode and Nanhai mode, this paper discussed the appropriate mode for the rural collective construction land use right transfer. It also suggested that, by planning seriously, following the market regulation mechanism, reasonably allocating the benefits of transfer and strengthening the supervision, government could control collective construction land transfer better.

Key words: New urban district; collective construction land; right-to-use transfer; mechanism

“一带一路”背景下东南亚三国旅游业发展比较

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摘 要：“一带一路”倡议既是中国开放型经济自主创新的体现，也是经济全球化的产物，刺激着中国与世界各国的全面变革，也促进各国发展，尤其对泰国、新加坡、马来西亚等东南亚三国旅游业将产生深刻影响，当然也将给某些国家带来冲击。各方应科学分析“一带一路”倡议对己方的优势与弊端，从而秉承正确的态度。

关键词：一带一路；东南亚；旅游业；发展现状

一、引言

“一带一路”是中国开放型经济在全面深化改革背景下演变而成的崭新倡议，进一步提高中国的改革开放水平，促进经济全球化与世界多极化。然而，任何倡议都不是完美的，总会对各国产生或多或少的影响，它符合中国的国情需要，却未必适合所有国家的发展模式与水平，在中国巨大的投资引擎激励下，许多国家会攀上经济飞跃的高峰，也有许多国家自此面临外来的挑战。但不能因为“一带一路”包含风险就否定其正确性，推动落实这一倡议终将有利于打造政治互信、经济融合、文化包容的利益共同体。相关各国包括中国都必须抓住机遇，应对挑战。从旅游业这一产业的发展现状可以粗略观察到各国在此倡议下的经济与文化融合程度，而比较研究各国的旅游业发展现状势必须探明各国应采取的应对策略。“一带一路”倡议尽管提倡互利共赢的合作关系，提倡尊重理解的包容理念，但因发展差异而形成的不公平秩序始终存在，过分信任乃至崇拜不利于其在时代吁求中寻求创新点，也不利于把握经济发展动态和世界发展趋势。本文将介绍“一带一路”倡议，包括和中国、世界、东南亚和旅游业的关系，具体分析东南亚泰国、新加坡、马来西亚的旅游业发展现状，并比较三国的旅游产业发展策略，然后总结“一带一路”倡议对三国发展造成的影响，探寻此“一带一路”倡议下不同国家的有效应对措施。

二、“一带一路”倡议的背景

（一）“一带一路”倡议概述

“一带一路”倡议是改革开放谋篇布局的重要举措，是经济全球化大环境下的必然选择，是开放新时代的新道路。在 30 多年开放进程中，从经济特区到沿海开放城市，再到经济开放区和浦东新区的设立，进入新世纪后加入世贸组织，直到如今中国成为世界第二大经济体。中国的开放战略与时俱进，逐步深化，符合日益深化的全球格局。开放是中国崛起于世界民族之林的重要工具，并依赖于中国自身的优势条件而走向辉煌，然而中国的开放型建设试图打破欧美国家主导的国际经济秩序，也造成了许多国家对中国发展的不信任与仇视。美国则提出亚太再平衡战略，利用中国周边国家的疑虑来限制中国的发展，各种中国威胁论甚嚣尘上。所以，为了消除各国的不信任情绪，也为了缓和中国在南海方面的领土争端，中国迫切需要向世界证明中国式开放是和平友好、互利共赢和尊重包容的。

针对当前的发展桎梏，中国从历史中汲取智慧，从探索中创新道路。“一带一路”倡议既是对传统开放模式的传承，也是对新时期开放经济的创新，二者相互统一，旨在突破反华势力编织的桎梏，与周边国家重新建立友好合作的关系，从政治、经济、文化等各方面实现包容性发展。推进“一带一路”建设，中国将充分发挥国内各地区比较优势，实行更加积极主动的开放战略，加强东中西互动合作，全面提升开放型经济水平。[1]经济合作是核心，文化交流和政治互助是重要内容，呼吁亚洲人民共同打造政治互信、经济融合、文化包容的利益共同体、命运共同体和责任共同体。“一带一路”倡议的提出及贯彻落实，都在向亚洲和太平洋，向全世界传递着一个尊重理解的中国形象。

（二）“一带一路”倡议与中国的关系

发展，必须顺应时代的潮流，又必须引领时代的潮

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流。中国需努力构建以和平共处五项原则为基础的国际政治经济新秩序，但首先得为生存创造和平与发展的大环境。丝绸之路的千年盛衰史警惕国人闭关锁国的危害，而中国加入世贸组织的不协调则提醒国人在开放环境下冷静对待不可预计的风险。中国选择了一条独立自主、不断创新的发展道路，“一带一路”倡议也被涵盖其中，凸显出传统与现实的和谐统一。中国提出“一带一路”倡议，一方面是为了应对美国的亚太再平衡战略，另一方面是开放型经济建设的新举措，它合乎和平共处五项原则和中国国情，也符合历史和现实的需要，必会为中国的全球化进程积攒力量，开辟道路。

“一带一路”倡议的提出标志着中国的开放型经济登上新台阶，不再局限于经济特区、开放城市的设立，而是将开放成果融合凝聚，共同贯彻于海陆丝绸之路和丝绸之路经济开发地带。上海浦东特区的设立辐射长江三角洲地区和中国，而“一带一路”的设立辐射中国周边国家，尤其以东南亚国家为主。中国开放的深入折射出中国与世界的联系愈加紧密，全球化愈渐深入，这也意味着中国即将面临更大的挑战。推行这一倡议会对之前的开放战略具有一定否定，这种全方位扩大开放战略需要付出巨大代价，同时也会加剧各国对中国的怀疑态度，更无形中要求中国担负许多责任。经济上国内公司面临更大挑战，文化的各种入侵明显，政治上更容易遭受大国影响。中国并不是强国，“中国制造”的问题在一定程度上反映了促进和阻滞中国产业优化升级的重要因素是开放，世界需要中国的廉价且丰富的劳动力。开放是大国崛起的必行之路，而新倡议的提出则反映出亟待变革的开放环境。中国对内提出经济发展新常态，对外提出“一带一路”倡议，它们同为全面建成小康社会和现代化社会贡献力量，代表着中国越来越好的发展方向，但同样地，中国只有将其真正落实，并勇敢地承担和平与发展的责任，才能真正构建开放国策、外交战略、结构调整、促进增长目标之间的良性互动关系。[2]

（三）“一带一路”倡议与东南亚关系

“一带一路”倡议是中国提出的世界新秩序、新关系，而它是否正确必须经过人民与历史的检验。这对世界是一把刀，还是一件工具，值得深究。“一带一路”倡议本质上是为世界和平与发展服务的，但这毕竟是目标，需要在时间与努力中实现。当今世界遵循经济全球化、世界多极化、文化多元化等趋势，都折射出社会的进步方向，然而世界呈现出另一重要倾向——不公平。发达国家与发展中国家存在历史差距，并在全球化进程中进一步扩大，渐渐地全球分裂为南北与东西的争端，而国际关系由国家利益主导，因利益分配的不公平，有的国家贫穷，有的国家富裕，贫富差距逐步拉大，却很少有国家能够突破。当世界由不公平走向公平，由公平走向更公平，日渐联系紧密的全球化发挥关键作用，但也加剧了不公平秩序的形成。

国际纷争由多因素共同作用而成，但决定因素始终是利益问题。在世界无法实现真正意义的公平前，不合理的利益分配导致的冲突终将持续。就比如中国的领土争端问题，中国的日益强大和快速发展引起美国、日本和东南亚国家的不满与恐惧，也招致不少的纠纷与外交困局。打破旧秩序，建立新秩序，这种斗争具有一定作用，至少反映了弱国的利益诉求与平等愿景，但斗争表现出的不稳定性也带给世界极大的风险。事实证明，弱小的国家力图建立公平公正的国际秩序最有效的方法是加强合作团结，实现互利共赢。中国推行的“一带一路”倡议积极争取发展中国家的支持，当面对强大的敌人，只有团结在一起，才有可能取胜。这就是中国的外交思路，尊重彼此差距和斗争性，却更主张彼此的和谐统一性。

中国是比较特殊的发展中国家，能够承担巨大的国际责任，也能够创造巨大的世界价值，而它在发展中与世界逐步融合，成为整个世界不可错过的合作伙伴与生产力量。这种亲密的伙伴关系对发展中国家尤其重要，就算是与中国存在争端的东南亚诸国，也很清楚中国的外贸投资对其关键影响。这个世界很大，并且国与国之间存在巨大差距，“一带一路”倡议在世界各地的推行存在各自的实施难点与应对思路，东南亚诸国与中国存在既对立又统一的关系，而此倡议的推行是消除彼此的斗争，尊重彼此特色，进而在此基础上强化合作关系。

“一带一路”沿线国家国情复杂而多元，这些国家的发展水平差距较大，市场化程度渗透不齐。泰国、马来西亚等发展中国家发展水平较低，新加坡等发达国家发展水平较高。受产业结构和经济发展水平以及市场需求能力等因素的影响，这些国家在开放程度、合作的深度和执行的力度等方面常常有所保留。新加坡既看重中国的资金、技术和市场，也担心中国大量的廉价产品对本国市场和产业链造成的一定影响。[3]同样地，东南亚各国丰富多彩的民族文化和各自政体也会受到中国文化与政治影响，国家发展的重要力量——特色性有可能遭受冲击。

“一带一路”倡议可能与东南亚各国的对外策略有一定的利益契合，也可能存在一定的利益冲突，给东南亚各国带来正面或负面影响，带来机遇与挑战，尤其是中国的对外投资会直接对发展中国家的产业结构造成重大影响。在复杂的东南亚局势中，相互依靠与相互影响的开放战略是必然的，同时“一带一路”倡议秉持的思路应是求同存异，尊重特色，加强合作。

三、东南亚三国旅游业发展现状

（一）“一带一路”倡议与旅游业发展关系

一个国家对产业的规划安排由国情决定，同时也会

受到国际社会的影响。根据产业结构的安排布置和发展现状，可以直接反映国家特色。比如中国的劳动力资源在多不在精，所以中国以第二产业，如建筑业作为支柱性产业，显示出中国制造的缺陷。“一带一路”倡议提出的国内背景是全面建成小康社会、全面深化改革的现实需要，并由此提出经济发展新常态，由高速增长转向中高速增长，这标志着我国的产业发展逐渐向理性与多元方向靠拢。市场主导产业，经济水平决定发展方向，而中国则在其中横亘着政府引导与战略规划。“一带一路”倡议的持续推进要求加强对外合作，并建立互利共赢的合作关系，这意味着中国将扩大对外投资，积极走出去。此背景下廉价的中国制造不完全适应中国走出去的战略规划，新时期的走出去既是“一带一路”倡议要求的产业升级、技术革新和资金支持相统一，也是避免对发展中国家的产业链造成倾销与破坏。

伴随着中国对发展中国家基础性投资的扩大，各国纷纷对中国投资做出反应，其中影响了某些产业的发展方向。对中国而言，实现经济合作与文化交流相契合的重要产业是旅游业。当前，旅游业抢抓“一带一路”发展新机遇，这一战略以传统的丝绸、茶叶贸易为起点，在新时期充分把握市场动态，积极推进以旅游业为代表的第三产业的发展。同时，“一带一路”倡议的舆论营造使命，必须由旅游去完成，让地方政府、投资企业、当地居民和国内外游客达成“这事儿比较靠谱”的共识，并经由旅游意识向旅游行为的转化，主动参与到“一带一路”倡议当中。[4]中国各地充分把握“一带一路”赋予的产业发展机遇，并通过这一大众文化产业在“一带一路”建设中秉承张骞、郑和等古人的“丝路精神”，传统优秀文化的核心价值观，从而传承、保护与发扬中国优秀文化资源与精神意志。

中国为实现制造大国向创造大国的转变，积极争取产业结构的优化升级，大力发展旅游业是比较便捷的做法，而丰富的旅游、文化资源和丰厚的利润回报促使中国积极把握新的机遇，然而有时中国人将机遇把握演变成狂热投资，对于这种低投资高回报的产业发展不考虑风险，不估计危机，致使旅游业循着不合理的方向发展，并在市场经济下对传统文化的传承保护造成妨碍，损害文化与精神价值。“一带一路”倡议扩大对旅游业发展的影响，投资的扩大刺激着这一产业发展，带来许多机遇与挑战，中国人民和世界各国人民深入“一带一路”的建设中，都受到或多或少的影响，在这种附加条件下，有的人会迷失，有的人会清醒对待，所以迫切需要分得清“一带一路”的正反两面效应。

（二）泰国旅游业发展现状

东南亚诸国存在着既融合又孤立的群体——华人，而华人凭借自身的生意智慧攫取东南亚大量财富，利益不合理的分配致使这些国家对华人产生排斥心理，而反华势力充分利用当地人的怨恨来抵制中国和中国经济的影响。当前，中国于世界是庞大的投资沃土，在巨大的消费引擎面前，“搁置争议，共同开发”是东南亚诸国实现跨越式发展的必由之路。中国对泰国投资的最主要途径就是旅游业，并且旅游业在当地政府的大力扶持下，已成为泰国的支柱性产业，而这一产业中每年中国游客占据总人口的 46%。

泰国对旅游业的发展高度重视，可以说泰国的对外策略主要依靠旅游业来实施。泰国充分开辟城市旅游资源，不断开辟旅游线路，曼谷、芭提雅、清迈、芽庄、巴厘岛等地开辟新景点，并根据游客的需要提供各式各样的服务。与此同时，泰国基本围绕游客的需要进行市政建设，大力发展酒店业务，提供色情、按摩等许多服务。而泰国吸引中国投资的主要方式是吸引中国游客消费，大力发展推销业务，极力将该国的土特产，如乳胶、宝石、蛇药、燕窝等推荐给中国人。还有，泰国旅游业相当重视文化的传播与共鸣，尽力将人妖文化、象文化、寺庙文化展示给游客，并且为了向中国游客做更好的宣传，将部分民俗文化通过中国人民熟悉的形式来呈现。

泰国旅游业的健康持续发展在提高泰国人民生活水平的同时也为泰国人民提供了更多的就业机会。每年赴泰旅游的游客人数不断增加。目前中国已成为赴泰游客最大输出国。[5]很大程度上，泰国旅游业的战略转型和产业发展基本围绕中国人民的旅游需求进行，因此旅游产业的发展未与其他产业有效契合，甚至不适应泰国国情。泰国旅游业的发展与各产业发展的不协调性凸显出来，并由于军政府的大力支持与疯狂投资，致使第二产业基础相对薄弱的泰国无力支撑中国人民消费，以至于每年都需要从中国进口大量旅游产品。第三产业的健康发展需要第二产业的有力支撑，在每年旅游业外汇收入不断创新高的同时，对中国和中国游客的依赖愈渐加深，对中国的投资也逐渐扩大，而本国人民在利润与政策号召下忽视其他产业的发展。最终，泰国旅游业的发展采取低价促销的方式，以廉价的旅游产品招徕更多的游客，长此以往，终将不利于旅游业的特色发展和品牌路线的构建。

（三）新加坡旅游业发展现状

产业结构是否合理与国家实际情况挂钩。由于新加坡国情特殊，拥有的资源有限，因此，农业、工业等第一、第二产业的发展相对受限，所以，该国同样重视第三产业的发展，但就其旅游资源而言，仍远逊于泰国，所以该国以贸易和金融为关键产业，外贸是新加坡国民经济重要支柱，进出口的商品包括加工石油产品、化学品、消费品、机器零件及附件、数据处理机及零件、电信设备和药品等。与此同时，新加坡加强金融业的发展，外汇收入依赖于外贸。

旅游业在新加坡的地位颇高，但不是支柱性产业。

区别于泰国，新加坡旅游致力于打造高端品牌，服务质量较高，旅游环境相对优美，并打造圣淘沙环球影城等国际娱乐知名品牌招徕游客。同时，由于自由贸易港口的缘故，高档消费品价格便宜，从而吸引游客购买，但本土旅游资源有限，少有安排民俗体验活动。新加坡是发达国家的代表，其物价水平高于中国，中国游客在该国中消费略少，同时，该国旅游产品相对单一，缺少适时调整，不符合广大中国人民的旅游需求。

总体而言，新加坡的旅游投资基础环境的比较优势，加上新加坡在东盟国家中具有最为优越的地理位置、完善的市场和投资环境、社会开放、人民友善、风俗文化也和中国相近，完全可以成为中国旅游企业未来投资的主要国家之一。[6]新加坡产业结构合理，符合本国资源现状，各项配套设施完善，满足旅游业的健康持续发展。但是，其存在的旅游危机是发达国家与发展中国家的隔阂，其立法和执法严格，并附加多种观光政策，致使游客的旅游行为受到太多限制，并由于本身的经济水平超前，严重超过了中国游客的经济能力。所以，新加坡旅游业在多年来未实现较突出的增长。

（四）马来西亚旅游业发展现状

东南亚三国中，马来西亚拥有的自然资源最为丰富，但擅于将资源转换为价值的人较少，而华人在其中扮演的角色相对特殊，他们从事商业，扮演着中马友好交往的桥梁。地广人稀的马来西亚，民族融合程度迟缓于新加坡和泰国，再加上宗教问题，国际化进程缓慢推进，在对外开放战略上不及泰国和新加坡积极。就其产业结构而言，马来西亚依赖于农业，由于属于热带雨林气候，所以自然资源相当丰富，主要农产品包括橡胶、宝石、锡和石油，同时依赖于马六甲海峡国际港口，制造业发展速度较快。作为第三大经济支柱，第二大外汇收入来源的旅游业近年来发展速度较快，出于对自然环境的保护和避免对进口货物的依赖，政府正推动马来西亚的旅游业。

马来西亚的中国游客占据较大比例，与泰国相比，开辟的景点以伊斯兰教文化为主，包括国家清真寺、大教堂等，同时注重对中马友好文化的传播，例如郑和下西洋留存的历史遗址被开发出来。该国旅游业外汇收入同样地是吸引游客消费，当地导游向游客推荐本地具有特色的土特产，如乳胶床垫、东革阿里和宝石等。该国的旅游景点以国家历史景点为主，相对单一，而且个别景区环境较差，地标性建筑物以双塔摩天大楼为主，除云顶高原的云顶赌场外，全国近年来未开辟新景点和新的娱乐设施。马来西亚是中国重要的旅游客源市场，在中国入境旅游市场占有非常重要的地位，马来西亚的旅华客源市场持续稳步发展，但其客源结构以华人为主，穆斯林市场具有广阔的旅游空间。中国要重视对穆斯林游客市场的开发，深入开发中国的穆斯林旅游文化资源，开发设计符合马来西亚游客需要的旅游产品，深化马来西亚政府和穆斯林旅行商的合作，加强旅游宣传促销和旅游人才培养，促进马来西亚旅华市场的持续发展。[7]

四、东南亚三国旅游业发展现状比较

（一）东南亚三国旅游业发展现状比较分析

产业结构是否合理、产业发展是否健康、产业前景是否广阔，这些好坏优劣的差别从宏观方面折射出国家发展水平的高低，国与国之间存在着不可逾越的发展鸿沟，并在不公平的国际秩序刺激下进一步扩大，有的国家抗拒不公正秩序，以仇恨与斗争的形式破坏团结合作关系，最终引火上身，有的国家顺从不公正秩序，保持对发达国家的依赖与服从，最终慢慢失去国家特色，失去可以改变国际秩序的重要力量。影响产业发展的因素有无数种，而对较快发展的旅游业而言，经济投资是最主要的诱因。

泰国、新加坡、马来西亚三国旅游业的发展共同面临“一带一路”下中国走出去的战略刺激，在中国游客相当可观的消费投资面前，它们一致地大力发展旅游事业，开辟新景点和提供新服务，致力于打造具有本国特色的旅游品牌，同时也将本国的特色资源和特色文化传递给世界。在此基础上，东南亚各国成为中国游客出境旅游最大的目的地，不仅让中国游客亲身投入“一带一路”建设中，也让东南亚各国伴随着这一产业的发展走出国门，走向世界，成为一笔重要的外汇收入。显然，这三国旅游业的发展得益于中国巨大的消费引擎，许多旅游产品和服务倾向于中国游客的旅游需求，利用高品质酒店、健康餐食、特色旅游路线、完善的服务、文化体验等形式招徕游客，并凭借有效的推销手段向中国消费者兜售当地土特产和昂贵奢侈品。与此同时，中国廉价劳动力为其旅游产品的售卖注入新活力，解决了东南亚地区工业劳动力不足等问题，但中国产品的倾销也造成了当地产品质量的下降，过多的旅游人数也致使生态环境破坏、治安难度加大、非法牟利增加和有关产业发展滞后等，三国努力使旅游业发展符合国情，但有时直接损害了当地人民的利益。

旅游业是泰国的第一支柱性产业，于新加坡和马来西亚是第四产业和第三产业。对旅游业的重视程度不能作为发达国家与发展中国家的区分，但旅游业在国家产业结构的定位则恰恰突出了产业规划是否合理在强弱国家之间的区别。以旅游业作为国家支柱的泰国忽略了发展中国家工业发展水平较低的现状，当面对庞大的中国消费群体，不得不依赖于中国进口贸易，由此泰国与中国因旅游业产生较大的贸易逆差。新加坡与马来西亚产业结构相对合理，新加坡由于资源限制，以外贸和金融业作为支柱产业，马来西亚充分发掘当地热带雨林

资源，以农业和制造工业为支柱产业，符合国情状况，同时也不忽视旅游业的发展。

泰国旅游业的发展近年来呈现狂热状态，但总体上却走上低价竞争路线，新加坡旅游业配合自然贸易港的优势，不断提高品质，形成高端品牌路线，马来西亚的旅游业模仿着泰国旅游业，但由于自身宗教与民族问题，存在着较广阔的发展空间。同作为以服务为主的第三产业，各自在国家发展水平、旅游资源、产业规划、民族与宗教等因素影响下走出了不一样的道路，而在面对以中国游客为代表的外来游客，都显示出对中国或轻或重的依赖。泰国高度依赖中国的“一带一路”倡议，马来西亚其次，新加坡依赖性明显较弱，这种依赖性直接限制了特色旅游业的发展，也阻滞了其改革创新，更破坏了本国产业战略规划。新加坡与马来西亚的旅游业则凸显出一定的旅游市场壁垒，同样地也成为旅游业改革创新的难点、热点与焦点。由于政策、民族与宗教等问题，破坏着旅游业的市场秩序，也让旅游业的发展固步自封于本国需要，亟需深化旅游管理体制改革，清除旅游市场壁垒，强化旅游市场监管，从而提升旅游竞争力，最终打造国际一流旅游目的地。[8]

从上述方面来看，东南亚三国旅游业带有明显的对外性，尤其是对中国“一带一路”倡议的呼应，它们旅游业的发展或适应于国情，或依赖于国外，这是各国的选择，但很大程度上都受到中国消费投资的影响，它们之间的差异可以形成特色，同时也作为差距刺激着彼此探寻改革创新的发展模式。

（二）“一带一路”对东南亚三国旅游业的影响

“一带一路”倡议是中国新时期的对外战略，包括新时期中国旅游产业的发展也被涵盖其中。当此种对外倡议充分应用到世界各国，各国或对其做出积极回应，或对其做出抗拒表示，但此倡议总会或多或少地影响到各国的发展方向。“一带一路”倡议下尽管强调平等、互助、合作共赢、和平发展等理念，但具有中国特色的外交战略不适应所有国家的发展，中国与新加坡、泰国、马来西亚三国存在意识形态领域和物质生产方面的差异，更存在着强国与弱国的发展差距。此倡议倘若寻找到彼此的利益契合点，自然会发挥关键的积极作用，相反，倘若触碰到彼此的矛盾点，终将不利于双方的团结合作。

“一带一路”倡议下，中国游客积极走出去，亲身投入“一带一路”的建设当中，凭借着中国发展的奇迹，中国正作为整个世界和亚洲地区的消费引擎，扮演着龙头，辐射着世界和亚洲。中国人民手上拥有富余的财富，一方面刺激中国消费，扩大外商在中国的投资，这是引进来，另一方面增加对国外的基础投资，这是走出去。引进来和走出去相结合是对中国发展彻头彻尾的考验，这不仅需要中国自主创新，提高自身发展水平，也需要积极吸纳世界优秀管理经验，达到国内与国际的双重统一。东南亚三国正处在中国走出去的暴风眼中，外贸、投资、旅游等各产业需要中国的支持，外汇收入的增加需要依赖中国，从泰国旅游业发展现状来看，许多发展中国家存在与中国密切的利益关系，并且深深受到中国的影响，倘若否定和中国的合作关系，很快地，就会面临经济崩溃的危机。但从新加坡旅游业发展现状来看，发达国家同样存在利益关系，但未深受其影响，不存在严重的依赖关系，可以拒绝中国不合理的产品倾销。

这就是大国和小国之间的差距，泰国在“一带一路”等中国对外战略下积极发展旅游业，对其疯狂投资，新加坡、马来西亚不忽视第三产业的发展，更积极协调国家其他产业与“一带一路”倡议的衔接。东南亚旅游业的快速发展都验证了“一带一路”建设彰显的文化融合、政治稳定和互利共赢等目标，为东南亚和亚洲各国的和平与发展事业做出巨大贡献。另一方面，泰国和马来西亚两国的旅游业仍存在广阔的发展空间，在“一带一路”倡议影响下，泰国旅游业模仿性和依赖性比较严重，并从这一支柱性产业延伸至许多产业，从而让整体模式不重视特色发展。同时，马来西亚和新加坡对“一带一路”倡议响应相对迟缓，旅游市场壁垒效应明显，不利于对本国旅游产业的国际化发展。

旅游业相当特殊，最先也最明显地感知到“一带一路”倡议对其产生的影响，由于“一带一路”倡议涉及的国家众多，包括东南亚、东亚、东欧等，又由于各国国情和利益需求，即便“一带一路”倡议整体符合各国利益，也不可避免地会存在分歧。此外，中国对沿线国家出口的产品大部分属于劳动密集型产品，价格较低，极易受到进出口国的反倾销调查，贸易摩擦加剧。[9]对中国和东南亚各国而言，此倡议既是机遇，也是挑战，但人们往往被暂时性的丰厚利润而放弃健康长远的发展，将发展禁锢于短浅目光，渐渐地，这倡议会成为相互伤害的利刃。

五、一带一路战略下各国发展对策建议

（一）中国对外战略对策建议

1. 转变经济发展模式，把握经济发展新常态

中国的奇迹式发展令世界瞩目，然而中国国情特殊，从产业结构、消费模式等各方面反映出与发达国家的差距。中国凭借丰富的劳动力资源使其在某些生产方面不需要依赖外国，但中国制造反映出中国在技术、资金等方面的对外依赖，尤其是数码科技的进口明显，从泰国旅游业对外发展的依赖性可以看出，任何发展中国家必须在坚持国家特色的基础上实现自主创新，在坚持对外战略的基础上实现国内的经济发展模式转变，从而把握经济发展新常态。“中高速”、“结构调整优化”、

“创新驱动”是“新常态”的三个关键词，引领“新常态”，调动一切潜力和积极因素，按照现代国家治理的取向，对接“新常态”，打开新局面，打造升级版，真正提高增长质量。[10]把握经济发展新常态是对中国全面深化改革提出的新命题，从内到外地实现改革与开放的有机统一，也是“一带一路”倡议实施的重要基石。

2.加大对外直接投资力度，吸引外资促进技术进步

一带一路战略实施要求我们积极走出去，旅游业中国游客的消费投资应当继续扩大，同时对外贸易投资、基础设施投资也需要扩大，中国需要充分发挥本身的廉价劳动力优势，同时也要避免产生贸易摩擦和产品倾销。加大对外直接投资力度，尤其给予泰国等发展中国家投资优惠政策，建立友好的合作关系，实现互利共赢的目标。另一方面，中国需要吸引外资，吸收借鉴外国的先进管理经验，进一步增加对中国的新投资，在新投资的过程中实现中国制造向中国创造的转变。在此背景下的对外战略，既符合中国特色发展，也适应各国的利益诉求，通过普遍的合作形式实现双方的互利共赢。

（二）一带一路战略对外影响对策建议

1.把握战略机遇，应对风险挑战

许多发展中国家在丰厚的利润回报中积极响应“一带一路”倡议，并深深地依赖于中国的消费引擎，但事实上其同时带来机遇与挑战，这是所有国家在全球化进程中都将面临的危机。把握战略机遇，应对风险挑战，从国民的普遍认知开始，进而协助本国企业尽快树立危机意识，在激烈的全球化竞争打造品牌，并建立良好的企业形象。在对外战略中，机遇与挑战并存，这说明此战略并不完满，却能够激励各国人民在敢于冒险、敢于创新的氛围中创造新价值。

2.寻求利益契合，尊重利益差别

“一带一路”倡议在各国能够广泛推行的重要原因是其符合各国的整体利益。国家之间合作关系的建立依赖于双方的共同利益，寻求利益契合，有助于建立友好的合作关系，有助于支持双方的平等交往。而更关键的是尊重彼此的利益差别，这是对各国包括政治、经济、文化在内的各种特色的尊重，从而形成平等合作的关系。50 多年来中国外交以及国际关系的实践表明，“求同存异”就像早些时候中国、缅甸和印度领导人倡导的和平共处五项原则一样，是不同社会制度、不同发展水平、不同意识形态和历史、文化传统的国家竞争共处、实现世界和平的重要保障，[11]也是双方共同合作的前提。“一带一路”倡议是中国对外战略的升级，是中国特色社会主义的一部分，显示了中国漫长历史形成的和谐统一思想，即求同存异。

3.共建和平环境，同谋发展新路

“一带一路”倡议实施的背景是当前中国在太平洋地区面临的领土争端问题，这一切的根源是不公正秩序下利益分配不平衡，而反华势力借助这种不合理分配影响中国周边局势。“一带一路”倡议很大程度上是为了寻求发展中国家的支持，在第三世界国家的共同努力下，共建和平亚太，为第三世界国家的发展提供稳定的国际环境。“一带一路”倡议是全球化进程对世界各国提出的新命题，如何顺应和平与发展的时代潮流，并在同一片蓝天下谋求人类发展的新道路，建立以和平共处五项原则为基础的国际政治经济新秩序，成为中国人民和世界人民苦苦寻求的答案，而对这些答案的探索无疑照亮了新老大国前行的路。

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全域旅游视角下益阳旅游休闲基地建设研究

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摘　要：随着大众旅游时代的到来，全域旅游成为新时期的旅游发展战略。益阳生态旅游资源的地域分布和空间展布的组合较好，在全域旅游视角下，益阳发展竹生态旅游具有独特的优势。通过产业集群、文化引领和景观生态这三大战略，加快益阳竹生态旅游休闲基地建设。

关键词：全域旅游；生态旅游；休闲基地；竹产业；益阳

益阳生态旅游资源的地域分布和空间展布的组合较好，尤其是竹资源特别丰富。益阳发展竹生态旅游产业，打造竹生态旅游休闲基地在全省乃至在中部地区具有独特的资源优势。

一、对全域旅游发展观的认识

全域旅游体现的是一种现代整体发展观念，区域经济各方面的发展应服务于旅游发展大局，形成全域一体的旅游品牌形象[1]。全域旅游作为一种创新的旅游发展观，这种认识是旅游业发展的一次思想解放，这种发展观的最大价值体现在三个方面。

（一）发展思路上，全域旅游强调资源整合，共同迎接正在兴起的大众旅游时代

现代人的生活方式、旅游方式发生深刻变革，对旅游目的地的观察视角也发生变化，特别是以自驾游、散客、自助旅游为主要特征的现代旅游，对旅游目的地设施、服务、管理的要求提出更高层次的需求[2]。旅游管理部门如果局限于传统的职能定位和工作手段，很难全方位的推进旅游业的整体发展。全域旅游发展的理念既突破了旅游部门自身局限，又有利于把各方面的力量团结起来。通过资源整合，超越利益对立，共同迎接正在兴起的大众旅游时代。

（二）发展路径上，从景点开发模式转变为全域旅游模式，将旅游业引领到广阔的空间

随着我国旅游市场的发展，人们的旅游理念和旅行体验方式已经发生趋势性变化。旅行者不再只满足于去几个知名景点，更加注重深层次了解当地文化和特色[3]。因此，传统以抓点方式为特征的景点旅游发展模式已不能满足现代大旅游发展需要，必须从景点开发模式转变为全域旅游开放模式。全域旅游是对现有旅游产品供给格局的一次颠覆，将旅游业引领到一个更为广阔的发展空间。

（三）发展效果上，全域旅游促进区域经济协调发展，使旅游业综合带动作用最大化

全域旅游的发展理念，就是要推动旅游者将旅游的足迹深入到旅游目的地的各个角落，而不仅仅局限在少数几个旅游景区，这既丰富了游客的旅游感受，又可以让更多的供给方参与到旅游业发展中来[4]。全域旅游把一个区域整体当作旅游景区，是空间全景化的系统旅游，是跳出传统旅游谋划现代旅游、跳出小旅游谋划大旅游，是旅游发展理念、发展模式上的根本性变革，其结果必然是旅游业综合带动社会经济发展的作用达到最大化。

二、益阳竹生态旅游休闲基地发展优势

（一）生态环境良好，竹旅游资源在湖区独具特色

益阳区域内山水相依的自然环境、温和湿润的宜人气候、源远流长的历史文化及较为发达的现代经济，造就益阳类型多样、数量庞大、品质优良的旅游资源。益阳生态环境良好，其独特的湿地生态旅游具有不可替代性。此外，

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对比湖区其他区域，益阳境内竹旅游资源丰富，独具特色。益阳境内的桃江是国家级森林公园，境内竹林面积达 115 万亩，居全省第一、全国第三。依托竹资源优势，发展竹乡生态游，以桃花江竹海为模板，开发建成了高标准游步道、竹凉亭和观竹楼、竹博物馆，使之成为了中南地区最大的竹林生态景区。

（二）竹资源丰富，竹制品加工业发展初具规模

益阳是湖南省重点竹产区之一，是全国著名的“楠竹之乡”。竹林丰富，现有竹林面积 200 多万亩，每年采伐楠竹 70 万吨，益阳桃江县更是号称“83 万人，83 万亩竹”。目前，全市包括楠竹在内的竹加工企业近 1000 家，从业人员近 20 万，现有出口竹木企业 20 多个，出口量占全省出口总量的 40%。竹笋产业也得到很好的发展。仅益阳桃江已建成 100 亩以上的笋用林基地 54 个，发展竹笋加工企业 24 家、合作社 16 家，面积 2.5 万余亩，2016 年产春笋 2000 万斤，实现产值 6000 多万元。随着桃江竹木制品检测中心、桃江竹艺制品交易平台、产业承接转移平台等强势入驻湖南林业(桃江)现代竹产业科技园，益阳竹产业聚集了以桃花江实业、万维竹业为代表的竹加工企业，带动竹加工向精深发展。

（三）竹文化的历史内涵丰富，竹制品种种类繁多

益阳作为传统的竹乡，其竹文化和竹制艺术历史悠久，竹产品在全国有一定的影响力。先秦时，益阳及其附近洞庭湖区的竹文化已经达到较高水平。在元代，益阳的市面上出现做工精良的竹器具。到了清代，益阳的竹器在全国已经小有名气，竹器文化知名度大为提升，益阳的滨湖一带被称为“竹器城”[5]。根据民国《益阳县志》记载，清时益阳“工业之卓著者首推竹器”。竹制品品种种类繁多。据初步统计，益阳市现有竹编、竹郁、竹雕、竹饰等各类竹编工艺产品达 800 余种，主要包括家居装饰、建筑材料、日常用品、家具、工艺美术、文娱用品、外贸制品和包装等 7 大类，产品销往日本、新加坡、蒙古、俄罗斯和欧美等国家和地区[6]。益阳竹文化旅游资源内涵丰富，旅游价值高，具有巨大的旅游开发潜力。

（四）区位条件优越，长株潭一小时经济圈辐射区

益阳区位条件好，位居洞庭湖南岸、湘中北部，处于长沙至张家界的黄金旅游线上，处在北通长江，南达娄底，是洞庭湖生态经济区核心城市之一，辐射带动湖区中部的开发作用十分明显。交通便捷，洞庭湖生态经济区内 13 条交通要道建设有 9 条与益阳相连，加上石长复线等铁路电气化建设、未来城际轻轨和远景规划中的通用机场建设，水陆经洞庭湖内通湘资沅澧四水，外达长江各口岸。公路、铁路、水路交通网络比较完备，已成为湖南中北部地区重要的交通枢纽城市。紧邻省会长沙，距黄花国际机场近 1 小时车程。良好的区位条件，便捷的交通体系，紧靠长株潭经济发达区，拥有巨大客源市场。

三、益阳竹生态旅游休闲基地发展战略

（一）产业集群战略——产城一体化，以竹产业为生态旅游休闲基地建设提供载体

产业集群是提升旅游产业竞争力的重要来源。根据产业发展目标，策划一、二、三产业相结合的产业项目，促进益阳竹种植产业、竹编工艺品和竹制品加工产业以及竹制品相关的文化旅游和休闲旅游产业融合发展。

1. 加快竹种植基地建设，为竹产业发展提供充足优质的生产资源

益阳竹资源丰富，竹林遍布全市，随着竹产业旅游的发展，对竹资源的需求越来越大。在益阳竹生态旅游休闲基地建设过程中，第一产业与竹的结合主要体现在竹产业种植基地建设方面。当前，益阳竹产区主要分为三个区域。第一个是南部山地竹区，位于桃江县南部和安化县境内，是益阳竹资源最丰富、种植面积最大的地区。第二个是中部丘岗竹区，主要包括沅江、桃江、益阳等丘岗地带，是益阳市竹林资源的重要组成部分。第三个是东北部平原地区，包含南县全区、沅江和大通湖区，竹资源分布相对集中。结合益阳的地势、气候和水源等优势，应加大发展竹林种植基地建设，这不仅成为益阳竹产业的种竹产竹基地，为竹产业提供充足的原材料，还能提高植被覆盖率，美化人居环境和自然环境。

2. 通过竹编产业带动竹制品加工业发展，为竹生态旅游休闲基地建设提供产业支撑

益阳竹编创造性的将艺术性、观赏性和实用性融于一体，堪称传统手工艺、竹篾特质与文化艺术的完美结合。竹编制品在日常生活中

的普及推动益阳竹编工艺的发展，如小郁竹器这种以编制工艺为主，结合拼、嵌、插、挫等技法制作的小竹器，因其观赏性强，轻便适用而长期深受人们群众欢迎。益阳竹编工艺在中国数千年竹编工艺的历史长河中，留下了浓墨重彩的一笔，素有“竹都”的美誉[5]。竹编产业的发展带动竹制品加工业快速发展起来。近年来，竹编工艺企业通过迅猛发展已经成为益阳农村经济发展的排头兵，全市拥有竹加工生产、经营单位和私营业主数万家，并出现了年产值一个亿以上的竹编制品精深加工企业。通过竹编产业带动竹制品加工业向精深加工方面发展，把竹产业作为富民强市的重要工作来抓，形成园区化布局、专业化生产、龙头企业引领的格局，为竹生态旅游休闲基地提供强大的产业支撑。

3. 发展竹家乐、度假村，推进竹生态旅游服务业向深度、多元化方向发展

合理利用益阳竹乡的绿色生态环境以及幽静的竹农生活，开发出对广大游客具有独特吸引力的集生态、休闲、康乐为一体的竹家乐旅游产品，打造具有浓郁益阳文化特色的生活环境。让游客在竹家乐可以体验到集吃、住、行、游、购、娱为一体的竹家乐文化，让游客在竹家乐能够充分深入到竹农的生活，参与到竹产业的种植、生产、加工与制作全过程，推进休闲旅游服务业向深度发展。合理利用竹这一天然绿色植物，让游客在度假村中能够体验与其他度假村不同的乐趣，在竹林中与大自然亲密接触，呼吸绿色新鲜空气，品尝绿色竹制食品。并在此基础上，有效利用竹生态、环保、绿色的特性，完善基础配套设施，建立利于传统康健运动的场所，如森林浴、空气浴、日光浴等。通过度假村的建设，满足游客生态休闲旅游多元化的需要。

（二）文化引领战略——文城一体化，以竹文化彰显竹生态旅游休闲基地建设灵魂

文化是旅游业发展的灵魂，旅游一旦没有文化内涵就如同一潭死水，没有生命力[6]。益阳竹生态旅游休闲基地建设中要加大竹文化的研究力度，挖掘竹的文化内涵，打造以竹为核心的文化品牌，推动竹产业旅游品牌形象的形成。

1. 加大对竹文化的研究力度，重新认识民间竹文化的价值

益阳人喜竹、赏竹、观竹、听竹、吟竹、颂竹、食竹、用竹，竹与益阳人们的生活息息相关、密不可分。“宁可食无肉，不可居无竹”成为一种崇尚坚忍不拔、劲节虚心的文化精神追求。器物景观的竹文化以及作为象征符号的竹文化具有深厚的益阳地域文化内涵，在社会的发展过程中显示出了顽强的生命了和生生不息的活力[7]。民间竹文化是发展益阳竹生态旅游经济的基础性资源和特色资源。因此，需要从广度上挖掘竹文化，从深度上挖掘竹文化的历史渊源，引导传统竹文化走向现代化。

2. 充分挖掘竹的艺术文化价值，注重竹产业与竹文化的渗透融合

一是加大有关竹的信仰、习俗等民间竹文化与竹产业融合。竹子的种植、加工、销售、消费等各个环节，皆蕴含着浓郁的民间竹文化。结合有关竹的信仰、习俗等民间竹文化的研究开发，会有更多的游人游子、新婚夫妇、金婚老人、青少年栽竹留念。二是将益阳地域特色的民俗文化融入竹编艺术中。竹制品的文化艺术化更是满足了人们从实用到精神的消费需求。借鉴日本竹编产品发展战略，挖掘益阳竹的文化艺术价值，有意识的赋予竹艺品丰富而深刻的益阳文化内涵。如设计出传播益阳地方花鼓戏的竹工艺品或者象征黑茶文化的竹工艺品。具有益阳传统特色文化的竹工艺品既能带给消费者全新感受，又能借助竹艺术推广益阳传统文化。

3. 加强竹文化的交流，提高益阳竹文化的影响力

一是成立竹艺行业协会，加大竹文化艺术交流力度。组织各种与竹艺相关的文化活动如竹艺术品博览会、竹摄影、美术、书法、墨竹画作品展览等，通过各种艺术形式展示竹艺的魅力。加大艺术家与民间群众的交流力度，使更多的人了解竹艺文化。二是举办形式多样的交流活动，提高竹文化的影响力。上个世纪 90 年代，益阳连续举办 4 届国际竹文化节。但是，对竹文化尤其是民间竹文化的认识仍停留在“文化搭台，经贸唱戏”的“搭台”配角地位。若再次举办竹文化节，不一定非要冠以“国际”字样。可以依托地方院校举办的竹文化研究型学术会议或竹艺文艺汇演或竹文化主题旅游或竹编、竹雕、竹饰等竹制工艺品的经贸交流洽谈。这些活动能够提升益阳对外交流中“竹都”、“楠竹之乡”的美誉度，增加益阳竹生态旅游休闲基地的人气。

（三）景观生态战略——景城一体化，以

城市竹景观体现生态旅游休闲基地格局

1. 以桃花江国家森林公园为基础，打造竹生态旅游圈

结合地形、环境特征、周边游览人群，益阳竹产业旅游应该着力打造以竹为主要吸引物的竹类森林公园。尽量保持园区内的自然特性，因地制宜，合理布局竹景观。如观景亭应该建立在地势较高处，林间小径应通往竹林深处，游步道用竹景观加以点缀。这样可以让游客更深刻的体验到竹林的雄壮和清幽，突出文化意境。结合已有的屈子祠、吟竹亭、民俗村、水上乐园、观竹楼、金盆庵以及东林祠的旅游景点，利用周边原始的生态环境，打造精致的竹生态旅游圈。

2. 建设竹海绿色长廊，营造竹海强有力的视觉冲击

按照竹产业发展规划内容，制定相应的措施，改造低产林、低产农田、荒废田地，扩展竹林景观，营造益阳竹海强有力的视觉冲击。一是加强竹乡基础建设，实现竹林持续发展。以桃江、安化两个竹产区为重点，实施 300 公里竹林乡道建设，逐步形成一个布局科学化、功能多样化、效益最大化的竹乡林道网络。二是打造竹海绿色长廊，营造绿色视觉冲击。益阳竹海绿色长廊建设以桃花江国家森林公园为基础，以桃江洪山竹海为核心，保留原有边生态绿道原有竹林的基础上，改造非竹林地，修整原有竹林景观，精心培育新增竹林景观，建设竹海绿色长廊，让旅游者一进入益阳桃江境内就可以感受到益阳竹海的壮丽景象，进而引起旅游者对益阳竹生态旅游的无尽遐想。

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Research on the Construction of Yiyang Tourism and Leisure Base from the Perspective of Tourism

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Abstract: With the advent of the mass tourism era, global tourism has become a tourism development strategy in the new period. Yiyang ecological tourism resources, geographical distribution and spatial distribution of the combination is better, in the global tourism perspective, Yiyang development of bamboo ecological tourism has a unique advantage. Through the industrial clusters, cultural leadership and landscape ecology of these three strategies to speed up Yiyang bamboo eco-tourism and leisure base construction.

Key words: global tourism; ecotourism; leisure base; bamboo industry; Yiyang