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ABSTRACT

This paper studied the impacts of urbanization regarding the performance of hotel in Guangdong through the study of panel data from 1994 to 2014. Urbanization was measured by economic, geographical landscape, population and social cultural dimensions. This research suggested that urbanization generally improves hotel performance, but with different effects. Therefore, stakeholders, such as hospitality managers, could provide corresponding governance strategies according to the characteristics of the city and province in China.

Keywords: Hotel performance; Occupancy rate; Urbanization; Guangdong; China

I. BACKGROUND

China has experienced very fast urbanization development since the 1990s (Li & Yao, 2009). According to National Bureau of Statistics of China (NBSC) (2016), in China, the cities in China have increased more than four times since 1978. Urbanization rate increased more than three times during the same period. Guangdong Province was an important economic center in China. Guangdong not only produced the highest Gross Domestic Product (GDP) in China, but also expected to see its GDP exceed 8 trillion RMB, There were over twenty cities and more than one thousand towns (Statistical Bureau of Guangdong (SBG), 2017). Guangdong was composed of four regions, Pearl River Delta (PRD), Eastern Region, Western Region and Mountainous Region. The PRD region was the leading powerhouse of economic reform, economic development and urbanization in not only Guangdong, but also China (Weng, 1998; Wong, & Shen, 2002). This study used Guangdong province to represent China. The open door policy was initially implemented in Guangdong. The unexpected growth of oversea tourists in Guangdong brought unprecedent opportunities to Guangdong hotel industry and created a huge demand on the lodging industry. Guangdong was one of the most popular destinations for international tourists (Zhang, Luo, Qu, & Guillet, 2013). Guangdong contained five major airports, an efficient network of railways and highways that connects tourists to many of China's main tourist destinations. Therefore, this study used Guangdong to act as a representative sample to investigate the hotel performance in China.

Ever since the open door policy, the growth of hotel in Guangdong has raised by the increasing amount of tourists. Guangdong was the top destination in China among oversea tourists (SBG, 2017). There were over thirty-four million visitors visited Guangdong in 2016.

Over twenty percent of the visitors were oversea tourists and the remaining were domestic tourists (CNTA, 2016). Within the hotel sector, Guangdong contained 16,693 hotels, including 983,102 hotel rooms and 58.8 percent of room occupancy rate (see Figure1).

(Insert Figure 1 here)

Between the 19th and 20th centuries, urbanization was a notable social appearance. Economically, Bradshaw and Fraser (1989) argued that modernization and industrialization would increase the proportion of urban population and hence increase the labor force in urban regions. Ciccone and Hall (1996) and Becker (2007) argued that the increase in urban population and labor forces created economics of scales on both the producers and customers. Urbanization hence contributed to create a tourism center (Kastarlak, 1971). Shen (2000) claimed that close to ten percent of the population in urban used hotels to accommodate temporarily. The increase of urbanization in China would hence increase the demand for hotel accommodation, regardless business travelers or leisure travelers. Zhang et al. (2013) discussed that urbanization would be the reference tool on hotel investment. According to Charles and Anderson (2016), urbanization was not only a good indicator to the size of market, but also the type of marketing strategies firms need to adopt. Urbanization was a crucial phenomenon internationally during the last two centuries. However, this issue did not appear in hospitality literature frequently. Urbanization would bring certain benefits to the society, but at the same time, it would bring social and political problems. The goal was benefit and cost control (Spence, Annez, & Buckley, 2009). Some Chinese scholars made some systematic studies in this area, however, many questions were unresolved (Qiu, 2007). The research question is how the macroeconomic factors influences on hotel operation. Particulary, this study tried to examines the link between urbanization and hotel performance.

There were three objectives of this study. The first objective was to investigate the relationship between urbanization and hotel performance. The second objective was to evaluate the factors in urbanization and how they affect hotel performance. The third objective was to provide suggestions and recommendations to hotel management.

II. LITERATURE REVIEW

Hotel Performance

Child (1972) defined organization performance as the actual output or results of an organization as measured against its intended outputs. Organizational performance could be further divided into several areas of outcome measurements. The first was financial performance, which included revenue, and return on assets and investment. The second was the product market performance, which included sales and market share. The last was returned to shareholders, which included the total return of a share and the value added (Richard, Devinney, Yip & Johnson, 2009). Performance measurement was important and necessary for hotel general managers (Phillips, 1999). Financial results simply reflected the performance of underlying operations (Chin, Barney & O'Sullivan, 1995). Key Performance Indicators (KPIs) or ratios were based on the key drivers or the business and reflected the performance and the progress of the business. Particularly within the hospitality and tourism industry, managers tended to use KPIs to measure performance (Ireland, 2014). The most common indicators were Occupancy rate, Average Daily Rate and Room Revenue per room (Damonte, Romp & Bahl, 1997; Enz, Canina & Walsh, 2001). Occupancy rate

measured the efficiency of room sold. This rate was the ratio between room night being sold and the room night available for sale (American Hotel and Motel Association, 1996).

This study employed occupancy rate as an indicator to measure hotel performance. The occupancy rate was a crucial indicator to measure hotel performance. Positive links between occupancy rate and hotel revenue was established by various researchers (Norkett, 1985; Barden, 1998; Jeffery & Barden, 2000). Furthermore, it was also a common management objective, regardless explicitly or implicitly, for many hotels (Barden, 1998). Jeffery and Barden (2000) also stressed the importance of such measures allowed hotel managers to compare occupancy rate with other hotels and hence to monitor hotel performance on a reliable and regular basis.

Urbanization and Hotel Performance

External environment and entrepreneurial process were inseparable (Fogel, 2001). External environments could provide a threat to business. Several researchers demonstrated the lack of competition, the lack of management practice, lack of resources, government regulations, economic policies and the recession of the economy would impose a threat to business (Garcia & Velasco, 2002; Christie & Crompton, 2001; Buick, 2003). There was a clear relationship between urbanization and economic growth (Landes, 1969; Williamson, 1987; Kasarda & Crenshaw, 1991; Burgess & Venables, 2004). However, the discussion of urbanization was absent from economic analysis of growth and development.

Since the hospitality industry was part of the service industry, hotel performance was also affected by the urbanization. Urbanization was one of the key factors to China's structural changes in terms of economic composition and employment (Huang & Bouis, 1996). Recently, many researchers use the four connotations, population, economy, social cultural, and geographical landscape, to measure urbanization (Fang & Yao, 2006; Chen, Lu, & Zha, 2010; Zhanget al., 2013; Luo & Lam, 2016). Luo and Lam (2016) studied the relationship between urbanization and hotel development. They examined the critical factors of urbanization on hotel development in China via qualitative semi-structured interviews. Population, economic, geographical landscape and social cultural dimensions was identified as major connotations of urbanization impact on hotel development. Luo, Qiu, Goh, & Wang (2016a) and Luo, Qiu, & Lam (2016b) showed that urbanization has a significant relationship with tourism development in Guangdong. Furthermore, both studies showed that the impact was uneven across regions and segments of tourism and specifically, there was a significant relationship between domestic tourism development and urbanization but an insignificant relationship between foreign tourism development and urbanization. Within hotel sector, urbanization showed different effects on hotel development in China (Zhang et al., 2013).

Variables and Empirical Measurement

This study investigated the relationship between urbanization and hotel performance in China. Hotel performance was measured by the hotel occupancy rate. Based on China's urbanization characteristics, the theoretical research of urbanization, the features of the Guangdong province and available secondary data, urbanization could be operationalized by following four dimensions. In this study, urbanization was measured by geographical landscape,

economic, population, and social cultural dimensions, these determinants are used to measure the level of urbanization in China (Fang & Yao, 2006; Chen, Lu, & Zha, 2010; Zhang et al, 2013; Luo 2016; Luo & Lam, 2016; Luo et al., 2016a, b).

Economic dimension was measured by the Share of service industry in GDP (SSGDP), and GDP per capita (GDPpc) (Ehrlich & Holdren, 1971; Bradshaw & Fraser, 1989; Liu, 2004; Fang & Yao, 2006; Xu & Watada, 2008; Chen et al., 2010; Luo & Lam 2016; Luo et al, 2016a, b). Generally speaking, GDP per capita was regarded as the average income from a macroeconomic perspective. Economists normally started cross-national comparisons of urbanization with local and per capita income or its closely related variable, gross domestic product (GDP). A positive relationship between urbanization and income was observed, i.e., the higher the urbanization rate, the higher the income. To achieve a high and sustainable growth, manufacturing and services industry were the leading force. The productivity increase in the agricultural sectors increased the labor force available to the manufacturing industry in the urban area (Spence et al., 2009). Since the main purpose of this study was to relate urbanization and tourism activities, which was part of the service industry, the Share of service industry in GDP was chosen because this variable represented the relative importance of the service sector in the cities or provinces (Luo et al, 2016b).

Population dimension was measured by Non-agricultural population proportion (NAPP) (Liu, 2004; Fang & Yao, 2006; Chen et al., 2010; Zhang et al., 2013; Luo et al, 2016a). According to the United Nation (2010), urbanization was measured by the population density of the urban areas. Non-agricultural population was selected as a measurement of urban population because most of the agricultural workers lived in rural areas (Zhang et al., 2013; Luo, 2016; Luo & Lam,

2016; Luo et al., 2016a, b).

Social cultural dimension was measured by number of Hospital beds (NHB) (Liu, 2004; Fang & Yao, 2006; Chen et al., 2010; Zhang et al., 2013; Luo, 2016; Luo et al. 2016a, b). The variable is a proxy of the social welfare structure of the lifestyle in the cities. Annemans, Van Audenhove, Vermolen, & Heylighen (2011) confirmed the hospital bed is a social dimension and it is used to study the relationship between hospital bed and the hospital building. Health was the basic objective of development. Moreover, health was a prerequisite for the increase in productivity and was seen as vital components of growth and development (Todaro & Smith, 2012). As population increased, the number of people who demand for health care would increase and hence increased the demand for hospital beds.

Geographical landscape was measured by the Area of garden and green (AGG) (Liu, 2004; Fang & Yao, 2006; Chen et al., 2010; Luo & Lam, 2016; Luo et al., 2016a, b). According to China City Statistical Yearbook (DUSS) (2015) the Area of garden and green is the vertical projection area in the city for vegetation or planted. Theoretically, land mosaic was a result of planning and an effective spatial arrangement (Forman, 2008). Feagan, & Ripmeester (2001) confirmed green space is the geographic identities at the level of the lawn. As the city develops, when the urbanization rate increases, the demand for land for industrialization would increase. Hence, the area of garden and green would decrease (Forman, 2008). Therefore, this variable reflectd the impact of urbanization.

III. RESEARCH METHOD

This study employed a quantitative method. Statistical analysis was used to test the relationship between hotel performance and urbanization. In the regression analysis, dependent variable which is hotel performance was measured by the hotel occupancy rate. According to the literature review, urbanization was measured by social cultural, economic, population, and geographical landscape dimensions as independent variables. Secondary data were collected on an annual basis from 1994 to 2014 in Guangdong. These data were generated from (1) China Statistical Yearbook (NBSC, 1995-2015), (2) China City Statistical Yearbook (DUSS, 1995-2015), (3) The Yearbook of China Tourism Statistics (CNTA,1995-2015), and (4) Guangdong Statistical Yearbook (SBG, 1995-2015). The proposed model of this study was as below:

1. $HOR_{i,t} = \alpha_0 + \beta_1 GDPpc_{i,t} + \beta_2 SSGDP_{i,t} + \beta_3 NAPP_{i,t} + \beta_4 NHB_{i,t} + \beta_6 AGG_{i,t} + \varepsilon_{i,t}$

Dependent variables:

$HOR_{i,t}$ = Hotel occupancy rate in the i^{th} city at time t, ln transformed.

Independent variables:

$GDPpc_{i,t}$ = GDP per capita of the i^{th} city at time t, measured in ln transformed RMB.

$SSGDP_{i,t}$ = Share of service industry in GDP in the i^{th} city at time t, measured in ln transformed.

$NAPP_{i,t}$ = Non-agricultural population proportion in the i^{th} city at time t, measured in ln transformed.

$NHB_{i,t}$ = Number of hospital beds in the i^{th} city at time t, measured in ln transformed unit.

$AGG_{i,t}$ = Area of garden and green in the ith city at time t, measured in ln transformed ha.

Error term:

$\varepsilon_{i,t}$ = '$\varepsilon_{i,t}$' is a residual term when city 'i' and year 't'.

This study used descriptive statistics and regression analysis to investigate the relationship between hotel performance and urbanization. This study appointed four different estimation methods: pooled Ordinary Least Square (OLS), Feasible Generalized Least Squares (FGLS), Random effect and Fixed effect regression to study urbanization effects. The panel data analysis method was used to test the relationship between urbanization and hotel performance. Cross-sectional data could explain the relative urbanization level within the year. Time series data could explain the evolution of hotel development throughout the years. Panel data methods were now popularly adopted by urbanization researchers and were considered to be the most appropriate approach for the present research. The advantages of panel data include: 1) the ability to resolve the heterogeneity problem in the micro basis; 2) increase variability and hence reduces the multicollinearity problem; 3) the ability to study the dynamic adjustment more precisely (Kennedy, 2003).

IV. RESULTS

Descriptive Statistics Results

The descriptive statistics of the variables used in this study were listed in Table 1. Since there are twenty-one cities in Guangdong and this study covered 20 years of observation, there were 441 observations collected. The average occupancy rate (HOR) throughout the years was around 56 percent, while the average share of service industry was around 37 percent. The average of GDP per capita (GDPpc) was 24,389 RMB. The same estimate for Non-agricultural population (NAPP) was around 41 percent. The average number of Hospital beds (NHB) was around 9122 units and for the Area of garden and green (AGG) was 10143 ha. One should handle these data with extreme care, since there were pooled data. The correlation between HOR and all other variables were positive and significant.

(Insert Table 1 here)

Panel data Regressions Results

Four different methods of regression would be used to investigate the relationship between HOR and other variables. The first was pooled OLS; the second was Feasible Generalized Least Square (FGLS); the third and forth were Fixed effect and Random effect respectively. Since our data set was composed of a short period of observation (20 years) and a large number of cities, according to Baltagi (2008), it

was common to employ pooled OLS, which meant the slope coefficients were the same across cities. Hence, this was our main regression model and the result was shown in Table 2. Most of the slope coefficients in this model were significant, except for Area of garden and green and Hospital Bed. The R-square for this model was 0.343 (with adjusted R-square 0.107). Variance inflation factor was used to investigate to significance of the multi-collinearity problem and the results were less than the recommended value (VIF < 10) suggested by Neter, Kutner, Nachtsheim & Wasserman (1996). Due to the time - series nature of the data, a Durbin-Watson test was used to study the significance of autocorrelation. The values of of the test statistics suggested that there were no significant autocorrelation problem (D-W statistically less than 2) (Chatterjee & Hadi, 2006).

(Insert Table 2 here)

The issue of multi-collinearity tended to inflate the variable of the slope coefficient. This would reduce the individual significance, but the independent variables, as a whole, could be significantly explaining the dependent variable (Kennedy, 2003). Feasible Generalized Least Square had the ability to transform the heteroskedastic nature under an unbalanced panel (Baltagi, 2008), hence, the second regression model, FGLS, was conducted and the result was shown in Table 3. The results of Table 2 and Table 3 are similar. The signs of the slope coefficient were close to identical between Table 2 and Table 3. However, one should notice that the significance level of slope coefficients improved and the variables that were

insignificant in Table 2, i.e., Hospital bed and Area of garden and green, were significant. The Wald Chi-square value was 20256.74 that indicated the degrees of freedom of the Chi-Square distribution used to test the Wald Chi-Square statistic at least one of the predictors' regression coefficient was not equal to zero (Baltagi, 2008).

(Insert Table 3 here)

This study performed the Hausman test specification for Random Effect and Fixed Effect, Prob>chi2 = 0.1764 > 0.05, the test recommended the Random Effect model (Greene, 2003). Based on the result of the Random Effect regression, occupancy rate in Guangdong could be explained by all the independent variables except Hospital Bed, i.e., the slope coefficient was not significant. Within Random Effect result, the growth of hotel occupancy rate in Guangdong was significantly related to the levels of GDP per capita (GDPpc), the Share of the service sector in GDP (SSGDP), Non-agricultural population proportion (NAPP) and Area of garden and green (AGG) in each city. The overall R-square for this model was 0.252. This suggests that the model could explain around 25.2 percent of the variation of the dependent variable. Individual coefficient of each variable represented the marginal effect of the independent variables on the dependent variables. All three models, pooled OLS, FGLS, and Random Effects suggested that urbanization affected the hotel occupancy rate. The results confirmed that occupancy rate was affected by economics, population, social, cultural and geographical landscape (See Table 4).

(Insert Table 4 here)

V. DISCUSSION AND CONCLUSION

This study discovers the relationship between urbanization and hotel performance, particularly occupancy rate. The continuously improving urbanization in the next century contributes abundant opportunities for rapid growth in China. This can be achieved by utilizing existing resources, improvement on high value manufacture products and services, and the increase reliance on domestic consumer demand. The hospitality industry, one of the fastest growing industry in China, will be one of the industry that benefit most from these opportunities.

First, the results of all three regressions show a huge degree of consistency. At the provincial level, the coefficient on GDP per capita, Share of service industry and Non-agricultural population proportion, are significant even without the correction on standard error (Table 2), while the remaining slope efficient become significant after the standard errors are adjusted based on the FGLS method (Table 3). The signs of the coefficient are consistent with the general understanding. The economic dimensions, GDP per capita and Share of service industry in GDP, are positively related to occupancy rate. As the income of individuals in the city increase and as the service industry becomes relatively more important, the demand of hotel accommodation will increase accordingly. Furthermore, as the number of people moving the urban area increase, the demand for hotel accommodation will increase. For Hospital bed, the explanation for the negative sign can be of two folds. First, in the long run and from the perspective of medical tourism competition, the development of medical tourism will cause tourists to substitute hospital

bed with hotel accommodation and hence, the increase of hospital bed will lead to a decrease of occupancy rate. Second, since Hospital bed is a meausre of the social welfare structure of the lifestyle in the cities.. The increase of hospital bed would increase tourists' concern on the living conditions of the destination provinces. Therefore, this would lead to a decrease of occupancy rate. For Area of garden and green, since this study uses the star-rated hotel occupancy rate as dependent variables, the occupancy rate for hostel or motel are not included. Hence, as the area of garden and green increases, the geographical landscape of the area improves, then the tourists might feel comfortable to substitute star-rated hotels to other non-star-rated accommodation facilities. Therefore, the increase of area of garden and green will lead to a decrease of occupancy rate.

Second, the results of this study show the impact of urbanization towards hotel performance is significant. After correcting the standard error of the slope coefficient, the slope coefficients for all independent variables are significant (Please see Table 3). However, the explanatory power of the regressions (Table 2 and Table 4) are relatively low. Zhang et al. (2013) showed that the explanatory power of similar independent variables toward hotel growth rate is around 90 percent, while the explanatory power of this study is well below 50. The reason for such a low explanatory power can be as follows: First, the dependent variables in Zhang et al. (2013) is the number of hotels in Guangdong. To a certain degree, this is the amount of capital, or investment in the hospitality industry. This is a macroeconomic data. Second, the dependent variable in this study is occupancy rate. This is a variable that reflects the performance of individual hotels. Hence, this is a microeconomic data. Third, the independent variables that measures urbanizations in both studys are GDP per capita, share of service industry, Non-agricultural

population, Hospital beds and Area of garden and green. These are all macroeconomics variables. Therefore, the result of this study shows the contributions of macroeconomics variables towards microeconomics variables are significant, i.e., the slope coefficients are significante, while these microeconomics variables can be fully explained by these marcoeconomics data.

This study provides two contributions. From the academic perspective, this study enhances the literature by identifying the effect of urbanization toward one of the key hotel performance indicators, occupancy rate. In particular, this study shows that GDP per capita, Share of service industry in GDP, Non-agricultural population proportion will increase occupancy rate while the Hospital bed and Area of garden and green will decrease occupancy rate. From the hotel management perspective, the occupancy rate is an important indicator of hotel performance. However, this study shows that this indicator will be affected by the urbanization level of the corresponding area. Hence, when top management is trying to evaluate hotel performance, one should take the degree of urbanization of the area into account. For the policymakers, this paper would help them restructure the city with understanding the effect of urbanization to hotel performance. Hence, it would be useful to improve the hotel business environment. To conclude, urbanization is an important factor in hotel performance in China. The results were consistent with previous literature, where the degree of urbanization would influence the marketing strategies of companies (Steenkamp, 2001; Charles, & Anderson, 2016). This will have certain implications for the hotel operators in designing their hotel

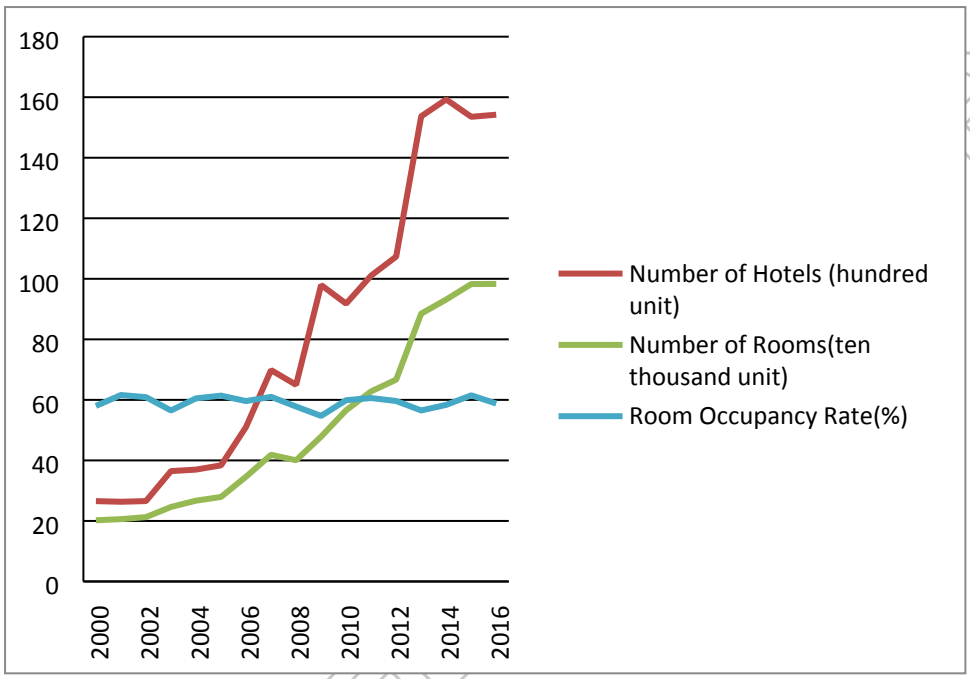
marketingstrategies. For example, from the hotel management perspective, since for the same level of investment into the same category of hotels in different cities will have different impacts to the occupany rate, to make cross city occupany rate evaluations, hotel managers should take the degree of urbanization of each city into consideration.

VI. RESEARCH LIMITATIONS AND FUTURE RESEARCH

This research has a number of limitations that deserve further investigations. First, the quantitative research of this study uses secondary data. Some data, such as the number of star-rated hotel before 1994, are missing. Therefore, this study cannot provide a longer historical panel study. Furthermore, other factors, such as population density and the education demographic, are not included. Moreover, this study uses hotel occupancy rate to measure hotel performance. However, different hotel performance indicators might show different results. For future research, by using performance variables such as ADR, ROI, etc., the macroeconomic factors that matter to hotel performance can be established. Furthermore, city characteristics (city size, city intensity, city labor structure and so on) may also affect the hotel performance. Finally, some factors which may affect the hotel performance, such as policy and governance are not included in the research. Future studies may include these variables to further examine the relationship between urbanization and hotel performance. It may bring more contributions to hotel industry and tourism industry.

Figures

Figure1 Number of Hotels、 Rooms and Room Occcupancy Rate in Guangdong Province (2000-2016)



Tables

Table 1 Descriptive Statistics and Correlations in Guangdong Province.

Variables	Mean	Std. Deviation	N	1	2	3	4	5	6
1.HOR(%)	56.44	0.40	441		.246**	.268**	.252**	.179**	.199**
2.GDPpc (RMB)	24389.78	1181.84	441			.656**	.729**	.625**	.629**
3.SSGDP(%)	37.34	0.35	441				.610**	.681**	.680**
4. NAPP(%)	44.81	1.18	441					.492**	.538**
5. NHB (unit)	9121.82	438.49	441						.844**
6. AGG (ha)	10143.86	1227.41	441						

**. Correlation is significant at the 0.01 level (2-tailed). Note: HOR is the hotel occupancy rate in each city; GDPpc is GDP per capita in each city; SSGDP is the share of service industry in GDP in each city; NAPP is non-agricultural population proportion in each city; NHB is number of hospital beds in each city; AGG is the area of garden and

green in each city.

Table 2 Pooled OLS Regression Statistics in Guangdong Province

Variables	Coefficients	Sig.	VIF	t-Value
GDPpc	0.037	0.010	3.226	2.592
SSGDP	0.130	0.033	2.594	2.592
NAPP	0.040	0.101	2.827	1.642
NHB	-0.018	0.251	2.404	-1.151
AGG	-0.008	0.451	4.652	-0.755
R	0.343			
Adjusted R Square	0.107			
F	11.579**			
Durbin-Waston	1.598			

**. Correlation is significant at the 0.01 level (2-tailed). Note: GDPpc is GDP per capita in each city; SSGDP is the share of service industry in GDP in each city; NAPP is non-agricultural population proportion in each city; NHB is number of hospital beds in each city; AGG is the area of garden and green in each city. Critical values for the Durbin–Watson test at 5% significance level are 0.69146 and 2.16189. These values are calculated dependent on T (length of the balanced panel-time periods the individuals were surveyed) and K (number of repressors') (Savin & White, 1977). As the test statistic lies between lower and higher bound, we do not reject null hypothesis of zero autocorrelation in the residuals.

Table 3 Cross-Sectional Time-Series FGLS Regression Statistics in Guangdong Province

Variables	Coefficients	Sig.	Std. Err.	t-Value
GDPpc	0.039	0.000	0.001	32.96
SSGDP	0.130	0.000	0.002	65.05
NAPP	0.041	0.000	0.002	19.79
NHB	-0.018	0.000	0.002	-10.19
AGG	-0.009	0.000	0.001	-17.59
Number of Obs	441			
Wald Chi-square Test	20256.74	0.000		

Note: The standard errors of FGLS regression was normalize by N standard errors. GDPpc is GDP per capita in each city; SSGDP is the share of service industry in GDP in each city; NAPP is non-agricultural population proportion in each city; NHB is number of hospital beds in each city; AGG is the area of garden and green in each city.

Table 4 Random-Effect (within) Regression Statistics at City Level in Guangdong Province

Variables	Coefficients	Sig.	Std. Err.	t-Value
GDPpc	0.033	0.047	0.017	1.98
SSGDP	0.148	0.028	0.068	2.20
NAPP	0.082	0.012	0.033	2.53
NHB	-0.005	0.841	0.023	-0.20
AGG	-0.03	0.020	0.013	-2.32
Number of Obs	441			
R Square	0.252			
F	40.55	0.000		
Sigma_u	0.054			
Sigma_e	0.143			
Rho	0.124			
Hausman Test	chi2= 7.65	Prob>chi2 = 0.1764		

Note: The standard errors of fixed-effect regression was conventional standard errors. GDPpc is GDP per capita in each city; SSGDP is the share of service industry in GDP in each city; NAPP is non-agricultural population proportion in each city; NHB is number of hospital beds in each city; AGG is the area of garden and green in each city. Sigma_u is the standard error of the unobserved effects that are unchanged over time. Sigma_e is the total sum of squared error. Rho is fraction of variance due to the unobserved effects.

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PUBLIC INTEREST STATEMENT

Urbanization and tourism are important Chinese development strategies. Indeed, China is probably one of the countries in the world with the fastest urbanization rate. The role of the Belt and Road initiative further elevates this "world processing factory" into a "world economic nexus" of the 21st century. Urbanization has played a facilitating role on the tourism and hotel development. There is a need for a macroeconomic perspective in studying hotel management. This study tests the macroeconomic factors that matter to hotel performance. The result of this study shows the contributions of macroeconomics variables towards microeconomics variables are significant**.** The results show that urbanization is an important factor in hotel performance in China.

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