상업적 젠트리피케이션 진단체계 연구: 근린재생형 도시재생사업을 중심으로

A Study on Measuring System of Commercial Gentrification in Neighborhood Urban Regeneration Projects

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SUMMARY

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Chapter 1. Introduction

In recent years, many local merchants have difficulty in affording rapidly increasing commercial rents, particularly in some hot commercial areas including Gyeongnidan-gil Road, Yeonnam-dong, and Seongsu-dong in Seoul, the capital of South Korea. The sharp increase in rent is often accompanied by other social, economic, cultural, and political issues and consequently leads to a serious hardship of existing merchants and local residents, which is termed commercial gentrification. The problem of commercial gentrification is now nation-wide issue as it occurs even in small- and medium-sized cities in South Korea. Prevalence and rapid expansion of commercial gentrification across the nation naturally raise a key policy question; how we can measure and respond commercial gentrification in a timely manner. Many academic and policy studies were recently conducted to address the question. Lack of full understandings about the nature of commercial gentrification, however, have often prevented researchers from developing an effective measuring system of

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commercial gentrification. It is truism that commercial gentrification affect neighborhood in positive and negative directions. This means such positive effects as neighborhood revitalization and urban regeneration should be maximized while negative consequences are minimized, and vice versa. Thus, policy outcomes largely depend on both measurement of commercial gentrification and subsequent policy responses in timely manners.

This study aims to propose a new measuring system of commercial gentrification to detect and gauge prevalence of commercial gentrification in neighborhoods across South Korea. First, we define the concept of commercial gentrification. Based on domestic and international literature review, we develop indicators of commercial gentrification. Demonstration of our measuring system is presented for Gunsan-si and Gongju-si. For public use, a measuring system is proposed to provide the public and other gentrification researchers with agent, data source, applicable spatial area, indicator update timeline, and relevant statistical database of individual indicators. We conclude by emphasizing use of our indicators and measuring system and suggesting policy and program improvements.

Chapter 2. Analysis of Character and Measuring Case of Commercial Gentrification in Korea

In chapter 2, we summarize domestic and international studies on measurement of commercial gentrification. Previous studies commonly find that commercial gentrification is so place-specific that measurement method and indicators can vary across places, which should be considered by gentrification researchers as the most fundamental nature of commercial gentrification. Though many domestic studies were conducted in recent years, discussions on the indicators of commercial gentrification and correlations between indicators were rarely found. To fill the gap in domestic research on commercial gentrification, we conducted more-focused literature review on domestic studies that attempted to develop indicators of commercial gentrification.

A list of phenomenon and corresponding indicators that are found in commercially gentrified or gentrifying areas were summarized by reviewing empirical analyses on commercial gentrification, Seongdong-gu study and Yang's indicators. These domestic studies have an implication to our study in that they list up important and quantifiable indicators.

We develop a list of Indicators of commercial gentrification, including land price and rents, change in retail composition(change in restaurants), frequency of media and social networking service (SNS) reports and Floating Population/Visitors. Also suggested in this study is detailed method to collect and manage each data source. First, it is noteworthy that it is hard to collect data on exact rents and sales, which are found irreplaceable by appraised value of land. Also we suggest that displacement is a complex phenomenon and consequently requires a proxy that could be feasibly quantified. In addition, a variety of big data collection is available for data on media and SNS reports. Beyond availability of existing data, we suggest to build new data sources for the public and researchers.

This study also provides overall implications on how to measure commercial gentrification and reflect the measured results on gentrification policy and program. First, existing indicators do not appear to be used to gauge prevalence of gentrification due to large discrepancy of survey period and actual timing of gentrification. Seongdong-gu study shows that gentrification researches need to provide a way how to reflect empirical results practically on gentrification policy and programs. Given that commercial gentrification occurs very rapidly and in a complex way, careful interpretation on empirical results should be emphasized by researchers.

Chapter 3. Analysis of Measuring Commercial Gentrification in UK, US and Germany

We turn to international literature review in chapter 3. The chapter summarizes

overall trend in commercial gentrification and measurement methods in United Kingdom (hereafter UK), United States (hereafter US), and Germany. We specifically focus on background, purpose, indicators, measurement procedure, detailed calculation method of indicators, and major findings of key studies in each country.

A UK study connected social diversity score with index of multiple deprivation (hereafter IMD) to measure prevalence of commercial gentrification. Considering that gentrification often occurs in socioeconomically disadvantaged neighborhoods where rents are relatively low, it totally makes sense to utilize level of deprivation to quantify gentrification. Linkage between IMD and social diversity indicators seems particularly useful when it is used with big data sources. A limitation of this approach would be that the social diversity score could only be created through a complex computation in technical support of experts and institutes.

In the US, early warning system has been developed in many largest cities to inform local residents, merchants, and policymakers of start or acceleration of gentrification. Two notable characteristics of gentrification research in the US are that i) many studies focus on residential gentrification more than commercial gentrification, and ii) US scholars seem to reach a general agreement that gentrification is a very place-specific phenomenon so that quantitative indicators should be developed differently in different places. Despite the place-specificity of gentrification, some studies examined statistical correlation between socioeconomic indicators related with commercial gentrification across multiple neighborhoods. For example, a US study developed empirical indicators of commercial gentrification, including i) retail turnover, churn, and retention, ii) disproportionate impacts to minority-owned establishments, iii) signal establishments, and iv) chains and small businesses. Among these indicators, the researchers found that only one indicator, disproportionate impacts to minority-owned establishments, had a statistically significant relation with changes in retail composition of the neighborhood. Also notable is that empirical indicators of commercial gentrification were developed in a full consideration of overall changes in commercial areas.

To understand German context of commercial gentrification, we focus on a pioneer meta-analysis study on around 70 studies, between 1980 and 2014, about German gentrification. The thorough review study suggests that there are social, constructive, commercial, and symbolic dimensions of commercial gentrification and each dimension appears in different pace in different periods. An additional key implication is that, within German scholarship, researchers reach a consensus that it is very hard to generalize driving actors and causes of gentrification and gentrification itself. For that reason, German studies on gentrification have evolved towards case study and comparative analysis rather than generalization. Also emphasized is that there is a series of progressively different gentrification, which naturally led to different factors in different level of gentrification.

In sum, we find a common and recent trend that more and more studies attempt to examine place-specific nature of gentrification. In particular, many researches focus on case study and comparative analysis. Despite limited take-aways about empirically quantifiable indicators, international literature review matters in the context of South Korea because lack of studies on small- and medium-sized cities requires greater emphasis on place-specific nature of gentrification among Korean gentrification researchers.

Chapter 4. Developing Indicators of Measuring Commercial Gentrification and Case Demonstration

Based on domestic and international literature review (chapters 2 and 3), we develop empirical indicators of commercial gentrification in chapter 4. Case demonstrations on two selected cities, Gunsan-si and Gongju-si, show that our indicators can measure commercial gentrification in those selected cities well, but careful approach is needed when applying our indicators to other cities in a very different context.

We first pooled existing indicators that were developed in other studies. To choose key indicators, the pool of indicators was reviewed and discussed by

experts from a variety of fields closely related with commercial gentrification. We evaluated key indicators in terms of four criteria, including importance, data availability, data reliability, and computability, and determined seven final key indicators and nine supplemental indicators as shown in Table 1. We chose not only indicators supported by available data but indicators that are very important but not available due to data limitation, emphasizing the need of creating new data sources for those indicators.

〈Empirical Indicators of Measuring Commercial Gentrification〉

Category	Indicator	Indicator Description
Key Indicators (7)	Rents	Change in Rents
	Sales	Change in Restaurant Sales
	Real Estate Price	Change in Real Estate Price
	Floating Population	Change in Floating Population
	Visitors	Change in Visitors to Major Spots
	Composition of Retails	Change in the Number of Restaurants and Necessity Retails
	Opening and Closing of Retails	Index of Opening/Closing of Restaurants
Supplemental Indicators (9)	Appraised Land Price	Change in Appraised Land Price
	Real Estate Transactions	Change in the Scale of Real Estate Transactions
	SNS Reports	Frequency of Online Exposure
	Residents	Number of Registered Residents
	Absentee Landlord	Transition of Ownership
	New Construction	Change in the Number of New Constructions
	Major Rehabilitation	Change in the Number of Major Rehabilitation
	Remodelling	Change in the Number of Remodelling
	Merged Land Parcels	Change in the Number of Merged Land Parcels

We apply selected final indicators, except unavailable data on individual rents, to Gunsan-si and Gongju-si by collection of data, computation of indicators, and interpretation of results. Findings confirms a strong correlation between indicators of Visitors, Real Estate Price, and Composition of Retails, indicating that the variables capture commercial gentrification well. We suggest that further collection and development of data sources, including Sales and Floating Population, are needed for future research. Also we emphasize the development of ground-truth variables to reflect real world conditions into our empirical indicators.

In terms of generalizability, we do not suggest wider use of our indicators yet despite its meaningful results in the selected two cities. We contrast Gunsan-si and Gongju-si to national and broader province data to better understand trends over time in those two cities. Depending on indicator, we find considerably large discrepancy of prevalence of gentrification reported by different indicators, implying inconsistency across indicators. Statistical significance was also varied across places. These limitations prevent us to identify prevalence of gentrification in each city, suggesting need of additional case studies and new data sources. Of particular importance is development of method to identify the timing when gentrification begins in a place.

Chapter 5. Measuring System of Commercial Gentrification in Korea

Summing up empirical indicators and case demonstrations, we propose a new measuring system of commercial gentrification in chapter 5. In particular, we suggest a variety of ways how researchers and policymakers can take advantage of empirical indicators and measuring system of commercial gentrification. We provide multiple dimensions of empirical indicators, including agent, raw data source, spatial area, and update frequency, for each of seven key indicators and nine supplemental indicators. In the preceding chapters, we cautioned limited generalizability of our indicators. Additional studies on other cities and regions are required to secure generalizability of our approach. As an alternative use, we alternatively suggest researchers and policymakers to make use of our empirical indicators and measuring system as base indicators to specific urban regeneration project in order to conduct site-based gentrification study and accumulate additional results on other areas. Given that commercial gentrification is often the flip side of local economic revitalization, gentrification indicators can be also used to assess performance of urban regeneration projects.

Chapter 6. Conclusion

We suggest program and policy improvements and future research agenda in this final chapter. The first policy suggestion is to include urban regeneration projects into the pool of commercial real estate survey administered by Korea Appraiser Board and consequently to apply our empirical indicators and measuring system to the project sites. Secondly, we propose to launch and monitor new measuring system of gentrification in areas designated by urban regeneration new deal project. For that purpose, a national guideline needs to be provided for local governments and project managers. A separate budget is also needed to be allocated to measure and timely respond gentrification. National government has to collect and administer local project-based resources to build a national database for public use. We turn to future research agenda. First of all, we propose multiple case studies on gentrification of urban regeneration project sites. A fuller research on correlation between phenomenon and empirical indicators of commercial gentrification. We also suggest to develop a gentrification prediction model that reflect social diversity score as used in UK study.

Scholarship and policy discourses reach to a consensus that gentrification is very place-specific and no single research method and indicators fit all. In addition, most domestic studies were focused on gentrification in Seoul. Lack of research on gentrification in local cities and urban regeneration new deal project sites warrants more emphasis on gentrification in localities out of Seoul. We examined two local cities whose pattern of gentrification largely differs from that of Seoul. We also proposed a new measuring system and empirical indicators of commercial gentrification and how other gentrification researchers and policymakers can take advantage of our approach.

⟪Measuring System of Commercial Gentrification⟫

	Indicator	Indicator Description	Source of Data	Public Data Availability Nat'l	Local	Local Data	Expert	Spatial Area	Update
Seven Key Indicators	Rents	Change in Rents	Korea Appraisal Board (http://www.r-one.co.kr)	Update Needed				○	
	Sales	Change in Restaurant Sales	Small-sized Merchant Group (http://sg.sbiz.or.kr)			○		Project Area	3 month
	Real Estate Price	Change in Real Estate Price	Ministry of Land, Infrastructure, and Transport, MOLIT(http://rt.molit.go.kr)	○				Dong Area	1 Year
	Floating Population	Change in Floating Population	Small-sized Merchant Group (http://sg.sbiz.or.kr)			○		Project Area	6 month
	Visitors	Change in Visitors to Major Spots	Tourism Data System (https://know.tour.go.kr)	○				Nearby Main Tour Place	1 Month
	Composition of Retails	Change in the Number of Restaurants, Necessity Retails, and Infrequent Retails	Korea Census Bureau (https://sgis.kostat.go.kr)	○				Dong Area	1 Year
		Convenient Stores, Franchise Cafe, and Gifts Shops	Field Survey			○		Project Area	1 Month
	Opening and Closing of Retails	Index of Opening or Closing or combined opening/closing of Restaurants	Local Permits Data (http://www.localdata.kr)		○			Project Area	1 Year
Nine Supplemental Indicators	Appraised Land Price	Change in Appraised Land Price	Local Government Website		○			Dong Area	1 Year
	Real Estate Transactions	Change in the Scale of Real Estate Transactions	MOLIT (http://rt.molit.go.kr)	○				Dong Area	1 Year
	SNS Reports	Frequency of Online Exposure	Data Purchased from Python & R Crawling Foursquare				○		
	Residents	Number of Registered Residents	National Statistics Portal (www.kosis.co.kr)	○				Haengjeong-Dong	1 Year
	Absentee Landlord	Transition of Ownership	National Spatial Data Infrastructure Portal (www.nsdi.go.kr)	○				Dong Area	1 Year
	New Construction	Change in the Number of New Constructions	Construction Data System (http://open.eais.go.kr)	○				Dong Area	1 Year
	Major Rehabilitation	Change in the Number of Major Rehabilitation	Construction Data System (http://open.eais.go.kr)	○				Dong Area	1 Year
	Remodelling	Change in the Number of Remodelling	Field Survey			○		Project Area	1 Month
	Merged Land Parcels	Change in the Number of Merged Land Parcels	National Spatial Data Infrastructure Portal (www.nsdi.go.kr)	○					