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Master's Thesis of Engineering

# Relationship between Vitalization of Similarly Named Commercial Streets and Related Keywords on Social Media

SNS 키워드 유형과 유사명칭 골목상권 발달의  
영향관계 분석  
-집객효과를 중심으로-

August 2023

Graduate School of  
Civil and Environmental Engineering  
Seoul National University  
Civil and Environmental Engineering Major

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# Abstract

‘~Ridan-gil’ is a similarly named commercial streets viral on social media. The aim of this thesis is to examine the patterns of texts and keywords of social media posts about the ‘~Ridan-gil’ commercial streets and how they interact with vitalization of the commercial streets.

To do so, previous studies were examined to define the different keyword groups related to ‘~Ridan-gil’ commercial streets. After so, text data were collected from Naver blog posts related 10 ‘~Ridan-gil’ commercial streets uploaded in year 2022. After classifying the words into each keyword group, its’ patterns were examined. Two keyword groups, ‘Place’ and ‘Contents(food)’, showed dominant pattern among all 10 ‘~Ridan-gil’ commercial streets,

To empirically analyze the relationship between each keyword group and commercial vitalization, a 2sls model on the relationship between the ‘number of pedestrians’, ‘place keyword’, and ‘contents(food) keyword’ was developed.

While interviews, case studies, and observations from precedent studies suggested that place image and spatial, physical aspects of ‘~Ridan-gil’ commercial streets are the main factors in attracting consumers to the area, the empirical analysis of this study suggested otherwise. ‘Contents(food)’ related keywords had positive(+), and stronger impact on consumer attraction than ‘Place’ related keywords did. While so, the derived models suggest that there is a complementary relationship between the two keyword groups.

The result of this research implies that development of foods and beverages related contents could rather be a more effective and efficient way of street revitalization and commercial regeneration than conventional regeneration methods such as renovations of physical environment.

Moreover, although existing studies on ‘~Ridan-gil’ commercial streets suggest that the lack of accessibility is complemented by marketing effects of social media, the results of the empirical analysis show public transportation and other related infrastructure play an important role in consumer attraction. Thus, means on improving the accessibility via public transportation are necessary.

This study has its significance in its effort to describe the patterns of consumer behavior on social media and its relationship with the vitalization

of ‘~Ridan-gil’ commercial streets. The result and implications of this study can be used in various fields of urban regeneration projects and contents marketing. Further studies may include analysis on factors related to spontaneous appearance and decline of new ‘~Ridan-gil’ commercial streets and its lifecycle.

**Keywords :** ~Ridan-gil, Commercial Vitalization, Web Crawling, Keyword Groups, 2sls, Commercial Urban Regeneration  
**Student Number :** 2021-20704

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# Chapter 1. Introduction

## 1.1. Study Background

Leisure activities such as commercial and cultural activities are one of the essential factors that carries out human life. As consumer preference has changed over time, the form of different leisure activities also has evolved(Gershuny, 2003 ; Gretzel et al., 2006).

Entering the age of information technology, the tendencies of consumers bragging their commercial activities on social media and internet has increased(Comer et al., 2020). This increase in usage of social media has boosted up the consumers' desire for 'Instagrammable' places that meets their aesthetic taste(Kim, 2019b ; Lee & Nam, 2020). One of the main examples of this type of place is '~Ridan-gil' similarly named commercial streets that have been emerging recently in South Korea.

'~Ridan-gil' is a similarly named, small-scale commercial street that went viral on social media prior to the commercial success of Gyeong-Ridan-gil, Itaewon, Seoul, South Korea(Kim, 2019a). Since then, similarly named commercial streets have been appearing nation-wide. Some of the famous examples of this similarly named commercial streets are Hwang-Ridan-gil, Yong-Ridan-gil, Mang-Ridan-gil, Song-Ridan-gil and many more<sup>1</sup>.

These similarly named commercial streets not only share their name, but also share different physical, socio-cultural, commercial traits. Recently, other commercial streets with different names<sup>2</sup> tend to share these characteristics.

'~Ridan-gil' were benchmarked as successful commercial

- 
1. Korea Tourism Organization Regional Tourism Capacity Assessment and Analysis Report(2021)
  2. Seoul Forest, Ttuk-seom, Seongsu-dong, Yeonhui-dong, Yeonnam-dong, Yeontral Park, Samcheong-dong, Iksun-dong, Garosu-gil, Apgujeong, ... (Korea Tourism Organization, ,2021)

vitalization and urban regeneration case study (Park, Chanlk et al., 2021). One of the interesting traits of these streets is its location. These streets are located under geographic conditions where pedestrians cannot easily access either via walking or through public transportation. The lack of accessibility is rather supplemented through marketing effects of social media. This, in other words, shows that place selection on small-scale commercial streets is affected by social media.

Social media and the internet serves as a new communicating tool of citizens in the present (Mora et al., 2018). This shows that citizens, as they proceed with their everyday life, shares, comments, and reviews their lives and information of places they live in. This sharing of information allows the citizens to enjoy their activities in the city more effectively and efficiently. The supplementing effect from marketing via social media in terms of access is thus a result of place selection through the internet (Kim et al., 2020).

However, questions on the sustainability of internet viral marketing are rising. ‘~Ridan-gil’ effect is a term that describes a phenomenon where various commercial streets nation-wide share physical and commercial traits of the ‘Ridan-gil’ commercial streets (Kim, 2019). As ‘~Ridan-gil’ commercial streets are becoming famous among consumers, this phenomenon is getting stronger. Commercial streets in South Korea are meant to show the unique characteristics of its cities or provinces of location; however, due to the ‘~Ridan-gil’ effect, these streets are losing its uniqueness. Moreover, various case studies showed that this effect ended up in commercial gentrification due to the increase of real-estate value and rent.

While the commercial gentrification of these streets is emerging as new problem to be solved, appropriate solutions are yet to be found. Various studies on such matter suggest the major reason for commercial gentrification as the attraction of young consumers.

Therefore, the rapid rise in the popularity of the ‘~Ridan-gil’ commercial streets and its gentrification are caused by the repetitive process of young consumers visiting, posting, reading

various information about the commercial streets on on social media. In other words, there is a mutual interactive relationship between social media and commercial vitalization.

## 1.2. Purpose of Research

The following five main points of interest can be drawn from the characteristics of the ‘~Ridan–gil’ commercial streets and its related issues.

- 1) Place selection on ‘~Ridan–gil’ commercial streets is made through the internet and social media.
- 2) Young consumers are key gentrifying factor of the commercial street.
- 3) Acquisition of information through social media determines the influx of young consumers to ‘~Ridan–gil’ commercial streets.
- 4) ‘~Ridan–gil’ commercial streets share common characteristics with each other and behave as one type of brand.
- 5) There is a mutual interaction between social media posts and vitalization of commercial streets.

Based on the points of interest, this study aims to examine how the posts, language and keywords used to describe the ‘~Ridan–gil’ commercial street on social media, the main mode of place selection for urban residents, are manifested and how they interact with vitalization of the commercial streets.

To do so, keyword groups that can appear in social media posts related to the ‘~Ridan–gil’ commercial streets were derived though related precedent studies. After so, the words collected through web crawling of related social media posts were classified into different keyword groups. Finally, an empirical model was

developed to analyze the interaction between keyword groups and vitalization of commercial streets.

The results of this study are expected to contribute to the understanding of the characteristics and development of commercial streets in South Korea and to the formulation of policies for vitalization and regeneration of the ‘~Ridan-gil’ and its related commercial streets in the future.

## Chapter 2. Literature Review

### 2.1. Characteristics of ‘~Ridan-gil’ Commercial Streets

Previous research on definition and characteristics of ‘~Ridan-gil’ commercial streets are comprised of studies that focus on how its physical, commercial, socio-cultural aspects are related to its development and vitalization. These researches are mainly about case studies and interviews on consumers, artists, and merchants that constitute the similarly named commercial street.

Yang, Hui-eun and Son, Yong-hun(2013) interviewed artists and visitors of Gyeong-Ridan-gil on the reasons behind their visit and migration to the commercial street. The result of their study showed that artists and visitors move in or visit the place due to its unique physical traits, aloneness, and creativity. Artists, especially, move in for networking and aggregation of different artist groups.

Kim, Gun-woo and Um, Ki-jun(2020) studied the factors of place selection and vitalization of the commercial streets by analyzing 8 cafés located in Uljiro 3 & 4 Ga. As the result, the spatial elements appeal ‘hip’ and ‘retro’ image to the visitors, and they upload photos of the places on their social media to project such images to themselves.

While previous case-study researches on ‘~Ridan-gil’ target 1-2 commercial streets, Kim, Ju-il(2019a,b), focusing on the nation-wide appearance of ‘~Ridan-gil’ similarly named commercial streets, studied different spatial, physical, socio-cultural characteristics shared between all commercial streets. As the result, similarly named commercial streets do share their characteristics in terms of location, naming, store distribution, business types, and consumer gathering via social media. From the study, it can be inferred that ‘~Ridan-gil’ commercial streets do have disadvantages in terms of accessibility, but it compensates for it through social media.

As various studies on ‘~Ridan-gil’ studied its characteristics

through case studies and interviews, the necessity of empirical analysis for further research was suggested.

Accordingly, Park, ChanIk et al.(2021) developed a multi-regression model to explain the effect of different spatial, socio-cultural characteristics of the similarly named commercial streets identified by Kim, Ju-il(2019,a,b) on commercial real-estate values of ‘~Ridan-gil’ streets. As the result, locational factor and business types did not have a significant effect on the real-estate value of the ‘~Ridan-gil’ commercial streets. On the other hand, store distribution, land use, street type, origin of name, and frequency of appearance and searches on social media did have a significant impact on real estate value.

Based on precedent research, the ‘~Ridan-gil’ commercial streets are isolated from the existing central business districts, and located in a narrow alley where walking and access through public transportation is inconvenient. However, the lack of accessibility is compensated through the marketing effect of social media. This means that consumers are looking for these commercial streets to find a place with ‘hip’ or ‘hot’ image and they upload it on their personal social media to project such image to themselves. In other words, ‘~Ridan-gil’ commercial streets are unique type or brand of small-scale commercial street, and the process of visiting the and uploading posts of such places on social media is a new type of urban commercial and touristic activity.

## 2.2. Gentrification of Commercial Streets

Commercial gentrification is an inseparable field of discussion when talking about small-scaled commercial streets in South Korea. Gentrification was first identified as the phenomenon of labor class lessee being evicted due to development of their neighborhood for the middle-class (Carpenter & Lees, 1995; Tolfo & Doucet, 2021). Research on gentrification shows differences according to time scope and area of study (Kim, 2007). This means that foreign gentrification research and that of South Korea do have a big difference.

While foreign gentrification research is focused on regeneration of brownfields, CBDs, and change in residential environments, South Korean gentrification research focuses on commercial gentrification. Commercial gentrification in South Korea mainly focuses on the process of vitalization and decline of commercial streets. Spontaneous increase in unique, creative stores in a dilapidated downtown area (mainly on small scale alleys) and its vitalization eventually leads to its quick decline due to the increase of real-estate value, rent and the according eviction of native residents and tenants. ‘~Ridan-gil’ effect is another form of gentrification of the similarly named commercial streets. Despite the small-scaled commercial streets are meant to show the unique characteristics of the cities and places they are in, their physical attributes are changing to meet the aesthetic requirements of consumers on social media; thus, losing their uniqueness.

As the effect intensified, gentrification has been a hot potato of ‘~Ridan-gil’ commercial streets. In response to such phenomenon, various studies have been conducted to analyze the factors that lead to gentrification to ensure its prevention and find means to sustain the commercial streets.

Kim, Jong-sung and Kim, Gul (2020) developed a multi-regression model on major gentrified commercial districts of Seoul to analyze its major gentrifiers. As the result, change rate of entrepreneurship and change rate of small-scale commerce

workers had significant positive(+) effect towards gentrification.

Hwang, Young-suk and Jung, Que-ho(2022), Interviewed the business owners and visitors of ‘~Ridan-gil’ commercial streets on the reason of their visit and evacuation. As the result of the interview, the reason people visit the streets is because of various F&B stores and information acquired through social media. The business owners move out from ‘~Ridan-gil’ due to congestion of similar business types, decrease in visitors and revenue.

Park Geun-song et al.(2020) analyzed 195 gentrified, and un-gentrified commercial districts nation-wide and developed logistic regression model. As the result, in case of the metropolitan area, the difference in areas of food stores had positive relationship with gentrification while type 2 neighborhood facilities had negative relationship with commercial gentrification. In case of provincial cities, the difference of open food stores had positive(+) relationship with gentrification while average basement floors had negative(-) relationship with commercial gentrification.

Kim, Gyeong-sun and Kim, Dong-sub(2019) developed a logistic regression model and machine learning model on 192 commercial districts in Seoul, South Korea. As the result, average monthly rent, revenue of F&B business from the age under 40, change in revenue from female consumers on their 30s had positive(+) effect on commercial gentrification.

From such results of existing studies, it can be inferred that the increase in F&B business, young consumers, and related posts from social media not only act as major factors of commercial vitalization but can also act as major gentrifiers.



### 2.3. Deriving Keywords and Images of Cities via Social Media

As people find and visit the commercial streets through information acquired from social media, it can be said that there is a significant effect of information sharing through the internet on place selection. As so, the internet and social media behave as a window to observe various everyday life and behavior of citizens (Deibert, 2019; Huang et al., 2021).

As the usage of social media and its related technologies develop, there are various research trying to derive urban planning related policy implications by analyzing the information obtained from social media and the internet. Examples of such research include studies that try to derive images of city and its various components by analyzing different social media posts on cities, regions, and places.

Image of city refers to a cognitive map that citizens draw through interacting with various factors that comprise a city (Lynch, 1960). Image itself is formed through various feelings and emotions of citizens. This means that not only physical and spatial factors of a city but also various socio-cultural, and behavioral factors form the cognitive map (Russell et al., 1981 ; Stern and Krakover, 1993).

Research methods on evaluating factors that form image of a city has changed along with the development of technology. One of the most recent ways to measure a city image is using various data uploaded on social media and the internet. Such studies analyze text data from different posts on social media to see how citizens recognize and describe their experience in a city.

Koltringer and Dickinger (2015) analyzed posts on DMO (Destination Marketing Organization) websites, UGC (User Generated Content), and editorial content of Anglo-American news media to derive tourism image of Vienna. As the result, among the three types of media, UGC was the richest and most diverse source of online information. Image keywords derived from DMOs were sights and attractions, activities for tourists, information on price

levels, currency, exchange rates and service quality. Image keywords from UGCs were sights and attractions, activities for tourists, transportation modes, usage experience and reviews of different accommodation types. News Media, unlike the two other types of media, displayed historical aspects of Vienna and MICE Industry as major image keywords. While the three types of media showed different patterns of image keywords, dominant categories observed in all three types of media were sights, transportation, activities, and experience.

Lai and To(2015) crawled posts on social media about Macao, and derived its image keywords through factor analysis. The 9 keywords derived from the analysis are as follows: heritage traits, hotel facilities, transportation and accessibility, history and culture, casinos and gaming, landmarks and attractions, entertainment and shows, sightseeing and tour, and lastly, tourism development.

Zhang et al.(2022) analyzed yearly tweets from year 2017 to 2021 to derive international image keywords of Beijing, China. As the result, the major keywords that appeared in all years were education, food, related cities, and culture. Other keywords that appeared on certain year due to a major event were Sino-US relation, trade friction, epidemic, Hongkong and Wither Olympics.

There is also research that analyzes image data on social media to derive city image factors. Hunter(2016), by collecting image posts related to ‘Seoul tourism’ from Naver, Baidu, and Google, characterized factors of tourism image of Seoul, South Korea. As the result, water ways and cityscapes, media, traditional tourism facilities, urban tourism experiences, were major tourism image characteristics.

Kang, Hyun-woo and Lee, Hui-jeong(2018), focusing on the point that social media is one of the main factors of commercial gentrification, analyzed text data of posts on social media related to Iksun-dong in Seoul, South Korea and compared it with different phases of commercial gentrification. As the result, before gentrification, significant keywords were different names of the place. Significant keywords when gentrification took place were

keywords related to placeness, stores, and young generation-related keywords. Significant keywords when gentrification intensified were keywords related to placeness, atmosphere, young generation, and stores.

Yoo, Seon-wook and Ryu, Shi-hyeok(2019) analyzed different posts from social media related to Gwangju-Jeonnam province in South Korea to derive its tourism image. As the result, keywords related to natural environment, food, traditional tourist attractions, museum and zoo/botanical gardens, historical tourist attractions were derived.

A review of domestic and foreign studies that have derived city image keywords through social media analysis show that keywords and images related to physical aspects of city and its contents appear separately. Moreover, some keyword types appear according to the unique event or characteristics within the city, such as epidemic, Sino-US relation, Winter Olympic(Zhang et al., 2022), Water ways(Hunter, 2016), Casino and Gaming(Lai & To, 2015).

Table 2.1. Previous studies on city image keyword on social media

Author	Target	Classification	Keyword Type
Koltringer & Dickinger (2015)	Vienna Tourism Image	DMO	sights and attraction, activities for tourists, price levels, currency, exchange rates, service quality
		UGC	sights and attraction, activities for tourist, transportation modes, usage experience, reviews on different accommodation types
		News Media	sights, activities, historical aspects, MICE industry
Lai, L. S. L., & To, W. M. (2015)	Macao Tourism Image		heritage traits, hotel facilities, transportation and accessibility, history and culture, casinos and gaming, landmarks and attraction, entertainment and shows, sightseeing and tour, tourism

Z. Zhang, M. Luo, Z. Luo, and H. Niu (2022)	International Image of Beijing	2017	Beijing School, Beijing Tradition, Related Cities
		2018	Beijing School and Tradition, Trade friction, tourism
		2019	Winter Olympics, campus culture, trade friction, Beijing Tradition
		2020	Sino-US Relation, food culture, epidemic, Hongkong, culture and sports
		2021	food and tradition, winter Olympics, campus culture
W. C. Hunter (2016)	Tourism Image of Seoul		water ways and cityscapes, mediated representation, representations of traditional tourist attraction, city travel experience
J.H. Choi & H.B. Lee (2017)	Seoul, South Korea		Tourism, Natural Environment, Economy, Accessibility, Cultural, Symbolic
S.W. Yoo & S.Y. Ryu (2019)	Tourism of Gwangju-Jeonnang Province		Natural Resource, Food, Traditional Attraction, Historical Attraction, Museum and Zoo/Botanical
H.W. Kang & H.J. Lee (2018)	Iksun-Dong & Phases of Gentrification	Before	Place, Name
		During	Placeness, stores, young generation
		Intensified	Placeness, atmosphere, stores, young generation

The first purpose of this research is to classify the keywords citizens use to describe their experience with ‘~Ridan-gil’ commercial streets on social media. From this, it can be said that this research shares similar context with precedent studies mentioned in this section. Considering the different keyword groups shown in previous studies and unique characteristics of ‘~Ridan-

gil’ commercial streets such as location, origin of name, business types, and consumer gathering via social media, possible social media keyword groups can be derived as shown in [Table 2.2].

Table 2.2. Keyword groups

Class	Keyword	Description
Commercial Keyword	Place	Words related to stores, buildings, location, and other spatial features that compose the commercial street
	Address	information on address of the commercial street and stores
	Transportation	transportation modes and public transportations
	Physical attributes	physical aspects of the commercial street and stores
	Nearby areas	Names of nearby areas of the commercial streets
	Feelings	Feeling and related adjectives
	Experience	Everyday life experience
	Operation	Words related to operation of different shops and stores
‘~Ridan–gil’ Keyword	Review	Words related to online reviews and posting
	Content (Food)	food and beverage business types which take up most of the commercial streets
	Other business type	Other types of business such as small–scale retail and sales, service
	Brand	Names of brands or stores
	Similar commercial Streets	Names of other ‘~Ridan–gil’ commercial streets and related areas
	Others	Words that may appear due to unique event or characteristics of the commercial street

## 2.4. Relationship between Commercial Vitalization and Social Media

The second purpose of this study is to analyze the relationship each keyword group has with commercial vitalization of ‘~Ridan-gil’ commercial streets. As mentioned earlier, social media serves as a tool for place selection of modern citizens. This can be seen in a variety of studies that utilized social media exposure frequency as a major explanatory variable in analyzing the factors of commercial vitalization.

Heo, Ja-yeon et al.(2014) analyzed how social media exposure frequency affect commercial vitalization of Gyeong-Ridan-gil and Yeonnam-dong by developing VAR and VECM model. As the result, the number of yearly social media posts on each commercial streets had positive(+) relationship with commercial vitalization.

Park, ChanIk et al.(2021), as mentioned earlier, empirically analyzed similar characteristics of ‘~Ridan-gil’ commercial streets suggested by Kim(2019,a,b). As an explanatory variable of social media marketing, search frequency of each ‘~Ridan-gil’ commercial street was used. As the result, internet search frequency had positive(+) significant relationship with real-estate value of ‘~Ridan-gil’ commercial streets.

As previous studies suggest, social media and internet exposure frequency do have a positive(+) effect on commercial vitalization; however, as social media play an important role on place selection and commercial vitalization, there is a need to set a more precise explanatory variable. Focusing on such point, the following studies analyzed the relationship of commercial vitalization and social media through examining the type of words, images users use to describe the commercial streets.

Lee, Sun-young et al.(2016) observed Instagram, the most used social media platform, to analyze which factors bring negative or positive image to different commercial districts. As the result, factors that bring positive image to the commercial districts were images related to shopping and F&B. Factors that bring negative

image to the commercial districts were images related to boasting or bragging of one's consuming behavior.

Kang, Hyun-woo and Lee, Hui-jung(2018), mentioned in section 3 of this chapter, is also an example of a study that attempted to define the relationship between commercial vitalization and social media by setting relatively precise explanatory variables of social media. In the study, different types of words (keyword groups) were defined according to different phases of commercial gentrification of Iksun-dong. It was shown that young generation related keywords and description on unique spatial characteristics or placeness of the commercial street increased when commercial gentrification was intensified. This shows that young consumers and spatial awareness of the commercial district accelerates its gentrification.

Despite so, the previous studies mentioned above were observatory, or simply comparative studies, which require empirical analysis for further research.

For other previous studies that actually did empirically analyze the effect of social media exposure frequency, multi-regression model, or logistic regression model for its analysis.

As mentioned earlier, social media and commercial vitalization have a mutual interactive relationship. For example, when a new store appears in dilapidated downtown area, a new commercial area/district/street is formed. This leads to its visitors posting reviews and information about such places in social media. Commercial vitalization through such process later increases more social media posts due to reviews of consumers seeking for 'hot' or 'Instagrammable' places.

In other words, there is a cycle between spontaneous generation of commercial streets, social media, and its commercial vitalization. In this case, as these factors possess a causal relationship between each other, other empirical model that considers such relationship must be used(Jung & Kim, 2010).

As mentioned earlier in this section, Heo, Ja-yeon et al., used VAR/VECM model to consider the mutual interaction between

commercial vitalization and social media. Thus, this research also aims to use related research methodology to fulfil its second purpose.



## Chapter 3. Research Problem and Hypothesis

### 3.1. Research Problem

By focusing on the growth and vitalization of ‘~Ridan–gil’ commercial streets via marketing effects of social media and various information about everyday life of citizens created shared via social media, this study aims to answer two research questions.

- 1) **How do patterns of different keyword groups vary according to the characteristics of various ‘~Ridan–gil’ commercial streets?**

This question focuses on the pattern each keyword group shows according to various spatial, socio–cultural, and commercial characteristics of ‘~Ridan–gil’ commercial streets. People draw a cognitive map of places they visit by interacting with various aspects or factors of the place. Thus, to answer this question, the pattern on how people recognize ‘~Ridan–gil’ commercial streets and describe it on social media must be analyzed. To do so, different ‘~Ridan–gil’ commercial streets and its related posts on social media will be analyzed.

- 2) **What kind of relationship does each keyword group show with vitalization of the commercial streets?**

Focusing on the point that social media posts interact with the vitalization of commercial districts, this question focuses on the relationship each keyword group shows with vitalization of ‘~Ridan–gil’ commercial streets. To answer this question, an empirical model analyzing the relationship between consumer gathering effect and each keyword group will be developed.

As there are two research problems set, this study consists of two parts. In the first part, the number and percentage of each

keyword groups are examined to observe its patterns according to different ‘~Ridan–gil’ commercial streets.

Second part of this study empirically analyzes the relationship between each keyword group, commercial vitalization, and different spatial, socio–cultural, and commercial characteristics of different ‘~Ridan–gil’ commercial streets.

### 3.2. Research Hypothesis

This section presents the research hypothesis to answer the research question of this study discussed in Section 1 of this chapter, based on the theoretical background and previous studies discussed in Chapter 2.

- 1) **Among the 14 keyword groups suggested in Section 3 of Chapter 2, ‘Place’ keyword group and ‘Content(food)’ keyword group would take most of the percentage ratio.**

Contents(food) keyword group refers to food and beverages which takes up majority of business types in the ‘~Ridan-gil’ commercial streets, and place keyword group refers to words related to stores, buildings and other locational and spatial characteristics that compose the commercial streets.

From existing studies on factors of gentrification, commercial vitalization, and place selection of consumers, business related to foods and beverages, young consumers, unique features and aesthetic image of the commercial streets acted as significant factors of visit. The explanatory variables on such features did have a positive(+) impact on commercial vitalization as well.

From this, it can be inferred that posts and information of ‘~Ridan-gil’ commercial streets on social media would mainly consist of aesthetic features of the commercial streets, and foods and beverages related contents the visitors can enjoy.

- 2) **Consumer-gathering effect of place related keywords is stronger than that of contents(food) related keywords.**

Place keyword group refers to words related to stores, buildings, and other locational and spatial characteristics that compose the commercial streets.

According to existing studies reviewed in Section 1 of Chapter 2, and other previous researches that studied factors of place

selection of ‘~Ridan-gil’ commercial streets, unique physical, spatial and locational characteristics that meet aesthetic requirements of the visitors the main determinants of consumer gathering.

Yang, Hui-eun and Son, Yong-hun(2013) interviewed the visitors of Gyeong-Ridan-gil about the reason of their visit. As the result of their study, it was shown that they visit the place due to the unique spatial features and images, and creativity of the commercial street.

Kim, Gun-woo and Um, Ki-jun(2020) studied the process of place selection of consumers and vitalization of streets by analyzing 8 cafés located in Uljiro 3 & 4 Ga. As the result, the spatial attributes that features ‘hip’ , ‘retro’ images and the desire of consumers to project such images to themselves attract people to the commercial streets.

From existing studies on relationship between consumer gathering and different features of commercial streets, it can be inferred that aesthetic place image attract people. However, as such studies are mostly comprised of observation and interviews, a further empirical analysis is necessary.

Therefore, this study attempts to empirically analyze whether images on keywords do attract consumers by analyzing the relationship between consumer gathering and keywords related to place and contents.

## Chapter 4. Methodology and Scope of Analysis

### 4.1. Area and Scope of Research

This research aims to analyze patterns of different keyword groups related to ‘~Ridan-gil’ streets and their relationship with the streets’ commercial vitalization. According to Korea Tourism Organization Regional Tourism Capacity Assessment and Analysis Report(2021), as of the year 2021, there are a total of 125 ‘~Ridan-gil’ streets nation-wide. 37% (46 streets) of the commercial streets are in Seoul. This takes the highest percentage among all cities and provinces in South Korea. Therefore, the area of study in this research is Seoul, where most of the ‘~Ridan-gil’ commercial streets and its corresponding effect are concentrated. However, according to the report, samples of ‘~Ridan-gil’ commercial streets were arbitrarily defined and collected by the researchers, so more meticulous filtering is required.

Accordingly, among the 46 ‘~Ridan-gil’ commercial streets, this study will classify the areas defined as ‘commercial streets’ by the Seoul Metropolitan Government’s Our Neighborhood Shop Business Area Analysis Service and analyze the top 10 commercial streets according to the content generation volume of Instagram and Naver.

The reason for using content generation volume of Instagram and Naver is because they are the most used social media platforms in South Korea. According to the NASMEDIA 2023 March Internet Use Survey in South Korea, Instagram is the most widely used social media by all age groups and Naver is the most popular service for information gathering for all age groups.

Of the 46 ‘~Ridan-gil’ commercial streets located in Seoul defined by the Korea Tourism Organization, a total of 28 streets were defined as commercial streets by the Seoul Metropolitan Government’s Our Neighborhood Shop Business Area Analysis Service. The top 10 streets, ranked by the number of Instagram

hashtag posts and monthly generated contents on Naver, are Seongsu-dong, Seoul Forest, Gyeong-Ridan-gil, Yeonghui-dong, Sharosu-gil, Song-Ridan-gil, Haebangchon, Yeotral Park, Ttukseom and Dosan Park.

The time scope of this study is the year 2022, the most recent date on which a whole year of data can be obtained. Only a year worth of data was collected because each platform has API restriction per individual IP due to its operating and security policies.

Table 4.1. Area of research

#	Name	Instagram Hashtag*	Monthly contents generated**
1	Seongsu-Dong	1,904,000	76,000
2	Seoul Forest	1,454,000	25,700
3	Gyeong-Ridan-gil	1,395,000	1,980
4	Yeonhui-Dong	729,000	58,300
5	Sharosu-Gil	672,000	6,100
6	Song-Ridan-gil	651,000	9,420
7	Haebangh-Chon	644,000	3,210
8	Yeontral Park	523,000	70,700
9	Ttuk-Seom	508,000	15,100
10	Dosan Park	504,000	8,500
11	Mang-Ridan-gil	445,000	1,610
12	Bangbae-Dong	283,000	57,300
13	Buahm-Dong	251,000	57,600
14	Mullae-Dong	248,000	52,900
15	Hapjeong-Dong	226,000	10,500
16	Yong-Ridan-gil	217,000	7,120
17	Huahm-Dong	183,000	6,670
18	Bulgwang-Cheon	103,000	3,730
19	Seongsan-Dong	90,000	48,000

20	Usadan-Gil	90,000	41
21	Gong-Ridan-gil	66,000	320
22	Ssang-Ridan-gil	57,000	210
23	Changshin-Dong	45,000	49,200
24	Yeoljeong-Dong	43,000	145,000
25	Ui-Dong	23,000	51,000
26	Mok-Ridan-gil	8,466	19
27	Seogyae-Dong	5,585	4,910
28	Com des garcon-Gil	353	420

\* Instagram ([www.instagram.com](http://www.instagram.com) accessed: 2023-04-18)

\*\* Blackkiwi ([www.blackkiwi.net](http://www.blackkiwi.net) accessed: 2023-04-18)

## 4.2. Research Flow and Method of Analysis

### 4.2.1. Research Flow

As mentioned earlier, this research is comprised of two parts. First part of the study aims to observe how consumers recognize and describe the various spatial, socio-cultural, and commercial characteristics of ‘~Ridan-gil’ on social media. Second part of the research aims to analyze how the words or keyword groups used to describe the commercial street is related to its vitalization.

To do so, Naver Blog posts uploaded in the year 2022 related to ‘~Ridan-gil’ commercial streets mentioned in Section 1 of this chapter were collected. As the time scope of this study is year 2022, to see the difference in consumer behavior on social media according to time, posts were collected quarterly. Naver blog posts were collected instead of Instagram posts due to Instagram’s limitation in the number of API requests per individual IP and the lack of filter search function.

Naver blog posts were collected through web crawling by using ‘Selenium’ automation package in ‘Python’. After so, collected text data were preprocessed by removing various stop words and onomatopoeias and adding neologisms to the dictionary.

To collect words that were most frequently used to describe one’s experience about ‘~Ridan-gil’ commercial street, top 100 words according to frequency was ranked per quarter and commercial street. Then, each word was classified into different keyword groups that were previously set in Section 3 of Chapter 2.

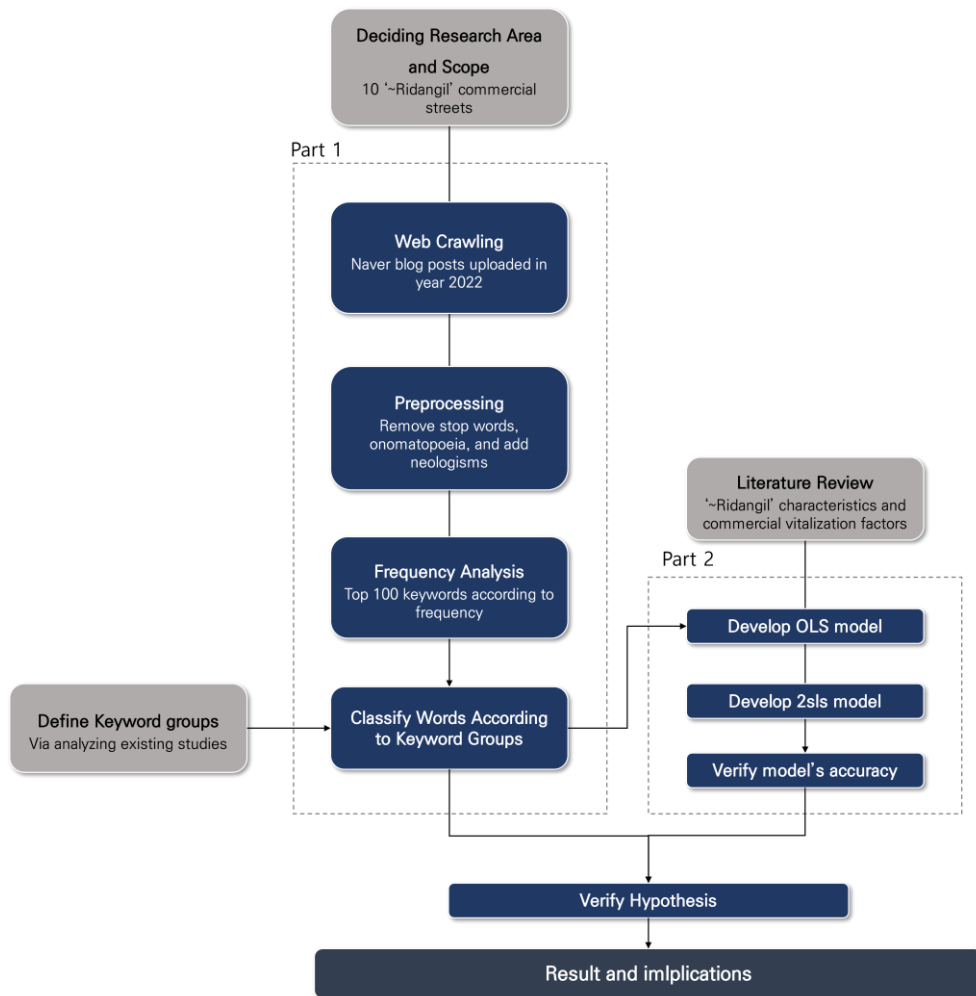
As the second part of this study is about empirical analysis, the relationship between each keyword group and commercial vitalization had to be measured. To do so, Two-Stage Least Squares model(2sls) was developed to estimate their causal effects.

The final model was obtained by first developing multiple linear regression models. Afterwards, the models derived were composed in the form of simultaneous linear equation system.



The diagram of research flow in this study is as follows:

Figure 4.1. Research flow diagram



### 4.2.2. Keyword Analysis

Before classifying the collected text data on social media into different keyword groups, each post corresponding to each ‘~Ridan-gil’ commercial street has to be collected and preprocessed. To do so, Naver blog posts related to the 10 ‘~Ridan-gil’ commercial streets uploaded in year 2022 were collected via web crawling using Selenium automation package in Python. The result of crawling is as follows:

Table 4.2. Naver posts per quarter

#	Name	1st quarter	2nd quarter	3rd quarter	4th quarter
1	Gyeong-Ridan-gil	3,504	4,756	4,820	4,196
2	Dosan Park	9,163	10,502	10,752	10,144
3	Ttuk-seom	15,397	26,316	26,889	22,395
4	Sharosu-gil	7,705	9,024	11,129	12,133
5	Seoul Forest	21,965	44,619	41,439	38,280
6	Seongsu-dong	41,283	51,549	58,089	58,383
7	Song-Ridan-gil	11,574	15,243	15,873	18,616
8	Yeontral Park	2,423	4,090	4,095	3,691
9	Yeonhui-dong	16,534	18,791	19,996	19,322
10	Haebang-chon	6,306	9,351	10,828	8,185

source: Naver Blog (blog.naver.com access date: 23.04 ~ 23.06)

After so, the collected text data were preprocessed by removing different stop words and onomatopoeias and adding neologisms. Normally, preprocessing of Korean text data is done by using KoNLPy package in Python. However, as this study collects texts and words from social media, neologisms that are not added to the conventional dictionary had to be added. To do so, Customized KoNLPy package in Python was used to add different neologisms and proper nouns related to ‘~Ridan-gil’ and its related places.

After preprocessing the collected text data, frequency of usage of different words was found. Then, top 100 words were extracted for each street and quarter.

### 4.2.3. Two-Stage Least Squares

As mentioned earlier, when there are multiple endogenous variables and the causal relationship between endogenous variables are intertwined, the model cannot be estimated using simple regression analysis such as OLS. In this case, building a system of simultaneous linear equations represent the reality more accurately (Jung & Kim, 2010 ; Heo et al., 2014 ; Ham & Son, 2012).

In this study, the relationship between vitalization of the commercial street and social media keyword groups was examined. As a mutual interactive relationship is present between the two variables, accordingly, system of simultaneous linear equations was developed.

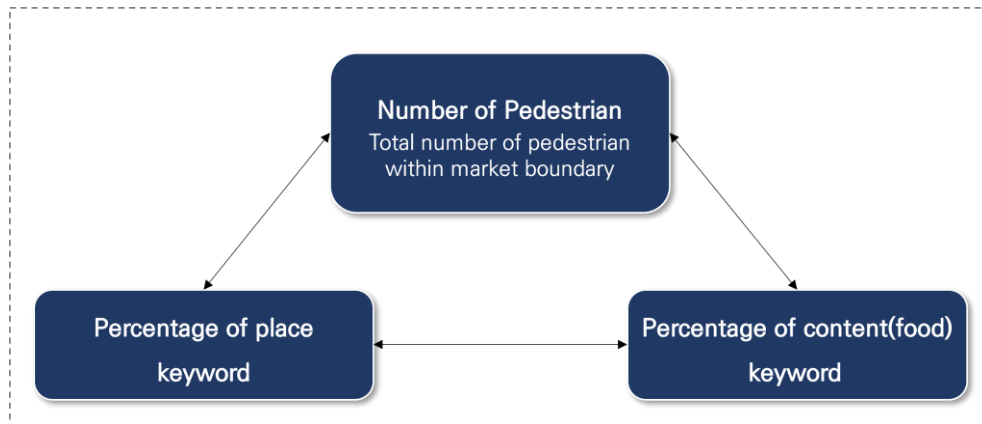
This study utilized the two-stage least squares (2sls), one the various techniques to estimate the simultaneous equation model. The two-stage least squares (2sls) is a statistical method use to estimate the causal effect of one variable on another when there is an endogenous explanatory variable (James & Singh, 1978; Bollen, 1996). The model works by regressing the endogenous variable on a set of instrumental variables. Instrumental variables are correlated with the endogenous variable but not correlated with the error term (Bound & Baker, 1995). To verify the accuracy of the developed model, adjusted R-squared was used.

To prove the hypothesis of this study and to evaluate the relationship between commercial vitalization of the 10 ‘~Ridan-gil’ commercial streets and its related social media posts, the 2sls model in this study is composed of 3 endogenous variables: number of pedestrians within market area, content (food) keyword ratio, and place keyword ratio. The reason why explanatory variable of each

keyword group was set as a percentage ratio rather than frequency was to control the different total number of posts per each commercial street.

As this study aims to reveal the relationship between the total number of pedestrians, place keyword group, and content(food) keyword group, the relationship between these 3 variables can be drawn as follows:

Figure 4.2. relationship between endogenous variables



#### 4.2.4. Data and Variables

To verify the hypothesis, variables representing the characteristics of ‘~Ridan-gil’ commercial streets and related spatial, socio-cultural factors were added. Most of the socio-cultural and commercial variables such as the total number of pedestrians within market boundary, the number of office workers, the number of stores, opening rate, closure rate, infrastructure, total quarterly revenue, and many more could be composed through Seoul Metropolitan Government’s Our Village Shop Trade Area Analysis Service. Variables related to physical and spatial characteristics of the commercial streets such as distance from the nearest subway station, average floor area ratio, average building coverage ratio, average number of floors in buildings, top floor of

buildings, average building age, and many more were obtained from Value Map and Seoul Open Data Plaza, and processed through Arc GIS program. The market boundary of the collected samples was defined by ‘market boundary shp file’ corresponding to each ‘~Ri-dangil’ commercial street. The was obtained from Seoul Metropolitan Government’s Our Village Shop Trade Area Analysis Service.

Table 4.3. Variables

Class	Variables	Source
Endogenous Variables	Number of Pedestrians	Seoul Our Village Shop Trade Area Analysis Service
	Content keyword percentage	Naver Blog Posts (Collected and preprocessed via Python)
	Place keyword percentage	
Exogenous Variables	Number of stores	Seoul Metropolitan Government’s Our Village Shop Trade Area Analysis Service
	Open rate	
	Closure rate	
	Number of franchise stores	
	Number of infrastructures	
	Distance with subway station	Value Map Seoul Open Data Plaza (processed via Arc GIS)
	Average floor area ratio	
	Average building coverage ratio	
	Average building age	
	Average building floors	

## Chapter 5. Results

### 5.1. Keyword Analysis Results

The keyword groups defined earlier in Section 3 of Chapter 2 are as follows:

Table 5.1. Keyword groups

Class	Keyword	Description
Commercial Keyword	Place	Words related to stores, buildings, location, and other spatial features that compose the commercial street
	Address	information on address of the commercial street and stores
	Transportation	transportation modes and public transportations
	Physical attributes	physical aspects of the commercial street and stores
	Nearby areas	Names of nearby areas of the commercial streets
	Feelings	Feeling and related adjectives
	Experience	Everyday life experience
‘~Ridan-gil’ Keyword	Operation	Words related to operation of different shops and stores
	Review	Words related to online reviews and posting
	Content (Food)	food and beverage business types which take up most of the commercial streets
	Other business type	Other types of business such as small-scale retail and sales, service
	Brand	Names of brands or stores
	Similar commercial Streets	Names of other ‘~Ridan-gil’ commercial streets and related areas
	Others	Words that may appear due to unique event or characteristics of the commercial street

In this section, patterns of the keyword groups per quarter will be observed according to the 10 ‘~Ridan-gil’ commercial streets. Keyword groups that take up more than 10% in all quarters will be mainly discussed in the section.

### 5.1.1. Gyeong-Ridan-gil

Table 5.2. Geyong-Ridan-gil keyword analysis result

Keywords	1 <sup>st</sup> quarter		2 <sup>nd</sup> quarter		3 <sup>rd</sup> quarter		4 <sup>th</sup> quarter	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Place	5,235	25.9	7,583	28.7	6,897	26.2	6,207	28.2
Address	1,398	6.9	1,997	7.6	1,924	7.3	1,748	8.0
Transportation	348	1.7	442	1.7	1,117	4.3	503	2.3
Similar commercial streets	1,582	7.9	1,820	6.9	1641	6.2	1,489	6.8
Nearby areas	820	4.1	1,417	5.4	1,693	6.4	1,282	5.8
Operation	1,730	8.6	2,587	9.8	2,134	8.1	2,097	9.5
Feelings	713	3.5	920	3.5	560	2.1	816	3.7
Reviews	1,472	7.3	1,798	6.8	1,936	7.4	1,495	6.8
Content(food)	4,142	20.5	4,657	17.6	4,986	19.0	3,638	16.5
Other business types	225	1.1	267	1.0	225	0.9	156	0.7
Brand	305	1.5	424	1.6	708	2.7	509	2.3
Experience	1,488	7.4	1,770	6.7	1,675	6.4	1,351	6.1
Physical attributes	504	2.5	614	2.3	560	2.1	607	2.8
Others (accommodation)	202	1.0	121	0.4	246	0.9	98	0.5

In the case of Gyeong-Ridan-gil, among the 14 groups of keywords classified, ‘Place’ and ‘Content(food)’ keyword group took the highest percentage ratio. Other keyword groups showed relatively low percentage ratio, taking less than 10% in all quarters.

Top 5 words<sup>3</sup> that showed high frequency in ‘Place’ keyword group were Café(1,465), Location(465), Atmosphere(344), Alley(216), and Building(195). Top 5 words that show high frequency in ‘Content(food)’ keywords were ‘Mat-jip’<sup>4</sup> (1664), ‘Pizza(420)’, ‘Brunch(340)’, Pizzeria(323), and Coffee(266).

Gyeong-Ridan-gil had additional keyword group which can be named as ‘Accommodation’. Words included in such keyword group were ‘Hotel’, and ‘Accommodation’.

### 5.1.2. Dosan Park

Table 5.3. Dosan Park keyword analysis result

Keywords	1 <sup>st</sup> quarter		2 <sup>nd</sup> quarter		3 <sup>rd</sup> quarter		4 <sup>th</sup> quarter	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Place	16,428	25.1	18,906	26.9	18,219	25.7	16,375	24.9
Address	5,599	8.6	5,377	7.6	6,383	9.0	6,651	10.1
Transportation	597	0.9	626	0.9	588	0.8	863	1.3
Similar commercial streets	289	0.4	288	0.4	288	0.4	287	0.4
Nearby areas	7,670	11.7	8,059	11.5	8,216	11.6	7,176	10.9
Operation	8,864	13.6	10,178	14.5	10,591	14.9	9,056	13.8
Feelings	2,462	3.8	1,982	2.8	1,901	2.7	1,493	2.3
Reviews	3,662	5.6	3,829	5.4	3,998	5.6	3,905	5.9
Content(food)	11,765	18.0	11,756	16.7	12,038	17.0	10,753	16.4
Other business types	1,065	1.6	836	1.2	485	0.7	1,386	2.1
Brand	3,295	5.0	3,445	4.9	3,356	4.7	2,910	4.4
Experience	2,222	3.4	3,440	4.9	3,669	5.2	3,626	5.5
Physical attributes	1,488	2.3	1,634	2.3	1,112	1.6	1,169	1.8

In the case of Dosan Park, keyword groups that take up more

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3. The top 5 words listed are based on the 1st quarter, and they show similar patterns in other quarters as well.

4. Mat-jip refers to stores selling delicious foods but today, they have the same meaning as the word ‘delicious’ itself.



than 10% in all quarters among the 13 keyword groups were ‘Place’, ‘Content(food)’, ‘Operation’ and ‘Nearby Areas’.

Top 5 words that showed highest frequency in ‘Place’ keyword group were ‘Café(3,604)’, ‘Park(1,579)’, ‘Location(1,345)’, ‘Nearby(1,285)’, and ‘Dosan(1,245)’. For ‘Content(food)’ keyword group, top 5 words that showed highest frequency were ‘Mat-jip(5,346)’, ‘Pizza(1,182)’, ‘Brunch(1,001)’, ‘Dessert(688)’, and ‘Coffee(638)’. The top 5 words included ‘Operation’ keyword group were ‘Reservation(941)’, ‘Waiting(854)’, ‘Menu(844)’, ‘Parking(622)’, and ‘Working(696)’. Top 5 words included in ‘Nearby Areas’ keyword group were ‘Apgujeong(4,002)’, ‘Cheongdam(2,139)’, ‘Cheongdam-dong(672)’, ‘Shinsa-dong(535)’, and ‘Rodeo(322)’.

### 5.1.3. Ttuk-eom

Table 5.4. Ttuk-Seom keyword analysis result

Keywords	1 <sup>st</sup> quarter		2 <sup>nd</sup> quarter		3 <sup>rd</sup> quarter		4 <sup>th</sup> quarter	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Place	27,277	24.6	40,270	36.3	41,569	37.4	36,684	33.0
Address	6,438	5.8	8,349	7.5	9,763	8.8	8,839	8.0
Transportation	15,111	13.6	19,515	17.6	20,629	18.6	20,140	18.1
Similar commercial streets	9,675	8.7	13,593	12.2	13,377	12.0	12,151	10.9
Nearby areas	3,133	2.8	5,114	4.6	4,943	4.5	4,151	3.7
Operation	10,650	9.6	14,671	13.2	14,837	13.4	15,812	14.2
Feelings	1,749	1.6	4,443	4.0	4,339	3.9	2,970	2.7
Reviews	5,730	5.2	8,694	7.8	8,801	7.9	7,826	7.0
Content(food)	16,406	14.8	19,762	17.8	20,633	18.6	18,377	16.5
Other business types	8,594	7.7	9,835	8.9	9,138	8.2	6,622	6.0
Brand	1,126	1.0	1,108	1.0	779	0.7	652	0.6
Experience	3,743	3.4	15,824	14.2	11,433	10.3	8,560	7.7
Physical attributes	1,439	1.3	2,743	2.5	3,485	3.1	2,420	2.2

In the case of Ttuk-Seom, keyword groups that take up more than 10% in all quarters among the 13 keyword groups were ‘Place’, ‘Content(food)’, and ‘Transportation’.

The top 5 words included in ‘Place’ keyword were ‘Café(7,012)’, ‘Exit(3,089)’, ‘Location(1,971)’, ‘Nearby(1971)’, and ‘Han-River(1,203)’. Top 5 words included in ‘Content(food)’ keyword group were ‘Mat-jip(8,669)’, ‘Coffee(1,460)’, ‘Cake(836)’, ‘Dessert(824)’, and ‘Wine(681)’. Top 5 words included in ‘Transportation’ keyword group were ‘Ttuk-Seom Station(9,490)’, ‘Seongsu Station(1,847)’, ‘Seoul Forest Station(1,229)’, ‘Line(1,115)’, and ‘Ttuk-Seom Yuwonji Station(948)’.

#### 5.1.4. Sharosu-gil

Table 5.5. Sharosu-gil keyword analysis result

Keywords	1 <sup>st</sup> quarter		2 <sup>nd</sup> quarter		3 <sup>rd</sup> quarter		4 <sup>th</sup> quarter	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Place	15,763	30.2	17,713	30.3	21,539	29.1	25,166	29.1
Address	2,744	5.3	2,869	4.9	4,204	5.7	5,291	6.1
Transportation	2,591	5.0	2,902	5.0	3,302	4.5	3,940	4.6
Similar commercial streets	0	0.0	0	0.0	0	0.0	0	0.0
Nearby areas	989	1.9	1,017	1.7	1,560	2.1	2,015	2.3
Operation	6,586	12.6	7,813	13.4	8,507	11.5	9,647	11.2
Feelings	1,936	3.7	2,004	3.4	2,886	3.9	3,181	3.7
Reviews	4,236	8.1	4,640	7.9	4,702	6.4	6,142	7.1
Content(food)	13,475	25.8	16,116	27.5	20,261	27.4	21,838	25.3
Other business types	377	0.7	1,039	1.8	1,174	1.6	1,139	1.3
Brand	886	1.7	0	0.0	1,211	1.6	2,456	2.8
Experience	2,136	4.1	1,865	3.2	4,161	5.6	4,946	5.7
Physical attributes	444	0.9	544	0.9	446	0.6	680	0.8

In the case of Sharosu-gil, keyword groups that take up more than 10% in all quarters among the 13 keyword groups were ‘Place’, ‘Content(food)’, and ‘Operation’. Sharosu-Gil did not have any words related to ‘Similar Commercial Streets’ keyword groups in all quarters.

Top 5 words included in ‘Place’ keyword group were ‘Café(3,684)’, ‘Entrance(2,703)’, ‘Location(1,257)’, ‘Nakseong-dae(897)’, and ‘Nearby(589)’. The top 5 words included in ‘Content(food)’ keyword group were ‘Mat-jip(5,503)’, ‘Coffee(731)’, ‘Dessert(695)’, ‘Cake(695)’, and ‘Meat(476)’. The top 5 words included in ‘Operation’ keyword group were ‘Menu(773)’, ‘Waiting(585)’, ‘Dinner(549)’, ‘Working(543)’, and ‘Table(410)’.

### 5.1.5. Seoul Forest

Table 5.6. Seoul Forest keyword analysis result

Keywords	1 <sup>st</sup> quarter		2 <sup>nd</sup> quarter		3 <sup>rd</sup> quarter		4 <sup>th</sup> quarter	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Place	27,868	21.9	39,306	15.4	37,660	15.9	39,701	20.4
Address	9,675	7.6	12,693	5.0	15,682	6.6	14,255	7.3
Transportation	7,090	5.6	8,921	3.5	9,441	4.0	9,695	5.0
Similar commercial streets	9,706	7.6	14,109	5.5	13,963	5.9	13,897	7.2
Nearby areas	2,656	2.1	5,477	2.1	6,443	2.7	2,655	1.4
Operation	13,831	10.9	23,859	9.3	22,336	9.4	23,278	12.0
Feelings	3,227	2.5	8,440	3.3	6,558	2.8	8,395	4.3
Reviews	8,042	6.3	15,076	5.9	12,646	5.3	13,039	6.7
Content(food)	19,671	15.5	26,455	10.4	25,134	10.6	27,742	14.3
Other business types	9,009	7.1	10,523	4.1	6,104	2.6	10,279	5.3
Brand	2,203	1.7	1,546	0.6	1,566	0.7	1,697	0.9
Experience	9,883	7.8	39,984	15.7	22,732	9.6	25,092	12.9
Physical attributes	4,202	3.3	6,272	2.5	6,229	2.6	4,621	2.4

Other (Construction)	0	0.0	42,610	16.7	50,080	21.2	0	0.0
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For Seoul Forest, the keyword groups that take up more than 10% in all quarters among the 14 keyword groups were ‘Place’, and ‘Content(food)’. There was an additional keyword group. The words included in ‘Others’ group were ‘Safety Education’, ‘Basic’, ‘Education’, ‘Construction’, ‘Safety’, ‘Health’, ‘Industry’, ‘Blue–Collar’, and many more. From this, the keyword group can be named as ‘Construction’.

The top 5 words included in ‘Place’ keyword group were ‘Café(8,137)’, ‘Location(2,466)’, ‘Nearby(1,998)’, ‘Exit(1,856)’, and ‘Park(1,650)’. The top 5 words included in ‘Contents(food)’ keyword group were ‘Mat–jip(8,642)’, ‘Cake(2,683)’, ‘Coffee(1,578)’, ‘Pizza(1,126)’, and ‘Dessert(950)’.

### 5.1.6. Seongsu–dong

Table 5.7. Seongsu–dong keyword analysis result

Keywords	1 <sup>st</sup> quarter		2 <sup>nd</sup> quarter		3 <sup>rd</sup> quarter		4 <sup>th</sup> quarter	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Place	48,741	23.7	46,176	18.1	67,261	24.4	66,979	23.8
Address	16,146	7.8	20,718	8.1	20,016	7.3	19,638	7.0
Transportation	6,607	3.2	7,361	2.9	8,499	3.1	9,197	3.3
Similar commercial streets	7,284	3.5	11,206	4.4	10,891	3.9	10,859	3.9
Nearby areas	4,945	2.4	6,081	2.4	5,287	1.9	3,333	1.2
Operation	25,810	12.5	32,566	12.8	35,058	12.7	36,948	13.1
Feelings	7,218	3.5	8,873	3.5	11,387	4.1	10,545	3.7
Reviews	14,486	7.0	17,921	7.0	20,536	7.4	20,883	7.4
Content(food)	34,281	16.6	37,099	14.6	45,038	16.3	47,652	16.9
Other business types	16,740	8.1	23,188	9.1	23,110	8.4	23,073	8.2
Brand	1,195	0.6	4,328	1.7	3,400	1.2	3,708	1.3

<b>Experience</b>	8,237	4.0	13,038	5.1	15,698	5.7	17,930	6.4
<b>Physical attributes</b>	7,276	3.5	8,252	3.2	8,407	3.0	8,189	2.9
<b>Other (House Maintenance)</b>	6,980	3.4	6,081	2.4	1,223	0.4	2,910	1.0

In the case of Seongsu-dong, keyword groups that take up more than 10% in all quarters among the 14 keyword groups were ‘Place’, ‘Content(food)’, and ‘Operation’. The words included in ‘Other’ group were ‘Glass’, ‘Partition’, ‘Fix’, ‘Insect-repellant’ and many more. From the words included, the additional keyword group can be named as ‘Housing Maintenance’.

The top 5 words included in ‘Place’ keyword group were ‘Café(16,665)’, ‘Location(4,011)’ , ‘Atmosphere(2,618)’, ‘Hot-Ple(2,374)<sup>5</sup>’, and ‘Restaurant(2,209)’. The top 5 words included in ‘Content(food)’ keyword group were ‘Mat-jip(15,418)’, ‘Coffee(3,144)’, ‘Cake(2,583)’, ‘Dessert(1,897)’, and ‘Wine(1,897)’. Top 5 words included in ‘Operation’ keyword group were ‘Menu(2,299)’, ‘Reservation(2,163)’, ‘Waiting(1,970)’, ‘Open(1,832)’, and ‘Weekends(1,724)’.

### 5.1.7. Song-Ridan-gil

Table 5.8. Song-Ridan-gil keyword analysis result

Keywords	1 <sup>st</sup> quarter		2 <sup>nd</sup> quarter		3 <sup>rd</sup> quarter		4 <sup>th</sup> quarter	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Place	17,500	21.5	22,221	21.0	21,193	20.4	24,161	18.8
Address	11,631	14.3	13,926	13.1	13,990	13.4	16,976	13.2
Transportation	1,263	1.6	1,435	1.4	1,519	1.5	1,959	1.5
Similar commercial streets	0	0.0	0	0.0	0	0.0	438	0.3
Nearby areas	5,302	6.5	8,343	7.9	7,038	6.8	9,267	7.2

<sup>5</sup> Abbreviation for ‘hot place’

Operation	10,892	13.4	15,625	14.8	15,890	15.3	18,600	14.5
Feelings	2,172	2.7	2,617	2.5	2,744	2.6	4,929	3.8
Reviews	6,409	7.9	7,267	6.9	7,498	7.2	9,471	7.4
Content(food)	18,432	22.6	23,662	22.3	23,952	23.0	29,408	22.9
Other business types	1,855	2.3	1,708	1.6	1,666	1.6	661	0.5
Brand	964	1.2	635	0.6	1,069	1.0	3,010	2.3
Experience	3,975	4.9	7,583	7.2	6,382	6.1	8,135	6.3
Physical attributes	1,056	1.3	883	0.8	1,092	1.0	1,411	1.1

In the case of Song–Ridan–gil, keyword groups that take up more than 10% in all quarters among the 13 keyword groups were ‘Place’, ‘Content(food)’, and ‘Operation’.

The top 5 words included in ‘Place’ keyword group were ‘Café(7,735)’, ‘Location(1,618)’, ‘Atmosphere(1,139)’, ‘Nearby(846)’, and ‘Restaurant(793)’. Top 5 words included in ‘Content(food)’ keyword group were ‘Mat–jip(7,895)’, ‘Coffee(1,116)’, ‘Pasta(1,006)’, ‘Dessert(946)’, and ‘Cake(785)’. Top 5 words included in ‘Operation’ keyword group were ‘Waiting(1,343)’, ‘Menu(1,012)’, ‘Working(773)’, ‘Dinner(697)’, and ‘Reservation(650)’.

### 5.1.8. Yeontral Park

Table 5.9. Yeontral Park keyword analysis result

Keywords	1 <sup>st</sup> quarter		2 <sup>nd</sup> quarter		3 <sup>rd</sup> quarter		4 <sup>th</sup> quarter	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Place	5,290	30.3	7,593	30.3	7,393	27.5	6,953	26.8
Address	1,451	8.3	2,247	9.0	2,296	8.5	2,680	10.3
Transportation	446	2.6	554	2.2	747	2.8	738	2.8
Similar commercial streets	0	0.0	0	0.0	0	0.0	0	0.0
Nearby areas	1,330	7.6	2,028	8.1	1,645	6.1	1,492	5.8

Operation	1,998	11.4	2,515	10.0	3,015	11.2	2,931	11.3
Feelings	615	3.5	846	3.4	1,003	3.7	789	3.0
Reviews	1,034	5.9	1,392	5.6	1,652	6.1	1,744	6.7
Content(food)	3,633	20.8	4,918	19.6	6,288	23.4	5,724	22.1
Other business types	64	0.4	248	1.0	0	0.0	126	0.5
Brand	0	0.0	0	0.0	223	0.8	83	0.3
Experience	1,288	7.4	2,258	9.0	2,200	8.2	2,223	8.6
Physical attributes	321	1.8	432	1.7	433	1.6	459	1.8

In the case of Yeontral Park, keyword groups that take up more than 10% in all quarters among the 13 keyword groups were ‘Place’, ‘Content(food)’, and ‘Operation’.

The top 5 words included in ‘Place’ keyword group were ‘Café(1,237)’, ‘Location(605)’, ‘Exit(380)’, ‘Atmosphere(310)’, and ‘Alley(266)’. Top 5 words included in ‘Content(food)’ keyword group were ‘Mat-jip(1,771)’, ‘Pasta(226)’, ‘Coffee(209)’, ‘Dessert(201)’, and ‘Cake(145)’. The top 5 words included in ‘Operation’ keyword group were ‘Working(189)’, ‘Menu(188)’, ‘Reservation(165)’, ‘Waiting(163)’, and ‘Seats(121)’.

### 5.1.9. Yeonhui-dong

Table 5.10. Yeonhui-dong keyword analysis result

Keywords	1 <sup>st</sup> quarter		2 <sup>nd</sup> quarter		3 <sup>rd</sup> quarter		4 <sup>th</sup> quarter	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Place	14,628	19.4	16,392	20.0	17,587	20.8	15,938	18.5
Address	4,894	6.5	5,809	7.1	5,565	6.6	5,082	5.9
Transportation	0	0.0	0	0.0	451	0.5	0	0.0
Similar commercial streets	3,432	4.5	3,612	4.4	3,847	4.5	4,263	5.0
Nearby areas	6,519	8.6	7,373	9.0	7,860	9.3	10,633	12.4
Operation	9,782	13.0	9,803	11.9	9,885	11.7	8,450	9.8

Feelings	1,858	2.5	2,130	2.6	3,119	3.7	3,121	3.6
Reviews	4,968	6.6	5,037	6.1	5,318	6.3	5,741	6.7
Content(food)	12,841	17.0	11,670	14.2	13,478	15.9	13,326	15.5
Other business types	6,522	8.6	7,339	8.9	6,269	7.4	5,768	6.7
Brand	872	1.2	967	1.2	487	0.6	0	0.0
Experience	3,676	4.9	4,942	6.0	4,978	5.9	5,248	6.1
Physical attributes	1,832	2.4	2,052	2.5	2,412	2.9	1,917	2.2
Others (Housing Maintenance)	3621	4.8	4908	6.0	3374	4.0	6,471	7.5

In the case of Yeonhui-dong, keyword groups that take up more than 10% in all quarters among the 14 keyword groups were ‘Place’, and ‘Content(food)’. Additional keyword group which includes words like ‘Cleaning’, ‘Change’, ‘Company’, ‘Carpentry’, ‘Moving’, ‘Construction’ and many more were observed. By the words included, the keyword group can be named as ‘Housing Maintenance’.

The top 5 words included in ‘Place’ keyword group were ‘Café(5,170)’, ‘Location(1,403)’, ‘Atmosphere(877)’, ‘Apartment(839)’ and ‘Nearby(697)’. Top 5 words included in ‘Content(food)’ keyword group were ‘Mat-jip(3,936)’, ‘Cake(2,418)’, ‘Coffee(1,779)’, ‘Bread(729)’, and ‘Brunch(659)’.

#### 5.1.10. Haebang-chon

Table 5.11. Haebang-chon keyword analysis result

Keywords	1 <sup>st</sup> quarter		2 <sup>nd</sup> quarter		3 <sup>rd</sup> quarter		4 <sup>th</sup> quarter	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Place	8,079	24.6	12,982	26.0	13,765	25.5	10,727	26.4
Address	2,180	6.6	3,489	7.0	3,738	6.9	3,126	7.7
Transportation	582	1.8	997	2.0	1,222	2.3	691	1.7
Similar commercial streets	411	1.3	629	1.3	534	1.0	506	1.2



Nearby areas	3,020	9.2	4,910	9.8	5,133	9.5	3,825	9.4
Operation	3,628	11.0	5,561	11.1	5,832	10.8	4,739	11.7
Feelings	1,569	4.8	2,363	4.7	2,953	5.5	2,021	5.0
Reviews	2,697	8.2	3,465	6.9	3,827	7.1	2,840	7.0
Content(food)	6,603	20.1	9,427	18.9	10,629	19.7	7,242	17.8
Other business types	450	1.4	474	1.0	492	0.9	186	0.5
Brand	967	2.9	788	1.6	237	0.4	193	0.5
Experience	2,260	6.9	4,214	8.4	4,925	9.1	4,019	9.9
Physical attributes	419	1.3	576	1.2	683	1.3	475	1.2

In the case of Haebang-chon, keyword groups that take up more than 10% in all quarters among the 13 keyword groups were ‘Place’, ‘Content(food)’, and ‘Operation’.

The top 5 words included in ‘Place’ keyword group were ‘Café(2,719)’, ‘Atmosphere(598)’, ‘Location(560)’, ‘Restaurant(409)’, and ‘Roof-top(397)’. Top 5 words included in ‘Content(food)’ keyword group were ‘Mat-jip(2,020)’, ‘Coffee(808)’, ‘Pizza(526)’, ‘Wine(390)’ and ‘Brunch(389)’. Top 5 words included in ‘Operation’ keyword group were ‘Reservation(437)’, ‘Menu(419)’, ‘Dinner(303)’, ‘Seats(274)’, and ‘Working(270)’.

#### 5.1.11. Sub-Conclusion

Among all 10 ‘~Ridan-gil’ commercial streets and its keyword groups, the keyword groups that took over 10% in all quarters and streets were ‘Place’ and ‘Content(food)’. This verifies the first hypothesis of this research. The first hypothesis of this research is as follows:

- 1) Among the 14 keyword groups suggested in Section 3 of Chapter 2, ‘Place’ keyword group and ‘Content(food)’ keyword group would take most of the percentage ratio.

Previous studies suggest that people visit ‘~Ridan-gil’ commercial streets for its aesthetic image. Other empirical studies suggest food business and young consumers are variables positively related to commercial gentrification. As ‘Place’ keywords and ‘Content(food)’ keywords showed dominant pattern in all commercial streets and quarters, the first hypothesis of this research is accepted.

Words mostly included in ‘Place’ keyword group were ‘Café’, ‘Atmosphere’, ‘Location’, ‘Exit’, ‘Entrance’, ‘Alley’, ‘Apartment’, ‘Stores’, ‘Restaurant’, ‘Parks’, ‘Roof-top’ and many more. From such pattern, it can be inferred that place characteristics such as spatial, physical, locational image of the commercial streets are recognized through various aesthetic image, and physical forms and environment. Words mostly included in ‘Content(food)’ keyword groups were ‘Coffee’, ‘Bread’, ‘Dessert’, ‘Brunch’, ‘Pasta’, ‘Coffee’, ‘Cake’ and many more. These mostly refer to western, cuisine and desserts.

Furthermore, the unique characteristics or events of the commercial streets did have a significant effect in patterns of commercial street related keywords on social media.

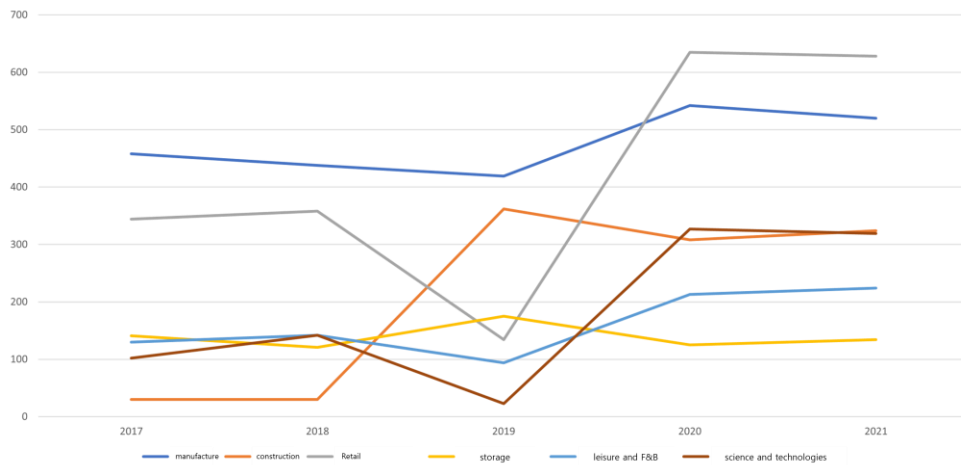
For instance, Gyeong-Ridan-gil had an extra keyword group named ‘Accommodation’. This may be because some of the famous 5-star hotels such as the ‘Grand Hyatt Seoul’, and ‘Mondrian Itaewon’ are located nearby.

Seongsu-Dong and Yeonhui-Dong had an additional keyword group as well. The keyword group was named ‘Housing Maintenance’, as the words included in the keyword group were ‘Glass’, ‘Partition’, ‘Fix’, ‘Insect-repellant’, ‘Cleaning’, ‘Change’, ‘Company’, ‘Carpentry’, ‘Moving’, ‘Construction’, and many more. This may be because villas and houses are concentrated in these commercial streets.

Seoul Forest also had an extra keyword group named ‘Construction’. The words included in the keyword group were ‘Safety education’, ‘Basic’, ‘Education’, ‘Construction’, ‘Safety’,

‘Health’, ‘Industry’, ‘Blue-Collar’, and many more. This may be due to the increase of construction related industry in Sungdong-Gu 1ga-1dong, where Seoul Forest is located. According to Seoul Open Data Plaza, the number of construction business increased rapidly from year 2018 to 2019. This could be the reason behind the additional keyword.

Figure 5.1. number of different business types



Reference: Seoul Open Data Plaza, Accessed: 2023-06-28

[https://stat.seoul.go.kr:443/statHtml/statHtml.do?orgId=201&tblId=DT\\_201004\\_0040004\\_2017&conn\\_path=12](https://stat.seoul.go.kr:443/statHtml/statHtml.do?orgId=201&tblId=DT_201004_0040004_2017&conn_path=12)

## 5.2. Two-Stage Least Squares Model Result

In order to derive system of linear equations models, 3 OLS models on 3 endogenous variables were developed. The adjusted coefficient of determination, adjusted R-squared, of multi regression models on ‘number of pedestrians within market boundary’, ‘place keyword percentage ratio’, and ‘content(food) keyword percentage ratio’ were each 0.84, 0.55, and 0.84. Most of the independent variables included in the model were significant under significant level of 0.05. As the VIF of each variable is lower than 10, there were no multicollinearity between the variables.

In case of 2sls models developed through the OLS models, there was a small decrease in adjusted R-squared of the three models and the significance rate of the independent variables. The adjusted R-squared of 2sls models on ‘number of pedestrians within market boundary’, ‘place keyword percentage ratio’, and ‘content(food) keyword percentage ratio’ were 0.83, 0.53, and 0.78 each. There was no multicollinearity between dependent variables as VIF of each variable was lower than 10.

Table 5.12. number of pedestrians OLS model

variables	Coefficient	Std. Error	t-value	p-value	VIF
intercept	-1,526,672	238,575	-6.40	0.000	–
place keyword percentage	-33,249	10,154	-3.27	0.002	1.62
content(food) keyword percentage	137,263	15,996	8.58	0.000	2.24
number of stores	28,016	5,803	4.83	0.000	1.76
number of infrastructures	16,547	4,206	3.93	0.000	1.28
number of franchise stores	174,930	52,578	3.33	0.001	1.87
2 <sup>nd</sup> quarter	250,431	108,142	2.32	0.024	1.67
3 <sup>rd</sup> quarter	91,819	105,238	0.87	0.386	1.58
4 <sup>th</sup> quarter	68,786	105,428	0.65	0.516	1.58
number of samples: 79, Adjusted R-squared: 0.84					

Table 5.13. percentage of place keywords OLS model

variables	Coefficient	Std. Error	t-value	p-value	VIF
intercept	-28.52	9.71	-2.94	0.00	-
number of pedestrians	-0.00	0.00	-5.92	0.00	4.21
content(food) keyword percentage	1.49	0.20	7.54	0.00	3.75
distance with subway station	-0.00	0.00	-2.47	0.02	1.45
building coverage ratio	0.43	0.15	2.85	0.01	1.62
number of infrastructures	0.19	0.06	3.50	0.00	2.44
average building age	0.13	0.10	1.24	0.22	2.01
average building floor	0.45	0.49	0.93	0.36	1.30
2 <sup>nd</sup> quarter	2.20	1.07	2.07	0.04	1.78
3 <sup>rd</sup> quarter	1.36	1.00	1.37	0.18	1.56
4 <sup>th</sup> quarter	1.22	1.00	1.22	0.23	1.57
number of samples: 79, Adjusted R-squared: 0.55					

Table 5.14. percentage of content (food) keywords OLS model

variables	Coefficient	Std. Error	t-value	p-value	VIF
intercept	12.90	1.19	10.86	0.00	
number of pedestrians	0.00	0.00	12.06	0.00	1.14
place keyword percentage	0.28	0.04	7.69	0.00	1.10
average building age	-0.22	0.03	-6.66	0.00	1.05
1 <sup>st</sup> quarter	1.76	0.45	3.95	0.00	1.49
2 <sup>nd</sup> quarter	1.05	0.44	2.38	0.02	1.51
3 <sup>rd</sup> quarter	0.97	0.44	2.20	0.03	1.50
number of samples: 79, Adjusted R-squared: 0.84					

Table 5.15. number of pedestrians 2sls model

variables	Coefficient	Std. Error	t-value	p-value	VIF
intercept	-1,906,928	437,326	-4.36	0.00	
place keyword percentage	-26,620	11,167	-2.38	0.02	1.61
content (food) keyword percentage	148,723	27,912	5.33	0.00	5.69
number of stores	25,826	8,281	3.12	0.00	2.48
number of infrastructures	18,456	5,794	3.19	0.00	1.38
number of franchise stores	176,422	75,901	2.32	0.02	3.01
2 <sup>nd</sup> quarter	330,406	297,771	1.11	0.27	5.22
3 <sup>rd</sup> quarter	116,512	331,576	0.35	0.73	2.98
4 <sup>th</sup> quarter	95,777	126,702	0.76	0.45	1.43
number of samples: 79, Adjusted R-squared: 0.83					

Table 5.16. percentage of place keywords 2sls model

variables	Coefficient	Std. Error	t-value	p-value	VIF
intercept	-35.97	10.28	-3.50	0.00	
number of pedestrians	-0.00	0.00	-6.34	0.00	5.17
content (food) keyword percentage	1.66	0.22	7.66	0.00	4.37
distance with subway station	-0.00	0.00	-2.71	0.01	1.49
building coverage ratio	0.51	0.16	3.21	0.00	1.70
number of infrastructures	0.23	0.06	3.95	0.00	2.68
average building age	0.12	0.11	1.16	0.25	2.08
average building floor	0.65	0.50	1.29	0.20	1.33
2 <sup>nd</sup> quarter	3.02	1.43	2.12	0.04	1.86
3 <sup>rd</sup> quarter	2.09	1.72	1.22	0.23	1.19
4 <sup>th</sup> quarter	1.30	1.15	1.13	0.26	1.42
number of samples: 79, Adjusted R-squared: 0.53					

Table 5.17. percentage of content (food) keywords 2sls model

variables	Coefficient	Std. Error	t-value	p-value	VIF
intercept	13.97	1.49	9.36	0.00	
number of pedestrians	0.00	0.00	10.85	0.00	1.18
place keyword percentage	0.19	0.05	4.24	0.00	1.17
average building age	-0.24	0.04	-5.28	0.00	1.19
1 <sup>st</sup> quarter	2.67	0.77	3.47	0.00	1.23
2 <sup>nd</sup> quarter	2.11	0.96	2.19	0.03	1.19
3 <sup>rd</sup> quarter	2.88	1.20	2.40	0.02	1.07
number of samples: 79, Adjusted R-squared: 0.78					

The second hypothesis of this research is as follows:

- 2) **Consumer-gathering effect of place related keywords is stronger than that of contents(food) related keywords.**

Previous studies suggest that aesthetic image and unique spatial features of ‘~Ridan-gil’ gather visitors to the commercial streets. However, as such studies were mainly comprised of interviews, case studies and observations, its effect had to be verified through empirical analysis.

The result of empirical analysis in this study rejects the second hypothesis. The results of the 2sls model suggest that there is a negative(-) relationship between percentage of place related keyword group and the number of pedestrians within market boundary of ‘~Ridan-gil’ commercial streets. On the other hand, the percentage of content(food) related keyword group turned out to have positive(+) relationship with the number of pedestrians within market boundary.

This implies the place selection of consumers on ‘~Ridan-gil’ commercial streets are mainly caused by food and beverage related contents, which take up the majority of business types that comprise the commercial streets.

However, the percentage of place related keyword group and

content(food) related keyword group turned out to have a positive(+) relationship with each other. This suggests that among the 14 different keyword groups, the two keyword groups display complementary relationship with each other.

Previous studies on the characteristics of ‘~Ridan-gil’ commercial streets suggest that they are located in areas that lack accessibility and are separated from previous central commercial areas. However, the result of the empirical analysis showed that the number consumer gathering infrastructure including bus stations has positive(+) impact on the number of pedestrians. This implies that although the lack of accessibility is supplemented through marketing effects of social media, public transportation and other consumer gathering infrastructures play an important role in vitalizing the commercial streets.



## Chapter 6. Conclusion

The purpose of this study was to examine the patterns of the posts, language and types of keywords used to describe the ‘~Ridan–gil’ commercial streets on social media, and empirically analyze their relationship with vitalization of the commercial streets.

To do so, previous studies were examined to define different keyword groups related to ‘~Ridan–gil’ commercial streets. After so, the words collected through web crawling were classified into each keyword group. The patterns of each keyword group were then examined to verify the first hypothesis of this study. As the result, the two keyword groups showed dominant patterns among all 10 ‘~Ridan–gil’ commercial streets in all quarters. They were ‘Place’ keywords and ‘Content(food)’ keywords. Thus, the first hypothesis of this research was accepted.

To verify the second hypothesis of this study, an empirical model was developed to analyze the relationship between commercial vitalization, and the two keyword groups. A 2sls models on the relationship between the ‘number of pedestrians within market boundary’, ‘place keyword percentage ratio’, and ‘content(food) keyword percentage ratio’ were developed. While interviews, case studies, and observations from precedent studies suggested that place image, spatial and physical aspects of ‘~Ridan–gil’ commercial streets attract people to the area, the empirical analysis of this study suggested otherwise. ‘Content(food)’ related keywords had positive(+) impact on consumer attraction while ‘Place’ keywords, the opposite. Thus, the second hypothesis of this study was rejected. Rather, as the two keyword groups had positive(+) effect on each other, their relationship is complementary.

The policy implication derived from the results of this study are as follows.

As place related keywords and content(food) related keywords showed dominant pattern among all groups of keywords, consumers

recognize ‘~Ridan–gil’ commercial streets in terms of its spatial and aesthetic features and foods and beverages that they can enjoy.

While so, social media posts that attract people are posts about contents related to foods and beverages. Place related features only showed complementary relationship with foods and beverages.

This suggests that in terms of commercial regeneration, development of contents related to foods and beverages are more practical ways of revitalization than conventional urban regeneration methods such as renovations of physical environment of dilapidated downtown areas.

Moreover, although the lack of accessibility in ‘~Ridan–gil’ commercial streets are known to be complemented by marketing effects of social media, public transportation, and other related infrastructure play an important role in consumer attraction. Therefore, measures in improving the accessibility of such commercial streets are needed.

‘~Ridan–gil’ commercial streets have developed into a new form of urban tourism as its related commercial streets went viral on social media. The contents and spatial aspects that comprise such commercial area had been studied and benchmarked by various urban regeneration projects. However, such effort could not bring effective solutions to vitalize the dilapidated downtown areas. Rather, new ‘~Ridan–gil’ commercial streets have been spontaneously appearing over time. This research has its significance in its effort to describe the patterns of consumer behavior on social media about the commercial streets and analyze the relationship each keyword group has with vitalization of the commercial streets. Although the low coefficient of determination on place related keyword group model and small decrease in adjusted R–squared value of the 2sls models stand out as features to be complemented, the result and implications of this study can be used in fields related to commercial regeneration, street revitalization, cultural street vitalization and social media marketing. Further studies may include analysis on factors related to spontaneous appearance and decline of new ‘~Ridan–gil’ commercial streets and its lifecycle.

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## 국문 초록

본 연구는 소비자들이 ‘~리단길’ 소규모 골목상권을 인식하고 묘사하는 과정 및 패턴을 살펴보고 이것이 상권 활성화와 상권의 특성 및 상권 활성화와 어떠한 관계가 있는지 살펴본다. 본 연구는 두 부분으로 구성된다. 먼저 소비자들이 장소를 인식하고 이를 인터넷에 게시할 때 사용되는 키워드를 유형별로 정의하고 각 유형의 패턴을 살펴본다. 이를 위해 먼저 선행연구를 통해 ‘~리단길’과 관련된 키워드를 유형화 및 정의하였다. 이후 웹 크롤링을 통해 연구의 대상으로 지정한 10개 ‘~리단길’ 상권과 관련된 2022년 네이버 블로그 포스트를 수집하고, 수집한 텍스트 정보를 정제하여 각 유형에 따라 분류하였다. 분석 결과, 상권의 장소와 콘텐츠(음식)과 관련된 키워드 유형의 빈도가 모든 상권 및 분기에서 압도적으로 높은 것으로 나타났다. 이는 소비자들이 ‘~리단길’ 상권을 인식할 때 상권의 공간, 물리적 요소와 요식업과 관련된 요소들을 함께 인식함을 나타낸다.

본 연구의 두번째 부분으로는 앞서 가장 높은 빈도를 나타낸 장소 키워드와 콘텐츠(음식) 키워드 유형이 상권 활성화의 대리 변수인 상권 별 총 통행량과 어떠한 관계를 갖고 있는 지 분석하였다. 이를 위해 위 세개의 내생변수에 대한 OLS 모형을 구축하고 이를 2sls 연립방정식 체계로 구성하였다. 분석 결과, 장소와 관련된 키워드 유형과 콘텐츠(음식)과 관련된 키워드 유형이 타 유형보다 압도적으로 높은 빈도를 나타냈다.

‘~리단길’ 상권의 활성화 요인에 대한 다양한 인터뷰, 사례조사, 참여관찰 등을 실행한 선행연구 등에 따르면 상권의 미적 요소가 소비자들의 재방문 의사에 긍정적인 영향을 미치는 것으로 나타나는 반면, 본 연구의 실증 분석 결과는 다른 양상을 나타냈다. 콘텐츠(음식)과 관련된 키워드 유형이 상권의 통행량의 유의한 양(+)의 영향을 미치는 것으로 나타났으며 장소 관련 키워드의가 음(-)의 영향을 미치는 것으로 나타났다. 두 키워드 유형은 서로 긍정적인 영향을 미치는 것으로 나타났으며 이는 장소와 관련된 키워드 유형이 오히려 콘텐츠(음식) 관련 키워드와 상호 보완적 관계를 나타냄을 시사한다.

본 연구의 결과를 종합했을 때, 상업적 도시재생의 일환으로 골목상권 및 낙후된 기존 상권의 물리적 환경에 대한 리모델링을 하는 것 보다는 상권과 관련된 다양한 콘텐츠, 특히 독창적이고 창의적인 요식업 관련 콘텐츠를 모색하고 유치하는 것이 더욱 효과적인 방법으로 사료된다.

더불어, ‘~리단길’ 특성과 관련된 선행연구에 따르면 해당 상권의 접근성의 부재가 SNS를 통한 마케팅 효과에 의해 보완되는 것으로 나타나지만, 버스정류장을 포함한 집객시설의 개수가 통행량에 긍정적인 영향을 미치는 것으로 나타났다. 상권의 입지적 특성에도 불구하고 대중교통 접근성이 상권의 통행량 및 활성화에 유의하게 작용하며 이와 관련된 시설을 보강하는 것이



필요한 것으로 사료된다.

본 연구는 현대 도시민들의 주요 소통 창구로 사용되는 SNS와 새로운 도시 소비 및 관광 문화의 요충지인 ‘~리단길’ 골목상권의 관계를 분석한 것에 의의를 갖는다. 본 연구의 결과 및 시사점은 상업도시재생, 문화가로 활성화, 인터넷 및 SNS 마케팅 등 분야에서 사용될 수 있을 것으로 생각된다.

**주요어** : ~리단길, 상업활성화, 웹 크롤링, 키워드 유형, 2sls, 상업 도시재생

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