IBFR
www.theIBFR.com

CRITICAL SUCCESS FACTORS FOR BUSINESS DISTRICT OPERATIONS IN TAIWAN

Cheng-Sheng Tung, Feng Chia University
Feng-Jyh Lin, Feng Chia University

ABSTRACT

This study examined the Dakeng Business District in Taichung, Taiwan in terms of the critical success factors for business district operation. Three dimensions, namely spatial design, service quality, and marketing and promotion, and 17 evaluation criteria were used, and a simple regression analysis was performed to identify the relationship between tourist loyalty and critical success factors. The results indicated that the critical success factors used in this study can serve as a reference for the Dakeng Business District, related municipal government agencies, and scholars researching business districts and their development. In terms of academic contributions, this study developed an evaluation framework for critical success factors for the operation of business districts.

JEL: M2, R1

KEYWORDS: Business District, Business Management, Critical Success Factors

INTRODUCTION

With the effects of department stores, shopping malls, and nonstore selling, traditional stores have transformed into business district brands characterized by agglomeration and the new trend of urban tourism marketing. A business district is a nonprofit organization. Business districts value the ideals advocated by the public, and well-organized, well-managed business districts can influence public affairs and transform society.

The Dakeng Business District in Taichung, Taiwan was registered in 2003. Located at the entrance to the Dakeng Scenic Area, the Dakeng Business District was formed by combining adjacent shops and stores. It is a major rest stop in the Dakeng Scenic Area. According to survey data from the Tourism and Tourism Bureau of Taichung City Government, visitors to business district and its turnover have increased each year. Therefore, this study investigates why the Dakeng Business District remains unaffected by certain changes from the perspective of its service quality, organization, operation, management, marketing, promotion, and spatial design. This study also identifies the advantages of developing the Dakeng Business District and the critical success factors for its operation to ensure its future success.

LITERATURE REVIEW

The literature review of this study is divided into three parts, namely business districts, business management, and critical success factors, to investigate the formation of a benign system of interactions between business districts and business management. This study creates a questionnaire based on critical success factors and distributes it to consumers who frequent the Dakeng Business District during their leisure time. The responses to questionnaire are analyzed to create a weighted ranking of the critical success factors for the software and hardware of the business district. The results can serve as reference for the

development of business management models of the Dakeng Business District and other enterprises, and the literature review and data can serve as reference for future research.

Scholars have suggested that a business district is a geographical area (Huff, 1964; Qiao & Peng, 2016) comprising several main streets and neighboring areas (Geisman, 2004; Osano & Languitone, 2016; Peng et al., 2020). A business district is a geographic area in which two or more retail stores converge and consumers shop (Berman & Evans, 1995; Brooks & Young, 1996; Osoba, 2012). The geographical area of a business district houses local residents who share their shopping spaces with tourists (Snepenger et al., 2003; Furlan et al., 2019). A business district attracts the public for consumption and entertainment (Lewison, 1991). The main factor affecting the development of a business district is the ability of its stores to provide products and services that satisfy the needs of consumers in the area as well as those in neighboring areas, thereby benefitting the economy (Pearce, 2001) and promoting cultural trends and urban activity. The conglomeration of small and medium retail businesses (including certain service industries) in a certain area compounds the effect of attracting customers (Thomas & Bromley, 1995).

By synthesizing these definitions, a business district can be defined as a geographical area in which a group of shops conglomerate. In addition, business districts can be integrated into their environment to create a culture in a geographical area with a stable consumer base and potential customers with similar consumption habits, causing the business district to fulfill many roles. Business districts continue to flourish, and their impact is growing stronger. Because this study investigated a business district in Taichung City, the definition of a business district is primarily based on the Taichung City Government's definition (Autonomous Regulations of Taichung City Shopping District Management and Guidance), that is, a block formed organically or through planning that comprises clusters of various types of stores and has received the approval of the Economic Development Bureau. Scholarly discourses serve as reference for this study.

The Dakeng Business District contains hot spring restaurants, theme restaurants, specialty restaurants, traditional markets, snack bars, catering, and households, with catering as the main industry. The Dakeng area offers an abundance of natural tourist attractions and has been developed through governmental guidance and planning. In addition to its beautiful landscapes, Dakeng offers several popular dishes. The area has become a modern tourist attraction and represents a focal point for leisure and recreation in Taichung.

This section presents the factors adapted from related studies that are used to evaluate the operation and management of the Dakeng Business District and form the framework of this study. Chen and Hung (2008) indicated that organizing autonomous committees, planning public facilities, cleaning and maintaining the environment, developing identification systems, and offering guidance to stores are positively correlated with the performance of a business district (Chen & Hung, 2008, Yu et al., 2015). Hsieh (2005) demonstrated that the supervision of attractive business districts can be assessed in terms of the following: professional management and implementation of counselors, local organization and operation, commercial space design, operators in the business district, law and policy integration, administrative resource integration, and public–private collaboration and integration. Wang (2008) used four dimensions, namely natural resources, environmental facilities, management and marketing, and stakeholder participation, to evaluate the critical success factors of the Jia Xian Shopping District; the study revealed that stakeholder participation is the critical success factor and that tourist participation and satisfaction were the most crucial evaluation criteria (Wang, 2008). Yu (2010) divided the critical success factors for business district operations in Taiwan into six dimensions, namely spatial design, management, service quality, marketing and promotion, project assistance, and organization and operation, for a total of 42 critical factor indicators (Lee et al.,2010). Hsieh (2012) divided the critical success factors of the business district of Keelung Miaokou into three dimensions, namely hardware, software, and engagement of public and private organizations, for a total of 12 critical factor indicators (Hsieh, 2012). In "Identifying And Using Critical

Success Factors," Leidecker & Bruno (1984) identified the following seven methods of identifying critical success factors: (1) environmental analysis; (2) analysis of industrial structure; (3) analysis of competition; (4) analysis of dominant firms in the industry; (5) industry and business experts; (6) temporal and intuitive factors; and (7) company assessment.

This study uses the six dimensions created by Yu (2010), namely spatial design, management, service quality, marketing and promotion, project assistance, and organization and operation, to survey and analyze the stores in the Dakeng Business District and evaluate the critical success factors. This study also refers to these factors to identify organizational needs and create future plans. The analysis is focused on the critical success factors of business district management; such factors indicate the competitiveness of a business district and must be identified for proper management and development. Five dimensions relevant to the Dakeng Business District are used, namely spatial design, service quality, marketing and promotion, customer satisfaction, and customer loyalty.

DATA AND METHODOLOGY

This study develops hypotheses through statistical analysis and empirically analyzes the hypotheses by designing and distributing a questionnaire. The questionnaire is based on the variables affecting the critical success factors of the business district summarized in Section 2. The questionnaire is used to collect statistical data, which serve as the basis for the subsequent empirical analysis.

Research Framework and Hypotheses

The literature review is used to identify the critical success factors for business district operations, and the weights of the factors are then determined. This study then identifies the participants and research tools and proposes a framework based on the questionnaire and a regression analysis to accomplish the research objectives.

The questionnaire serves as the basis of the investigation. The results of the questionnaire are summarized to determine the critical success factors of the Dakeng Business District, and the business district is analyzed using a weighted ranking of the critical success factors to provide reference for companies and develop innovative marketing models. Questionnaires are used by researchers to gather objective data. Properly designed questionnaires allow the data to be standardized, which facilitates subsequent analysis and comparisons and increases the accuracy of the analysis.

This study proposes the following hypotheses:

(1) H_1: Tourists' enjoyment of the spatial design of the district is significantly and positively correlated with loyalty.

(2) H_2: Tourists' enjoyment of the service quality of the district is significantly and positively correlated with loyalty.

(3) H_3: Tourists' enjoyment of the marketing and promotion of the district is significantly and positively correlated with loyalty.

(4) H_4: Tourists' satisfaction is significantly and positively correlated with loyalty.

Participants

The expert questionnaire is distributed to operators in the Dakeng Business District, the public sector, academia, and the team implementing the counseling project. The consumer questionnaire is distributed to consumers who have visited Dakeng for leisure or walking tours.

Questionnaire Design

The questionnaire in this study is based on the literature. The official version of the questionnaire is distributed, and the returned questionnaires are submitted for statistical analysis. The research procedure is as follows:

Step 1: Four main evaluation dimensions and 20 secondary evaluation factors are extracted from the literature review and used as the contents of the questionnaire. In the first stage, a total of 20 expert questionnaires are issued to industrialists, experts, and scholars. The questions are scored on a scale from 1 to 5.

Step 2: A total of 300 consumer questionnaires are issued to consumers who have been to the Dakeng Business District for leisure or walking tours. The questions are scored on a scale from 1 to 5.

RESULTS

This chapter is divided into four sections. The first section presents the sample analysis of the respondents' personal data and consumption behavior. The second section describes the reliability analysis of the critical success factors of business district operations, customer satisfaction, and customer loyalty. The third section presents the analysis of the validity of the critical success factors. The fourth section presents the descriptive statistics–based analysis. The fifth section presents the correlation analysis and the regression analysis.

Sample Structural Analysis

The participants are individuals who have been to the Dakeng Business District. The questionnaires are issued between March 10 and April 15. A pretest is administered from March 10 to March 15, and a total of 30 responses are collected. The reliability and validity analyses confirm that the pretest can be used as the official questionnaire. The formal test is conducted from March 16 to April 15, and an online questionnaire is issued using a Google form. The respondents are recruited using snowball sampling. During the survey period, a total of 300 questionnaires are collected, and 20 invalid questionnaires with incomplete answers are excluded. A total of 280 valid questionnaires are returned, and the valid response rate is 93.3% (Table 1). The equation is as follows.

$$Loyalty = \alpha + \beta\_1\,(Spatial\ Design) + \beta\_2\,(Service\ Quality)\beta\_3\,(Marketing\ and\ Promotion) + \beta\_4\,(Satisfication) \tag{1}$$

Table 1: Overview of Returned Questionnaires

Item	Count
Number of returned questionnaires	300
Number of invalid questionnaires	20
Number of valid questionnaires	280
Valid response rate	93.3%

This shows the number of returned questionnaires and valid respond rate.

Demographic Data

Among the 280 participants, men (57.5%) outnumber women (42.5%); the majority are aged between 45 and 54 years, accounting for 37.1%, and the smallest age group is those aged between 15 and 24 years (n = 1), accounting for 5.36%. In terms of education, 235 participants (Table 2) hold a bachelor's degree or higher, constituting the highest percentage (83.9%). A total of 203 participants are married (Table 2), accounting for 72.5%. In terms of occupation, 196 participants are merchants, constituting the highest percentage (70%); 127 participants have an average monthly income of more than NT$100,000, constituting the highest percentage (45.4%). In terms of residence, 258 participants live in Taichung City, constituting the highest percentage (92.14%).

In terms of frequency of visits, 50 participants visit the Dakeng Business District at least once a month, constituting the highest percentage (17.9%). In terms of time of visit, 95 participants visit from 8:00 a.m. to 12:00 a.m., constituting the highest percentage (33.9 %); 90 participants visit from 12:00 a.m. to 4:00 p.m., accounting for 32.1%; and 37 participants visit from 6:00 p.m. to 8:00 p.m., constituting the lowest percentage (13.2%). In terms of mode of transportation, 12 participants walk, accounting for 4.29%; 3 participants bike, accounting for 1.07%; 29 participants ride motorcycles, accounting for 10.4%; 231 participants drive their cars, constituting the highest percentage (82.5%); 1 participant takes public transportation, constituting the smallest percentage (0.4%); and 4 participants travel by other means, accounting for 1.43%. In terms of duration of visit, 249 participants stay for half a day (Table 2), constituting the highest percentage (88.9%), 25 participants stay for 1 day, accounting for 8.9%; and 6 participants stay for more than 2 days, constituting the lowest percentage (2.1%) (Table 2).

Spatial Design

Two statistical values, namely adjusted item-total correlation and Cronbach's α, are used to identify the items that increase the internal consistency (Cronbach's α) when removed. Regarding the adjusted item-total correlation, correlation coefficients were all of great value, indicating that the six items of this dimension need not be removed. When each item is removed, Cronbach's α remains <0.896, indicating that removing any of the items does not affect the overall reliability of this dimension (Table 3).

Service Quality

Cronbach's α for the service quality dimension is 0.896 (Table 3), indicating high reliability. In terms of adjusted item-total correlation, the correlation coefficients indicate that none of five items of this dimension should be removed. When each item is removed, Cronbach's α remains <0.896, indicating that removing any of the items does not affect the overall reliability of this dimension.

Marketing and Promotion

Cronbach's α for the marketing and promotion dimension is 0.921 (Table 3). In terms of the adjusted item-total correlation, the correlation coefficients indicate that none of the seven items of this dimension should be removed. When each item is removed, Cronbach's α remains <0.921, indicating that removing any of the items does not affect the overall reliability of this dimension.

Satisfaction

Cronbach's α for the satisfaction dimension is 0.919 (Table 3), indicating high reliability. In terms of the adjusted item-total correlation, the correlation coefficients indicate that none of the six items of this dimension should be removed. When each item is removed, Cronbach's α remains <0.919, indicating that removing any of the items does not affect the overall reliability of this dimension.

Loyalty

Cronbach's α for the loyalty dimension is 0.876 (Table 3), indicating high reliability. In terms of the adjusted item-total correlation, the correlation coefficients indicate that none of the five items of this dimension should be removed. When each item is removed, Cronbach's α remains <0.876, indicating that removing any of the items does not affect the overall reliability of this dimension.

Table 2: Frequency Distribution of Basic Demographic Data

Variable	Category	Frequency	Percentage	Cumulative Percentage
Sex	Female	119	42.5	42.5
	Male	161	57.5	100.0
Age	15–24 years old	15	5.4	5.4
	25–34 years old	25	8.9	14.3
	35–44 years old	57	20.4	34.6
	45–54 years old	104	37.1	71.8
	55–64 years old	66	23.6	95.4
	65 years old and older	13	4.6	100.0
Education	Junior high school	1	0.4	0.4
	Senior (or vocational) high school	31	11.1	11.4
	Junior college	13	4.6	16.1
	College	90	32.1	48.2
	Graduate school and higher	145	51.8	100.0
Marital status	Unmarried	77	27.5	27.5
	Married	203	72.5	100.0
Occupation	Soldier	1	0.4	0.4
	Government employee	10	3.6	3.9
	Teacher	5	1.8	5.7
	Merchant	196	70.0	75.7
	Farmer	5	1.8	77.5
	Student	13	4.6	82.1
	Worker	13	4.6	86.8
	Medical professional	5	1.8	88.6
	Legal professional	3	1.1	89.6
	Others	29	10.4	100.0

Table 2: Frequency Distribution of Basic Demographic Data (Continued)

Variable	Category	Frequency	Percentage	Cumulative Percentage
Monthly income	No income	1	0.4	0.4
	Less than NT$20,000	13	4.6	5.0
	NT$20,000–30,000	10	3.6	8.6
	NT$30,000–50,000	40	14.3	22.9
	NT$50,000–70,000	48	17.1	40.0
	NT$70,000–100,0000	41	14.6	54.6
	More than NT$100,000	127	45.4	100.0
Residence	Taichung City	258	92.1	92.1
	Outside Taichung City	22	7.9	100.0
Frequency of visits	At least once every week	48	17.1	17.1
	At least once every 2 weeks	30	10.7	27.9
	At least once every month	50	17.9	45.7
	At least once every 3 months	49	17.5	63.2
	At least once every 6 months	47	16.8	80.0
	At least once every year	41	14.6	94.6
	Others	15	5.4	100.0
Time of visit	8:00 a.m. to 12:00 a.m.	95	33.9	33.9
	12:00 p.m. to 4:00 p.m.	90	32.1	66.1
	4:00 p.m. to 6:00 p.m.	58	20.7	86.8
	6:00 p.m. to 8:00 p.m.	37	13.2	100.0
Mode of transportation	Walk	12	4.3	4.3
	Bike	3	1.1	5.4
	Motorcycle	29	10.4	15.7
	Personal car	231	82.5	98.2
	Public transportation	1	0.4	98.6
	Other	4	1.4	100.0
Duration of visit	Half day	249	88.9	88.9
	Full day	25	8.9	97.9
	2 days or more	6	2.1	100.0
Total		280	100.0	

This table shows the basic demographic data. The first column reports the collected variables. the second column reports the categories of each variable. Frequency, percentage, and cumulative percentage are shown in the third to fifth column.

Table 3: Reliability Analysis

Dimension	Item	Adjusted Item-Total Correlation	Cronbach's α When Item Is Removed
Spatial design	Overall layout of pedestrian zone	0.781	0.864
	Comfort of walking in the pedestrian zone	0.786	0.863
	Characteristics of stores and culture	0.747	0.872
	Overall cleanliness	0.683	0.886
	Atmospheric lighting at night	0.727	0.877
Cronbach's α		0.896	
Service quality	Stores' prices are open and transparent	0.715	0.879
	Stores' overall product quality is excellent	0.793	0.863
	Overall environment is safe	0.765	0.868
	Staff are knowledgeable and well mannered	0.802	0.860
	Staff voluntarily assist customers	0.656	0.894
Cronbach's α		0.896	
Marketing and promotion	Signage system in the tourist attractions is detailed	0.727	0.912
	Guide services are available at tourist attractions	0.739	0.910
	Guidebooks are available	0.722	0.912
	Information related to the Dakeng Business District can be found on the internet	0.662	0.918
	The Dakeng Business District appears often in media and advertisements	0.792	0.905
	Promotional materials about related activities are available	0.840	0.900
	Promotional materials about local events are available	0.804	0.904
Cronbach's α		0.921	
Satisfaction	Convenient parking is available	0.706	0.913
	Several hiking trails are available	0.713	0.912
	Pedestrian walking lanes are provided	0.802	0.900
	Store signs are well designed	0.794	0.901
	Convenient public toilets are available	0.809	0.899
	The district contains a large recreational area	0.795	0.901
Cronbach's α		0.919	
Loyalty	I would recommend the Dakeng Business District to relatives and friends	0.809	0.811
	I will visit the Dakeng Business District again	0.768	0.830
	I would like to participate in promotional activities	0.759	0.830
	The experience exceeded my expectations	0.622	0.819
Cronbach's α		0.876	

This table shows the reliability test for the questionnaires. The study proposes four hypotheses. The first column reports the testing hypothesis (dimension). The second column reports the designed questions for each dimension.

Validity Analysis

Validity refers to whether a tool can accurately measure what the researcher intends to measure. This study performs factor analysis to test the construct validity of the critical success factors scale. Construct validity

is divided into two types: convergence validity and discriminant validity. The greater the factor loading of an item in its own dimension (>0.5 is the general standard), the higher the convergence validity. The smaller the factor loading for an item outside its own dimension (<0.5 is the general standard), the higher the discriminative validity.

The factor loadings of the items pertaining to the dimensions of the critical success factors are >0.5, indicating that the items have convergent validity. The cumulative variance is 71.06%, indicating that the sample data from the questionnaire have a certain level of validity (Table 4).

Table 4: Validity Analysis

Dimension	Item	Factor Loading	Explained Variance
Spatial design	Overall layout of the pedestrian zone	0.852	27.17%
	Comfort of walking in the pedestrian zone	0.837	
	Characteristics of stores and culture	0.668	
	Overall cleanliness	0.540	
	Atmospheric lighting at night	0.727	
Service quality	Stores' prices are open and transparent	0.779	23.96%
	Stores' overall product quality is excellent	0.831	
	Overall environment is safe	0.746	
	Staff are knowledgeable and well mannered	0.776	
	Staff voluntarily assist customers	0.616	
Marketing and promotion	Signage system in the tourist attractions is detailed	0.673	19.92%
	Guide services are available at tourist attractions	0.699	
	Guidebooks are available	0.765	
	Information related to the Dakeng Business District can be found on the internet	0.657	
Marketing and promotion	The Dakeng Business District appears often in media and advertisements	0.840	
	Promotional materials about related activities are available	0.838	
	Promotional materials about local events are available	0.764	
Cumulative explained variance	71.06%		

This table shows the validity analysis. The first column reports the testing hypothesis (dimension). The second column reports the designed questions for each dimension.

Descriptive Statistics–Based Analysis

Three dimensions of the critical success factors, namely spatial design, service quality, and marketing and promotion, are used to measure the participants' satisfaction and loyalty.

The critical success factors in the spatial design dimension are "overall layout of the pedestrian zone," "comfort of walking in pedestrian zone," "characteristics of stores and culture," "overall cleanliness," and "atmospheric lighting at night." The participants' responses indicate that "overall cleanliness" (mean: 3.493) ranks first, "characteristics of stores and culture" (mean: 3.482) ranks second, and "overall layout of the pedestrian zone" (mean: 3.475) ranks third (Table 5).

Table 5: Means of Critical Success Factors in Spatial Design Dimension

Factor	Mean	Standard Deviation	Rank
Overall layout of pedestrian zone	3.475	0.8161	3
Comfort of walking in the pedestrian zone	3.357	0.8215	4
Characteristics of stores and culture	3.482	0.7758	2
Overall cleanliness	3.493	0.6981	1
Atmospheric lighting at night	3.350	0.8289	5

This table shows the values of mean and standard deviation for H1(Spatial Design). The last column is the rank of mean value.

The critical success factors in the service quality dimension are "stores' prices are open and transparent," "stores' overall product quality is excellent," "overall environment is safe," "staff are knowledgeable and well mannered," and "staff voluntarily assist customers." "Stores' prices are open and transparent" (mean: 3.893) ranks first, "staff voluntarily assist customers" (mean: 3.750) ranks second, and "staff are knowledgeable and well mannered" (mean: 3.718) ranks third (Table 6).

Table 6: Means of Critical Success Factors in Service Quality Dimension

Factor	Mean	Standard Deviation	Rank
Stores' prices are open and transparent	3.839	0.6872	1
Stores' overall product quality is excellent	3.714	0.6589	4
Overall environment is safe	3.714	0.7113	4
Staff are knowledgeable and well mannered	3.718	0.7252	3
Staff voluntarily assist customers	3.750	0.7632	2

This table shows the values of mean and standard deviation for H2(Service Quality). The last column is the rank of mean value.

The critical success factors in the marketing and promotion dimension are "signage system in the tourist attractions is detailed," "guide services are available at tourist attractions," "guidebooks are available," "information related to the Dakeng Business District can be found on the internet," "the Dakeng Business District appears often in media and advertisements," "promotional materials about related activities are available," and "promotional materials about local events are available." The participants' responses indicate that "information related to the Dakeng Business District can be found on the internet" (mean: 3.789) ranks first, "signage system in the tourist attractions is detailed" (mean: 3.629) ranks second, "relevant guidebooks are available" (mean: 3.718) ranks third, and "the Dakeng Business District appears often in media and advertisements" (mean: 3.368) ranks last (Table 7).

Table 7: Means of Critical Success Factors in Marketing and Promotion Dimension

Factor	Mean	Standard Deviation	Rank
Signage system in the tourist attractions is detailed	3.629	0.6862	2
Guide services are available at tourist attractions	3.536	0.7844	3
Guidebooks are available	3.429	0.8351	6
Information related to the Dakeng Business District can be found on the internet	3.789	0.7491	1
The Dakeng Business District appears often in media and advertisements	3.368	0.8699	7
Promotional materials about related activities are available	3.471	0.8334	4
Promotional materials about local events are available	3.450	0.8494	5

This table shows the values of mean and standard deviation for H3(Marketing and Promotion). The last column is the rank of mean value.

In terms of the critical success factors in the satisfaction dimension, "several hiking trails are available" (mean: 3.704) ranks first, "the district contains a large recreational area" (mean: 3.529) ranks second, "store signs are well designed" (mean: 3.479) ranks third, and "convenient public toilets are available" (mean: 3.30) ranks last (Table 8).

Table 8: Means of Factors in Satisfaction Dimension

Factor	Mean	Standard Deviation	Rank
Convenient parking is available	3.339	0.8774	5
Several hiking trails are available	3.704	0.8475	1
Pedestrian walking lanes are provided	3.468	0.8461	4
Store signs are well designed	3.479	0.8590	3
Convenient public toilets are available	3.300	0.8609	6
The district contains a large recreational area	3.529	0.8546	2

This table shows the values of mean and standard deviation for H4(Satisfaction). The last column is the rank of mean value.

In terms of the critical success factors in the loyalty dimension, "I will visit the Dakeng Business District again" (mean: 3.939) ranks first, "I would recommend the Dakeng Business District to relatives and friends" (mean: 3.825) ranks second, and "I would like to participate in promotional activities" (mean: 3.782) ranks third (Table 9).

Table 9: Means of Factors in Loyalty Dimension

Factor	Mean	Standard Deviation	Number
I would recommend the Dakeng Business District to relatives and friends	3.825	0.7145	2
I will visit the Dakeng Business District again	3.939	0.6666	1
I would like to participate in promotional activities	3.782	0.7422	3
The experience exceeded my expectations	3.525	0.8248	4

This table shows the values of mean and standard deviation for the Loyalty dimension. The last column is the rank of mean value.

Correlation Analysis

An analysis based on the Pearson correlation coefficient is performed to determine the relationship among the participants' loyalty, the three dimensions of the critical success factors, and satisfaction. Pearson's r ranges from −1 to 1, and a Person's r greater than 0 indicates a positive correlation between two variables; a Pearson's r value less than 0 indicates a negative correlation between two variables. Table 10 presents the correlation analysis of loyalty, spatial design, service quality, marketing and promotion, and satisfaction.

The correlation coefficients among the variables are all positive and >0.5, indicating a moderate to strong positive correlation among the variables.

Table 10: Correlation Analysis

	Loyalty	Spatial Design	Service Quality	Marketing and Promotion	Satisfaction
Loyalty	1				
Spatial design	0.623	1			
Service quality	0.650	0.684	1		
Marketing and promotion	0.662	0.618	0.650	1	
Satisfaction	0.655	0.635	0.548	0.702	1

This table shows the correlation analysis of variables. The values in the table represent Pearson correlation coefficient.

Regression Analysis

Loyalty is a key factor for the sustainable operations of a business district. This study performs a regression analysis to explore the relationships between the three dimensions of critical success and satisfaction and loyalty. Table 11 presents the estimation results; the adjusted R^2 value is 0.573. The variance inflation factor of the independent variables (spatial design, service quality, marketing and promotion, and satisfaction) are all <10, indicating no problems of collinearity among these independent variables. The estimated coefficients of spatial design, service quality, marketing and promotion, and satisfaction are all positive and significantly greater than 0, indicating that the participants' enjoyment of the spatial design of the district has a significant positive correlation with loyalty; therefore, H1 is supported. The participants' enjoyment of the service quality of the district has a significant positive correlation with loyalty; therefore, H2 is supported. The participants' enjoyment of the marketing and promotion of the district has a significant positive correlation with loyalty; therefore, H3 is supported.

The participants' enjoyment of the critical success factors exhibits a significant positive correlation with loyalty. The higher their level of enjoyment of the critical success factors, the stronger the loyalty; the lower their level of enjoyment, the weaker the loyalty. In terms of the standardization coefficients, the effect of service quality is the strongest among the three dimensions, followed by that of marketing and promotion, and that of spatial design is the weakest. Satisfaction also exhibits a significant positive effect on loyalty. Therefore, H4 is supported, with a standardized coefficient of 0.274, which is the largest value among the four variables, indicating that the effect of satisfaction on loyalty is the strongest.

Table 11: Estimated Coefficients of Loyalty Regression Model

Variable	Unstandardized Coefficient		Standardized Coefficient	Significance		Collinearity Statistic	
	B	Standard Deviation	β	T	P	Tolerance	Variance Inflation Factor
Constant	2.829	0.658		4.299	0.000***		
Spatial design	0.101	0.045	0.133	2.227	0.027**	0.430	2.323
Service quality	0.229	0.049	0.271	4.638	0.000***	0.449	2.228
Marketing and promotion	0.137	0.040	0.212	3.436	0.001**	0.402	2.488
Satisfaction	0.159	0.034	0.274	4.643	0.000***	0.441	2.266
$\overline{R^2}$				0.573			

*This table shows the result of regression analysis. The P value in each cell is the t-statistic. ***, ** and * indicate significance at the 1, 5 and 10 percent levels respectively.*

CONCLUDING COMMENTS

The continuous elevation of living standards has caused rapid changes in lifestyle, business, and tourism. Therefore, the critical success factors for the sustainable development of business districts and the prosperity of the local economy must be identified. This section presents the conclusions of this study as well as suggestions.

This study examines the critical success factors for the operations of the Dakeng Business District from the perspective of tourism and analyzes their relationship with tourist loyalty. The participants are tourists who have visited the Dakeng Business District. A questionnaire is distributed as a Google form, and snowball sampling is used to recruit the participants. A total of 300 questionnaires are returned, 280 of which are valid. The reliability and validity analyses confirm that the items on the questionnaire have sufficient credibility and consistency to measure the critical success factors. The data from the questionnaire are submitted to a descriptive statistics–based analysis and a regression analysis. The findings are summarized as follows:

The participants are mostly male (57.5%). In terms of age distribution, the majority are aged between 45 and 64 years (60.1%). In terms of education, the majority have bachelor's degree or higher (83.8%). A total of 72% of the participants are married. In terms of occupation, the majority are merchants (70%), followed by other (10.36%). The average monthly income of the participants is over NT$70,000 (59.9%). A total of 92% of the participants live in Taichung City. In terms of the frequency of visits to Dakeng, the majority visit at least once every month (17.86%), followed by at least once every 3 months (17.5%) and at least once every week (17.14%). In terms of the time of the visit, the majority visit in the morning (33.93%). In terms of modes of transportation, the majority drive cars (82.5%). In terms of duration of visit, the majority stay for half a day (88.93%).

The Cronbach's α values for three dimensions, namely the spatial design, service quality, and marketing and promotion, indicate high reliability, suggesting that the critical success factors have good consistency and stability. In terms of validity, the construction validity of the critical success factor scale is tested through a factor analysis. The results indicate that the factor loadings of each item of the dimensions are >0.5, indicating convergent validity. The cumulative variance is 71.06%, indicating a certain degree of validity for the data from the questionnaire.

In terms of the critical success factors for business district operation, from the perspective of tourists, "overall cleanliness" is the most crucial factor in the spatial design dimension, followed by "store characteristics and culture" and "overall layout of the pedestrian zone." In terms of the service quality dimension, "stores' prices are open and transparent" is the most crucial factor, followed by "staff voluntarily assist customers" and "staff are knowledgeable and well mannered." As for the marketing and promotion dimension, "information related to the Dakeng Business District can be found on the internet" is the most crucial factor, followed by "signage system in the tourist attractions is detailed" and "guidebooks are available."

The regression analysis reveals that the three dimensions significantly and positively affect tourist loyalty; thus, H1, H2, and H3 are supported (Table 12). The standardized coefficients indicate that the effect of service quality on loyalty is the strongest, followed by that of marketing and promotion and that of spatial design. Satisfaction is significantly and positively correlated with loyalty; thus, H4 is supported.

Table 12: Research Hypothesis Verification Results

Hypothesis	Result
H1: Tourists' enjoyment of the spatial design of the district is significantly and positively correlated with loyalty.	Supported
H2: Tourists' enjoyment of the service quality of the district is significantly and positively correlated with loyalty.	Supported
H3: Tourists' enjoyment of the marketing and promotion of the district is significantly and positively correlated with loyalty.	Supported
H4: Tourists' satisfaction is significantly and positively correlated with loyalty.	Supported

This table shows the result of Research Hypothesis. The second column reports four supported hypotheses.

Because of the well-known Dakeng Trail near the Dakeng Business District, the majority of tourists visiting the business district are aged between 45 and 64 years. Prioritizing lifestyles of health and sustainability represents a potential direction to develop the Dakeng Business District into a location suitable for senior citizens. This approach can be implemented to address Taiwan's aging society and the business opportunities it entails.

According to the analysis of the critical success factors, tourists highly value information related to the district, the knowledge of the staff in its stores, and the services they provide. Therefore, the sustainable development of the Dakeng Business District depends on the enhancement and improvement of these three aspects.

In response to the transformation of domestic tourism, the Dakeng Business District can assume the role of a destination marketing organization, linking Dakeng with distinctive cultural and tourist attractions in neighboring areas to form a sightseeing corridor. The influx of tourists can fortify the consumer base of the Dakeng Business District, expand its commercial niche, and drive the overall development of Dakeng.

REFERENCES

Berman, B., & Evans, J. R. (1995). Retail management: A strategic approach (Doctoral dissertation, Univerza v Mariboru, Ekonomsko-poslovna fakulteta).

Brooks, J. S. & Young, A. H. (1996). Revitalising the Central Business District in the Face of Decline: The Case of New Orleans, 1973-1993. *The Town Planning Review*, 64(3), 251-271.

Chen C.-B. & Hung G.-J. (2008). The Effect of the Renewal and Reconstruction of Business Area on Enterprises' Management Strategy and Performance. *Journal of Taiwan Intelligent Technologies and Applied Statistics*, 6(1), 39-54.

Chen C.-B. & Hung G.-J. (2008). The Effect of the Renewal and Reconstruction of Business Area on Enterprises' Management Strategy and Performance. *Journal of Taiwan Intelligent Technologies and Applied Statistics*, 6(1), 39-54.

Furlan, R., Petruccioli, A., Major, M. D., Zaina, S., Zaina, S., Saeed, M. A., and Saleh, D. (2019). The urban regeneration of west-bay, business district of Doha (State of Qatar): A transit-oriented development enhancing livability. *Journal of Urban Management*, 8(1), 126-144.

Geisman, B. (2004). A renaissance in neighborhood and" main street" business istricts. *Economic Development Journal*, 3(2), 65.

Huff, D. L. (1964). Defining and estimating a trading area. Journal of marketing, 28(3), 34-38.

Hsieh G.-S. (2012). Key Success Factors of the Image Business District Management ─ A Case Study on Image Business District of Temple in Keelung.

Leidecker, J. K., & Bruno, A. V. (1984). Identifying and using critical success factors. *Long Range Planning*, 17(1), 23-32.

Lewison, D. M. (1991). Retailing. Macmillan International Higher Education.

Lee Q.-S., Huang Z.-Y. & Yu C.-F., (2010). A Study on the Key Success Factors of the Business Districts in Taiwan. *Journal of Management Practices and Principles*, 4(4), 65-81.

Osano, H. M. & Languitone, H. (2016). Factors influencing access to finance by SMEs in Mozambique: case of SMEs in Maputo central business district. *Journal of Innovation and Entrepreneurship*, 5:13.

Osoba, S. B. (2012). Appraisal of Parking Problems and Traffic Management Measures in Central Business District in Lagos, Nigeria, *Journal of Sustainable Development*, 5(8), 105-115.

Pearce, D. G. (2001). An integrative framework for urban tourism research. *Annals of tourism research*, 28(4), 926-946.

Peng, F.-L., Qiao, Y.-K., Zhao, J.-W., Liu, K., & Li, J.-C. (2020). Planning and implementation of underground space in Chinese central business district (CBD): A case of Shanghai Hongqiao CBD. *Tunnelling and Underground Space Technology*, 95, 103176.

Qiao, Y.-K., & Peng, F.-L. (2016). Lessons learnt from urban underground space use in Shanghai—from Lujiazui business district to Hongqiao central business district. *Tunnelling and Underground Space Technology*, 55, 308-319.

Snepenger, D. J., Murphy, L., O'Connell, R., & Gregg, E. (2003). Tourists and residents use of a shopping space. *Annals of Tourism Research*, 30(3), 567-580.

Thomas, C., & Bromley, R. (1995). Retail decline and the opportunities for commercial revitalisation of small shopping centres: a case study in South Wales. *The Town Planning Review*, 431-452.

Wang C.-H. (2008). The Critical Success Factors for Chia Hsien Image Commercial District. Dissertation for the Graduate Institute of Hospitality Management, National Kaohsiung University of Hospitality and Tourism, 1-105.

Yu, W., Ai, T., & Shao, S. (2015). The analysis and delimitation of Central Business District using network kernel density estimation. *Journal of Transport Geography*, 45(C), 32-47.

BIOGRAPHY

Mr. Tung is a Ph.D. student at Feng Chia University. He is the owner of Don Don Taro Ball which is a very popular shop in Taiwan. Mr. Tung was the chairman of Dakeng Business District and worked with local government to promote the awareness of the district's many famous restaurants. He can be reached at Feng Chia University, 100, Wenhua Road, Xitun District, Taichung City, Republic of China.

Dr. Lin is a Professor of Marketing at Feng Chia University. His research interests are on strategy, small and medium enterprises, and international business. He had published many papers in SSCI journals. He is

the associate editor of International Journal of Business and Economics. He can be reached at Feng Chia University, 100, Wenhua Road, Xitun District, Taichung City, Republic of China.