

Determinant Analysis of Fast-Food Franchise Distribution in Bali Province

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Abstract

This study investigated the factors influencing the spatial distribution of fast-food franchises across nine regencies and cities in Bali Province. The research problem was rooted in extreme spatial inequality, where franchise outlets were heavily concentrated in urban and tourism centers while access in marginal areas remained limited. Understanding these distribution determinants was essential to ensure that culinary investments contribute to balanced regional economic growth. The research employed a quantitative causal-associative design using multiple linear regression analysis to test the influence of average food consumption per capita, the number of local restaurants, and the availability of shopping centers on franchise distribution using 2024 cross-sectional data. Secondary data were obtained from official government statistics and systematic digital observations. The findings revealed that the availability of shopping centers was the sole significant predictor for franchise locations, explaining a major portion of the distribution variance. Conversely, local consumption levels and the density of existing restaurants did not significantly affect franchise distribution. It was concluded that franchise expansion in Bali was primarily driven by an agglomeration strategy around formal retail infrastructure to capture tourist traffic rather than following domestic purchasing power. These results suggest that developing modern commercial infrastructure is a primary prerequisite for attracting global retail investment to promote regional economic equity.

Keywords: *Agglomeration, Bali, Fast-Food Franchise, Retail Infrastructure, Spatial Distribution*

INTRODUCTION

The fast-food franchise industry continues to undergo global expansion through a process of consumption standardization that extends to various countries, including Indonesia. This phenomenon is in line with the concept of McDonaldization by Ritzer (2024), where the principles of efficiency and standardization become the primary drivers of global business expansion. In a local context, Bali Province increasingly asserts its position as an international tourism destination with rapid economic growth. Suardana (2024) notes that this economic acceleration is followed by a very dynamic transformation of the retail and culinary sectors. Based on the Regional Economic

Analysis (2025), this development is reflected in the significant expansion of the modern culinary sector in strategic urban areas. The presence of large-scale franchise brands such as McDonald's, KFC, Burger King, Pizza Hut, and Richeese Factory, as stated by Levy and Weitz (2012), not only represents the expansion of business networks but also serves as a vital indicator of economic vitality and the attractiveness of community purchasing power for global investment.

The problem of this research is rooted in the phenomenon of spatial distribution inequality, which aligns with Krugman's (1991) concept of spatial inequality, where franchise outlets are extremely concentrated in urban-tourism areas and very limited in marginal regions. This condition is complicated by the absence of a comprehensive analysis that simultaneously examines the influence of economic factors, competition density, and infrastructure readiness. As emphasized in the regional econometrics model by Gujarati (2022), simultaneous and partial testing is highly necessary to understand the interaction between variables within the scope of regional economics. Furthermore, Bryman (2024) highlights the gap between theory and empirical evidence, given that the application of agglomeration theory in the specific context of the franchise industry in Bali is still very limited, especially those using actual post-pandemic data from 2024.

This study aims to provide empirical evidence through a systematic quantitative analysis to explain the extent to which average food consumption per capita, restaurant density, and the availability of shopping centers determine the variations in the distribution of franchise outlets across nine regencies/cities in Bali Province. The novelty of this research lies in testing the variable of shopping center availability as a key indicator of modern retail infrastructure readiness. Unlike traditional location models that tend to focus on population density, this study argues that modern infrastructure is the primary prerequisite dictating investment distribution in global tourism destination regions. Thus, the results of this research are expected to resolve theoretical debates regarding the impact of local culinary competition while simultaneously serving as a strategic guide for equitable regional economic growth in Bali. The expansion of the modern retail sector can be a catalyst for job creation if supported by a proper understanding of these spatial distribution dynamics.

LITERATURE REVIEW

The literature review in this study is based on the evolution of location theory, ranging from the classical thoughts of Weber (1909) and Christaller (1933) to Marshall's (1920) Agglomeration Theory. Theoretical debates arise when analyzing consumer behavior through Engel's Law (1857). However, the reality of the fast-food industry in tourist areas shows a different pattern. Dolezal and Novelli (2022), in their study on development in Bali, argue that the economy in international destinations is heavily influenced by tourism-led consumption, which is often not fully captured in local household consumption data. This is supported by Sakseno (2013), who states that the location of modern retail is often driven by accessibility for non-permanent consumers rather than the income structure of the local population in the region.

The dynamics of this distribution are also influenced by the debate between agglomeration effects and market saturation. Kalnins and Chung (2004) support the concept that franchises tend to cluster in areas with high economic activity to capture established market traffic. On the other hand, Sari and Fernandez (2021), in their

research in Indonesia, emphasize that the density of local culinary businesses is not considered an entry barrier for international franchises due to different strategic groups and sharp consumer segmentation. This condition reinforces the central role of retail infrastructure, where Suharto and Wijaya (2022) as well as Lee and Kim (2021) found a strong correlation between the presence of shopping centers and the number of franchise outlets due to guaranteed foot traffic and the stability of the business ecosystem.

Although previous research by Hidayat & Nugroho (2018) and Sari & Fernandez (2021) has mapped the determinants of franchises in Java, there is a literature gap in the context of Bali, which has unique tourism economic characteristics. Therefore, this study aims to empirically test whether the distribution of franchises in Bali is driven more by domestic demand factors, the density of local competitors, or the availability of modern retail infrastructure. The final output of this research is intended to produce a comprehensive location predictor model based on 2024 actual data, which can serve as a strategic guide for investors in identifying potential areas in international tourism destinations.

METHOD

This study employs a quantitative approach based on numerical data and analyzed through statistical procedures to examine the influence of average food consumption per capita (X_1), the number of restaurants (X_2), and the availability of shopping centers (X_3) on the distribution of fast-food franchise outlets (Y) in Bali Province. The research design is causal-associative, utilizing descriptive and inferential methods aimed at identifying cause-and-effect relationships between variables through multiple linear regression analysis. The regression model was selected for its ability to statistically test the simultaneous and partial effects of independent variables on the dependent variable to explain the variation in outlet distribution across nine regencies/cities in Bali.

The data used are cross-sectional data for the year 2024, consisting of the number of fast-food franchise outlets, food consumption per capita, the number of restaurants, and the availability of shopping centers in nine regencies/cities in Bali. Secondary data sources were obtained from the 2024 official publications of the Central Bureau of Statistics (BPS) of Bali Province for variables X_1 and X_2 , systematic Google Maps observations for franchise outlet data (Y) and shopping centers (X_3), and verification via official franchise brand websites. This study utilizes a census technique where all members of the population are included as samples to enhance external validity and minimize sampling errors.

Data analysis was conducted using descriptive statistical analysis to provide an overview of the mean, minimum, and maximum values, as well as inferential statistical analysis using a multiple linear regression model. The regression equation model in this study is formulated as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Where:

Y : number of franchise outlets

α : constant

$\beta_1; \beta_2; \beta_3$: Regression coefficients of each independent variable

ϵ : *Error Term* (other factors outside the model)

Hypothesis testing was performed through the Simultaneous Significance Test (F-test) to observe the collective influence, the Partial Significance Test (t-test) to observe the individual influence of each variable, and the Coefficient of Determination analysis (R^2) to measure the extent to which the variation in franchise distribution can be explained by the proposed model. All statistical data processing was performed using SPSS software.

RESULTS AND DISCUSSION

Result

Bali Province has long asserted its position as an international tourism destination, triggering dynamic economic transformations and changes in community lifestyles, as analyzed by Putra (2025) in a study on spatial commercialization in Ubud which revealed the disruption of traditional principles due to food retail expansion. This economic acceleration has driven a significant expansion of the modern retail and culinary sectors, marked by the massive presence of global fast-food franchises as indicators of economic vitality and investment attractiveness (Hadi, 2025). However, this has created a phenomenon of extreme spatial inequality, where the distribution of outlets is concentrated in urban-tourism areas while marginal regions suffer from limited access. This condition demands a deep understanding of location determinants to ensure that culinary investment distribution contributes to equitable economic growth across all regencies and cities in Bali.

There are several economic and infrastructure indicators considered to influence franchise distribution patterns, such as average food consumption per capita, restaurant density, and the availability of shopping centers. This statement aligns with the findings of Kim & Moon (2020), who stated that the lifestyle of dining out in urban areas is a major driver of fast-food consumption. However, research by Putra & Santoso (2019) shows that the density of traditional restaurants is not always directly proportional to foreign franchise investment interest, indicating unique competitive dynamics in Bali. Furthermore, a study by Suharto & Wijaya (2022) emphasizes that the availability of shopping centers has a very strong correlation with outlet location determination due to infrastructure readiness factors. Through the developed research model, an analysis of these variables was conducted to provide empirical evidence regarding which factors are most influential in determining the distribution of fast-food franchises across the nine regencies and cities in Bali Province.

Table 1. Descriptive Statistic

Variable	N	Mean	Std. Dev.	Min	Max
X_1	9	750.55	190.09	485.82	1081.71
X_2	9	905.78	1568.16	52	4928
X_3	9	4.67	5.70	0	16
Y	9	6.44	9.32	0	23

Source: author's analysis (2026)

Based on the results of the descriptive statistical analysis across nine regencies and cities in Bali Province, significant indications of spatial inequality were found across all research variables. The distribution of Fast-Food Franchise Outlets (Y) has a mean value of 6.44 outlets. However, it shows a sharp disparity with a range between 0 and 23 outlets. The standard deviation (9.32), which exceeds the mean, confirms a high concentration of outlets only within specific economic centers.

A similar condition is observed in the variable Number of Restaurants (X_2) which has an extreme range from 52 to 4.928 units with a very high standard deviation of 1,568.16, reflecting a striking difference in the formal culinary sector infrastructure between regions. This infrastructure inequality is further emphasized by the variable Number of Shopping Centers (X_3) which has a mean of 4.67 units. However, some regions completely lack modern facilities (value of 0), while urban areas have up to 16.

On the other hand, the variable Average Food Consumption per Capita (X_1) shows a mean value of IDR 750.55 thousand with a relatively more stable standard deviation of 190.09. This indicates that the variation in local community purchasing power is more evenly distributed compared to the distribution of commercial facilities and franchise businesses themselves. Overall, these descriptive data provide an illustration that franchise distribution patterns in Bali tend to follow the concentration of commercial infrastructure rather than following the general distribution of community consumption expenditure.

Table 2. Model Summary

Model Summary	R	R Square	Adjusted R Square	Std. Error of the Estimate
Y	0.99	0.98	0.97	1.72

Source: author's analysis (2026)

Based on the testing results in Table 2, the correlation coefficient (R) value of 0.99 indicates an extremely strong and positive relationship between the independent variables and the distribution of fast-food franchises. Furthermore, the Adjusted R Square value of 0.97 indicates that this model has a very high level of predictive accuracy, where 97% of the variation in the distribution of franchise outlets in Bali Province can be accurately explained by the variables of food consumption, restaurant density, and shopping facilities. Meanwhile, only 3% of the variation is influenced by other factors outside the model. The accuracy of this model is further reinforced by the low Standard Error of the Estimate of 1.72, which shows that the deviation between the regression model and the actual data is very minimal.

Table 3. Test Anova

ANOVA	Sum of Squares	df	Mean Square	F	Sig.
Regression	679.41	3	226.47	76.46	0.000
Residual	14.81	5	2.96		
Total	694.22	8			

Source: author's analysis (2026)

The results of the ANOVA test in table 3 show a significance value of 0.000, much smaller than the threshold $\alpha = 0,05$. This proves that the variables of average food consumption (X_1), number of restaurants (X_2), and number of shopping centers (X_3) simultaneously have a very significant influence on the distribution of fast-food franchise outlets in Bali Province. With an F-statistic of 76.46, it can be concluded that the multiple linear regression model used is highly feasible for predicting the distribution patterns of franchise outlets based on these three independent factors.

Table 4. Coefficients

Variable	B	Std. Error	Beta	t	Sig.
(Constant)	-7.94	3.72		-2.14	0.077
X_1	0.01	0.01	0.23	1.93	0.112
X_2	0.00	0.00	0.10	0.90	0.412
X_3	1.18	0.18	0.72	6.47	0.001

Source: author's analysis (2026)

Based on the partial test results (t-test) in Table 4, the Number of Shopping Centers (X_3) is the only significant predictor, with a t-value of 6.47 and a significance level of $p = 0.001 (< 0.01)$. The low standard error (SE = 0.18) confirms a high estimation precision.

Conversely, the variable Average Food Consumption per Capita (X_1) has no significant effect ($t = 1.93; p = 0.112 > 0.05$). nor does the Number of Restaurants (X_2) ($t = 0.90; p = 0.412 > 0.05$). The beta coefficient of 0.72 for X_3 reinforces its relative dominance, explaining 72% of the variation in the distribution of franchise outlets.

Multiple Linear Regression Equation

$$Y = -7.49 + 0.01X_1 + 0.00X_2 + 1.18X_3 + \epsilon$$

The constant of -7.94 represents the theoretical baseline when all three independent variables are zero, although it lacks direct practical interpretation as such a condition is unrealistic in an empirical context. The coefficient for food consumption per capita ($\beta_1 = 0.01; p = 0.112$) indicates a minimal positive influence that is not statistically significant. Similarly, the coefficient for restaurant density ($\beta_2 = 0.00; p = 0.412$) indicates practically zero effect on the dependent variable, whereas the coefficient for shopping facilities ($\beta_3 = 1.18; p = 0.001$) shows a highly significant positive influence.

Hypothesis Testing

Based on the statistical analysis results, the hypothesis testing in this study demonstrates that, simultaneously, average food consumption (X_1), the number of restaurants (X_2), and the number of shopping centers (X_3) have a significant effect on the distribution of fast-food franchise outlets in Bali ($p = 0.000$), thus H_1 is accepted. However, partially, only the variable of the number of shopping centers (X_3) is proven to have a positive and significant effect ($p = 0.001$) with a regression coefficient of 1.18, indicating that

the availability of modern retail infrastructure is the primary predictor of outlet location determination. Conversely, the hypotheses for average consumption (X_1) and the number of restaurants (X_2) are rejected, as they yield significance values of 0.112 and 0.412, respectively ($p > 0.05$), meaning these two factors do not exert a significant influence individually.

Discussion

Based on the findings of the statistical data analysis above, the results are in line with the research framework that has been prepared and will then be interpreted through in-depth discussions to reveal the dynamics of the distribution of franchises in Bali Province.

Average per capita food consumption has a positive but insignificant influence on the distribution of franchise outlets as indicated by the p-value value (0.112), which means that an increase in average consumption of 1,000 rupiah will only increase the distribution of franchise outlets by 0.01 units assuming other variables are fixed. The findings regarding insignificance reinforce the argument of Dolezal and Novelli (2022) that in world tourist destination areas such as Bali, economic structure is greatly influenced by tourist spending patterns that are often not accurately recorded in the household consumption data of local residents. As stated by Sakseno (2013), the choice of outlet location is more driven by accessibility factors and non-permanent consumer mobility than the income structure of the surrounding indigenous population. The insignificance of this consumption variable is also reinforced by the findings of Athens et al. (2016) and Oexle et al. (2015) who confirm that per capita consumption is not the main determining factor because ease of access to retail points is much more decisive for business expansion than the absolute purchasing power level of people in the region.

The variable of the number of restaurants and restaurants also showed a positive value that was close to zero and not statistically significant with a p-value (0.412), which means that the addition of the number of local restaurants by one unit practically had no effect on the expansion of franchise outlets assuming other variables were fixed. This insignificance is in line with the research of Sari and Fernandez (2021) regarding franchise location preferences in Surabaya which emphasizes that the density of local culinary businesses is not considered a threat or an attraction for international franchises due to sharp differences in consumer segmentation. This condition is explained theoretically through the concept of Strategic Groups by Porter (1998), which states that global franchises and local restaurants are in different strategic groups with a competitive base that does not directly intersect.

The phenomenon of "peaceful coexistence" between modern and traditional culinary businesses is also supported by the findings of Maruyama and Wu (2014) who stated that in emerging markets, modern retail (franchises) and traditional retail (local restaurants) can grow side by side because they serve the needs of consumers in different situations and orientations. In addition, Hannan and Freeman (1977) through the theory of "Market Niche" reinforce that organizations with different characteristics can inhabit the same ecosystem without killing each other if they occupy different market niches. As such, the large number of local restaurants in Bali does not linearly influence the fast-food franchise expansion decision as the two move in different market paths.

Meanwhile, the variable of the number of shopping centers has been proven to have

a positive and very significant influence on the distribution of franchise outlets with a p-value (0.001), which means that every addition of one shopping center unit will increase the number of franchise outlets by 1.18 units significantly. These findings fully confirm the theory of economic agglomeration from Marshall (1890) and Krugman (1991), in which franchise businesses exhibit strong grouping behavior around formal economic nodes to take advantage of infrastructure externalities. This significance is in line with the study by Lamichhane et al. (2013) which found modern retail centers to be a strong predictor of fast food density, and supports Wingrove's (2017) finding that central commercial infrastructure is a crucial factor for franchise revenue. Strategically, this phenomenon reflects the "following-the-mall" strategy as identified by Lee and Kim (2021), where the majority of new outlets are placed within a radius near shopping centers to minimize risks through foot traffic assurance and collective promotion. The study of Kalnins and Chung (2004) also strengthens this by explaining that outlets tend to congregate in areas with high economic activity to benefit from knowledge spillover and shared infrastructure.

CONCLUSION

The results of multiple linear regression analysis show that the variable of the availability of modern retail infrastructure, namely the number of shopping centers, has a positive and very significant effect on the distribution of fast food franchise outlets in Bali. On the other hand, economic variables such as average per capita food consumption and competitor density variables such as the number of restaurants and restaurants did not have a significant effect on the distribution of the franchise. These findings indicate that the expansion of franchise business in Bali is driven more by agglomeration strategies around formal economic nodes (malls) to capture tourist traffic, rather than following the administrative distribution of local purchasing power.

This research proves that physical infrastructure factors are the main prerequisites that determine the direction of global retail investment in tourism areas. Therefore, in an effort to realize equitable economic growth in all districts/cities in Bali, the government needs to pay attention to the availability of modern commercial infrastructure facilities as an investment attraction because domestic economic variables alone are not strong enough to attract business penetration. This research contributes to mapping a "population-agnostic" location distribution model in international destinations.

However, this study still has limitations in the use of per capita consumption data of local residents who have not been able to capture the real purchasing power of foreign tourists as the main consumers of franchises. In addition, the author's limited understanding causes the regulatory aspect of regional spatial planning to not be discussed in depth. Further research can be developed by integrating data on tourist visit volume and regional zoning policy variables to obtain more comprehensive analysis results on the spatial dynamics of the culinary industry in Bali Province.

DECLARATION OF GENERATIVE AI

During the preparation of this work, the author used Gemini to assist with language editing and improving clarity of expression. After using this tool, the author reviewed and edited the content as needed and took full responsibility for the content of the

publication.

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