Methods and Applications of Investment Decisions in the Catering Industry
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ABSTRACT
With economic globalization and consumption upgrading, investment activities in the catering industry have become more frequent and complex. This study aims to explore effective methods for investment decision-making in the catering industry and empirically analyze their application with a view to improving investment efficiency and accuracy. Through the method of financial analysis difference calculation, we comprehensively analyze the investment payback period, risk assessment and expected returns. Model analysis reveals the performance and applicability of different investment methods in actual operations. The results show that combining the unique industry characteristics of catering and adopting a customized comprehensive decision-making model can significantly improve the success rate of investment decisions. Therefore, good risk assessment and decision-making methods can bring clearer investment directions and higher economic benefits to investors in the catering industry.

INTRODUCTION
With the deepening development of economic globalization and the changes in the consumption concepts of many consumers, the catering industry, as an important part of the service industry, is becoming the focus of the investment market. However, investment decisions in the catering industry are not only closely related to the economic environment, but also affected by multiple factors such as culture, region, and consumption habits, making the decision-making process complex and changeable. Under such circumstances, how formulating effective investment strategies and achieving effective allocation of capital and reasonable risk control is a very challenging task for investors in the catering industry. Currently, although some scholars have studied the theory and practical operation of catering investment, there is still a lack of targeted and empirical research in view of the characteristics of the catering industry, such as cyclicity, diverse models, and risk tolerance, especially in investment decisions. There are obvious research gaps in the development and application of models. In response to the above situation, this study aims to explore effective methods for investment decision-making in the catering industry, and verify the application and effect of these methods in actual operations through specific cases. Through comprehensive financial analysis and market research, this article systematically analyzes the investment environment and risks, and evaluates the feasibility of the investment strategy and its expected return performance. The case analysis method is applied to different investment scenarios for verification, in order to optimize the investment decision-making methods in the catering industry.

LITERATURE REVIEW
Theoretical Basis of Investment Decision-Making
Overview of Investment Decision Model
In the investment process of the catering industry, the investment decision-making model is an indispensable tool. These models are designed to help investors make rational decisions by analyzing different economic indicators, market trends, consumer behavior, and potential risks (Banaiy N, et al., 2016). Investment decision-making models usually include multiple aspects, such as cash flow analysis, rate of return assessment, risk assessment and market analysis.

The catering industry has its own unique characteristics, including seasonal fluctuations, food safety issues, diverse consumer tastes, and high competition. These characteristics need to be fully considered in investment decision-making models. For example, consumer demand for healthy food and fast food changes with time and social and cultural changes, which requires investors to accurately predict future consumption trends and adjust investment strategies accordingly. These investment strategies are inseparable from the establishment of decision-making models. For example, cash flow analysis is an important part of the investment decision-making model. Investors need to evaluate the cash inflow and outflow of the project to ensure that the investment project can generate sufficient cash flow to meet operational needs and bring returns to investors. Rate of return assessment focuses on the ratio between investment return and invested capital. In the restaurant industry, this metric has a direct impact on financial results. Furthermore, risk assessment occupies a core position in the investment decision-making model of the catering industry. Finally, market analysis involves

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research on the macro and micro levels of the catering market. Macro-level analysis may include research on the overall economic environment and industry trends, while micro-level analysis pays more attention to consumer behavior, competitor strategies, etc. In addition to the model components mentioned above, there are other methods commonly used for investment decisions, such as decision tree analysis, sensitivity analysis, and Monte Carlo simulation. These methods can help investors evaluate investment options from different perspectives and make more comprehensive and in-depth decisions.

In practical applications, investment decision-making models need to be customized according to specific investment projects and market environments. Because investment decision-making models play an important role in catering industry investments, they help investors analyze investment opportunities in a structured and quantitative way. It is important to note that while these models can provide powerful analytical tools, they cannot completely replace investor intuition and experience. A successful investment decision usually requires a combination of model analysis and investor insights.

Risk Assessment and Management Methods
Risk assessment and management methods are an important part of the investment decision-making process, especially in the catering industry. Due to its unique market dynamics and uncertainty in consumer preferences, risk management is particularly critical. This article aims to explore the risk assessment and management methods applied in investment decisions in the catering industry.

Risk assessment methods include two basic forms: qualitative and quantitative. Qualitative methods focus on assessing the type of risk and its likely impact, while quantitative methods attempt to quantify the probability and potential economic impact of a risk. In investment decisions in the catering industry, qualitative methods include SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) and PEST analysis (Political, Economic, Social, Technological), which help identify opportunities and threats in the business environment (1st Palepu K G, et al., 2020). Quantitative methods include sensitivity analysis, scenario analysis and Monte Carlo simulation. Sensitivity analysis is used to evaluate the impact of changes in specific input variables on the outcome of an investment decision, while scenario analysis evaluates the potential outcomes of an investment under different market scenarios. Monte Carlo simulation predicts the probability distribution of investment results by building a probability model and conducting a large number of random samples.

In terms of risk management methods, strategies commonly used in the catering industry include risk avoidance, mitigation, transfer and acceptance. Risk avoidance involves taking steps to avoid high-risk investments, such as not investing in restaurant businesses in politically unstable areas. Risk mitigation reduces the impact of risks by diversifying investments and strengthening corporate internal controls. Risk transfer typically involves the use of insurance or contractual provisions to transfer certain risks to a third party. Risk acceptance is the decision to take certain unavoidable risks after risk assessment, usually because these risks are closely related to opportunities for high returns. Therefore, the risk assessment factors and management methods in the catering industry are shown in Table 1 below.

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Return on Investment and Financial Analysis
When studying investment decisions in the catering industry, return on investment (ROI) and financial analysis techniques are two core elements. Return on investment is a key indicator of investment effectiveness, and financial analysis technology provides investors with a series of methods and tools for evaluating and predicting the financial performance of catering businesses.

Typically expressed as a percentage, ROI is the ratio of investment income relative to the investment cost. In the catering industry, calculating ROI may involve many forms of benefits and costs, including but not limited to initial building decoration costs, equipment purchase costs, raw material costs, labor costs, marketing expenses and any other operating expenses. In terms of income, it may include daily operating income, improvement of brand value and appreciation of long-term assets (1st Hayes D K & 2nd Hayes J D, 2021). Therefore, accurately calculating the return on investment in the restaurant industry requires a comprehensive consideration of all relevant revenue and cost streams. In practice, investors and managers use a variety of financial analysis techniques to evaluate their restaurant businesses. These techniques include, but are not limited to, cash flow analysis, cost-benefit analysis, sensitivity analysis, and financial ratio analysis.

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It is worth noting that the catering industry is a dynamic and highly competitive field, and long-term brand building, customer loyalty, and market share stabilization are equally important. So when conducting financial analysis, investors should not only focus on short-term financial performance. Sensitivity analysis can reveal the potential impact on revenue from price changes or supply chain disruptions. Financial ratio analysis can help investors compare the financial health of different catering companies to determine the best investment options (Usman, M., et al., 2018).

In addition to internal financial analysis, external economic factors must also be taken into account. This includes monitoring of inflation rates, interest rate levels, policy changes and socioeconomic trends. These macroeconomic indicators may have an impact on consumer spending patterns, thereby impacting restaurant industry earnings. Therefore, ROI and financial analysis techniques are indispensable tools in investment decisions in the catering industry. Through these tools, investors can gain in-depth insights about their investments, allowing them to make informed decisions based on data and market trends.

MATERIALS AND METHODS
Investment Decision-Making Methods in the Catering Industry
Application of Empirical Analysis Method in Investment Decision-Making
The empirical analysis method is a research method based on data analysis. It reveals the internal connections and regularities between variables through the collection, organization and analysis of historical data. This method has important application value in investment decision-making. The application of empirical analysis method in catering investment decisions can start from market demand analysis. As an important part of the service industry, the development of the catering industry is profoundly affected by consumer preferences, spending power and market trends. By collecting and analyzing consumer behavior data in a specific area, investors can understand changes in consumers’ basic needs and preferences for catering consumption, and then predict future market demand (Polk, C. & Sapienza, P., 2018). For example, by conducting regression analysis on consumption data over the years, the elasticity of consumer demand for a certain catering service can be revealed, thereby providing a reference for investment decisions.

Empirical analysis also plays an important role in cost control and profit forecasting. The costs of the catering industry mainly include food purchase costs, labor costs, store rental costs, etc. Through historical trend analysis of these cost data, possible changes in costs in the future can be predicted, providing a basis for cost control and profit forecasting. For example, by analyzing the trend of food price changes, it is possible to predict future fluctuations in raw material procurement costs, and then adjust the dish pricing strategy to ensure the realization of profit targets.

Furthermore, empirical analysis methods also have significant applications in competitive analysis. Competition in the catering industry is fierce, and understanding competitors’ business conditions and strategies is crucial to investment decisions. By analyzing competitors’ turnover, market share, customer satisfaction and other data, you can evaluate your own competitive position and potential risks in the market. For example, through comparative analysis, investors can discover competitors’ special services or marketing strategies, and investors can adjust their own business strategies accordingly to enhance competitiveness.

In addition, empirical analysis methods are also indispensable in assessing the feasibility of investment projects. Before investing in a catering project, through empirical analysis of the potential investment project's historical business data, customer flow, brand influence, etc., the project's profitability and growth potential can be comprehensively evaluated. For example, analyzing the past expansion history and market feedback of a certain catering brand can provide empirical support for the location selection and market positioning of new stores.

In summary, empirical analysis plays a vital role in investment decisions in the catering industry. Through systematic analysis of historical data, investors can not only more accurately assess market demand, control costs, predict profits, analyze competition and assess risks, but also develop more reasonable and scientific investment strategies based on empirical results. Therefore, the empirical analysis method has become one of the indispensable tools in catering investment decision-making.

Investment Decision-Making Strategy That Combines Qualitative and Quantitative Methods
When discussing investment decision-making strategies in the catering industry, the method of combining qualitative and quantitative analysis is particularly critical. Qualitative analysis refers to analysis based on non-numeric information, such as industry trends, brand influence, management team experience, market reputation, etc. Quantitative analysis focuses on evaluating the potential value of investment projects through numerical calculations, such as financial ratio analysis, discounted cash flow (DCF) models, etc.

In investment decisions in the catering industry, qualitative analysis can first help investors understand the fundamentals of the industry. As an industry closely related to consumer demand, the catering industry is affected by many factors such as culture, region, and consumer preferences (Pieloch-Babiarz, A., 2020). Through an in-depth understanding of these non-numeric factors, investors can have an intuitive understanding of the development trends and changes in the catering market. For example, for a local catering brand, qualitative analysis can focus on the brand’s local

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tolerance. A catering company that relies too much on direct sales will have a direct impact on the company's financial stability and risk management. Determinants of the cost of capital are the price a business must pay to use its assets. According to portfolio theory, the correlation between different catering projects will affect the risk level of the overall investment. When making investment decisions, catering companies need to evaluate the expected returns and risks of various potential investment projects. According to portfolio theory, the correlation between different catering projects will affect the risk level of the overall investment. Furthermore, catering companies also need to consider capital cost and capital structure when applying portfolio theory. The cost of capital is the price a business must pay to obtain capital, including the cost of debt and equity. An ideal investment portfolio should maximize returns while minimizing the cost of capital. Determinants of capital structure include the ratio of debt to equity, which directly affects a company's financial stability and risk tolerance. A catering company that relies too much on direct sales will have a direct impact on the company's financial stability and risk management.

Application of Portfolio Theory in the Catering Industry

Portfolio theory, proposed by Harry Markowitz in 1952, aims to optimize the ratio of risk and return through the rational allocation of assets. In the catering industry, this theory is also applicable to the decision-making of diversified investments, especially in the face of an increasingly competitive market environment with changing customer tastes. This section will discuss the specific application and effect of portfolio theory in the catering industry.

When making investment decisions, catering companies need to evaluate the expected returns and risks of various potential investment projects. According to portfolio theory, the correlation between different catering projects will affect the risk level of the overall investment. Furthermore, catering companies also need to consider capital cost and capital structure when applying portfolio theory. The cost of capital is the price a business must pay to obtain capital, including the cost of debt and equity. An ideal investment portfolio should maximize returns while minimizing the cost of capital. Determinants of capital structure include the ratio of debt to equity, which directly affects a company's financial stability and risk tolerance. A catering company that relies too much on direct sales will have a direct impact on the company's financial stability and risk management.

RESULTS AND DISCUSSION

Analysis of Investment Decision-Making Method Models and Practical Cases

Model Evaluation and Discussion of Investment Decision-Making Methods in Emerging Catering Models

When discussing the application of investment decision-making methods in emerging catering models, we first need to clarify that the core purpose of investment decision-making is to identify, evaluate and select projects that can maximize expected returns. Emerging catering models such as catering technology integration, unmanned restaurants, food delivery services, etc. are all new areas for investment decision-making in the contemporary catering industry. Analysis of investment decisions in these emerging models requires the application of traditional financial evaluation methods, while also considering industry-specific risks and potentials (1st Nieh, F. P. & 2nd Pong, C. Y., 2012).
The financial evaluation method is shown in Figure 1, net present value (NPV) 30%, internal rate of return (IRR) 30%, payback period (PBP) 30% and other 10%, etc. We use the above evaluation methods to evaluate how an unmanned restaurant can reduce employee costs and increase future cash flow, and conduct discount calculations to determine whether the net present value of an investor’s investment in an unmanned restaurant is positive, and then make a decision on whether to invest.

Therefore, the weight of each indicator is calculated based on the coefficient of variation. The detailed steps are as follows: First, since different data have differences in measurement standards and magnitudes, the standardization method should be used to standardize the indicators. We need to use the extreme value processing method (Equation (1) and Equation (2) to standardize the original data. The evaluation values are shown in Table 2. Through the financial evaluation model assignment, all discount values R>0, so the investment decision-making method is feasible in the emerging catering model, but we should still consider that the emerging catering model is accompanied by a high degree of uncertainty and risk. We need to further add methods such as sensitivity analysis, scenario analysis and Monte Carlo simulation. Sensitivity analysis can help investors understand the impact of changes in key variables (such as customer traffic, raw material prices, etc.) on project profitability. Scenario analysis further considers multiple possible outcomes under different market and operating environments, providing investors with a more comprehensive risk assessment framework. Monte Carlo simulation, as a more advanced risk assessment method, simulates possible investment results by building a probability model. In addition to the financial assessment and risk analysis methods mentioned above, it is also very feasible to consider real-time data analysis methods and consumer behavior research. By analyzing social media, customer reviews, sales data, etc., investors can gain instant insights into market trends and customer preferences. These analyzes not only help assess the market potential of specific catering models, but also guide investors in more precise target market positioning. However, investment decisions in the catering industry should not ignore non-
financial factors such as laws and regulations, cultural differences and ethics. Therefore, investors need to comprehensively consider financial assessment, risk analysis, real-time data interpretation, social ethics and other aspects of information to make reasonable and far-sighted investment decisions.

Catering Business Case Study

When discussing investment decision-making methods and their applications in the catering industry, case studies are an important way to gain insight into actual operations and the effectiveness of decision-making. This chapter will analyze the case of a representative catering company to reveal the methods and strategies used in its investment decision-making process, as well as the results and existing problems, in order to provide useful reference and reference for the catering industry. This catering enterprise is a long-established medium-sized restaurant chain, its business is mainly concentrated in the mid-to-high-end market, and it is famous for providing special dishes and high-quality services. In the past five years, the company has implemented many major investment decisions based on market trends and consumer needs. These decisions determine the company's survival and development in the highly competitive catering market. The decision-making roadmap is shown in Figure 2.

![Figure 2: A company's investment decision-making roadmap](image)

In terms of expanding chain stores, the company has adopted a cautious and effective market research strategy. Before opening a new store, the company first conducts an in-depth analysis of factors such as the market capacity of the potential area, consumer taste preferences, competitor situations, and geographical location. Based on these data analyses, the company selected areas with high foot traffic and less direct competition as locations for new stores (1st Kusnadi, Y. & 2nd Wei, K. J., 2017). Facts have proved that this data-driven location selection strategy has achieved remarkable success. The newly opened stores attracted a large number of customers in the early stages of opening, and the turnover gradually stabilized and showed a growth trend.

When upgrading kitchen equipment, companies face the dual challenge of improving dish quality and efficiency. After a detailed cost-benefit analysis, the company decided to invest in the purchase of automated kitchen equipment, including smart cooking equipment and ingredient processing systems. The introduction of these equipment not only improves the efficiency of making dishes, but also maintains the consistency of the taste of the dishes, which is crucial for chain restaurants. At the same time, by reducing food waste and saving human resources, these investments paid for themselves in just over a year.

The introduction of an intelligent management system is part of the company's digital transformation. The system integrates multiple functions such as order processing, inventory management, customer relationship management, and employee scheduling. Through real-time data analysis and reporting, management can make decisions faster and optimize operational processes. The use of this system greatly improves work efficiency, reduces human errors, and enhances customers’ dining experience.

The decision to develop a new menu line is an important test of the company's ability to continue to innovate. In order to attract young consumers and health-conscious customer groups, companies have invested in research and development and launched a series of dishes that are in line with healthy eating trends. The launch of these
new dishes not only enriches the menu, but also enhances the company’s market competitiveness, attracts new customer groups, and improves customer satisfaction. Investment in brand marketing is reflected in multi-channel publicity and brand image building. Companies use social media, online advertising and ground promotion activities to effectively convey brand information to target consumer groups. By partnering with local communities, businesses increase their visibility and loyalty among potential customers, and these events not only enhance their brand image but also lead to significant sales growth. Despite a series of achievements, companies have also encountered some challenges in the investment decision-making process. For example, during the expansion of new stores, some locations failed to fully consider transportation convenience and parking issues, which affected customer visitation rates. In terms of dish development, some newly introduced high-cost ingredients have not received the expected market response, resulting in a certain waste of resources. These issues point out that companies still need to improve the depth and breadth of market research, as well as strengthen cost control and risk assessment capabilities in investment decisions.

Through the study of this catering enterprise case, we can see that reasonable investment decisions are crucial to the long-term development of catering enterprises. Successful investment is often based on accurate insights into the market, an in-depth understanding of consumer needs and the effective allocation of corporate resources. At the same time, continuous learning and adjustment, and reflection and summary of failed investments are also the keys to ensuring that enterprises remain competitive in a changing market environment. Catering companies should use these cases as a mirror and continuously optimize their investment decision-making methods to achieve sustainable business growth and brand value enhancement.

**CONCLUSION**

This study aims to explore effective methods for investment decision-making in the catering industry and the practical application of risk analysis to improve investment efficiency and decision-making accuracy. Through a research path that combines theoretical and empirical analysis, this article deeply analyzes the investment environment, risk assessment and expected returns of the catering industry, explores a customized comprehensive decision-making model, and reveals the applicability of this model in actual operations through specific cases. Sex and advantage. The research results confirm that systematic strategies adopted based on the unique characteristics of the catering industry can effectively guide investors to make more accurate investment decisions and achieve higher economic benefits. Through the above discussion and evidence, it is expected to provide investors in the catering industry with richer and more complete theoretical support and inject new vitality into the sustainable development of the industry.

**REFERENCES**


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