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JUSTIFICATION OF THE NEED TO APPLY CORRELATION ANALYSIS IN THE MARKETING ACTIVITIES OF AN ENTERPRISE

The realities of the modern dynamic and highly competitive market increase the demands on business success, in particular highlighting the need to ensure adaptability and clearly set priorities. Furthermore, continuous monitoring of changes in market demands and flexible adjustment of short-term plans have become integral parts of enterprise strategies. In conditions of a changing competitive environment and growing external and internal threats, entrepreneurs need to quickly assess opportunities, make optimal decisions, test new approaches, products, business models, and avoid passivity in strategic decisions [1].

In the post-war period, enterprises will also face a number of threats such as disrupted logistics chains, shortage of own funds, difficulties in obtaining credit resources, complications due to government policies, and a high degree of uncertainty in the business environment. These issues negatively affect the financial condition of enterprises, leading to limited marketing budgets [3].

Thus, in modern conditions characterized by the development of crisis phenomena, market dynamism, and increasing competition, effective management of the marketing activities of an enterprise becomes critically important. However, making informed decisions within the marketing system requires a deep understanding of the impact of various factors on the effectiveness of marketing campaigns and the overall financial condition of the enterprise. Correlation-regression analysis is one of the most common and effective tools in statistical analysis, especially in the context of studying relationships between variables and forecasting outcomes based on these relationships.

Correlation-regression analysis serves as a powerful tool for data analysis and forecasting, enabling enterprises to identify patterns and relationships between marketing variables and their impact on key performance indicators (Table 1). Therefore, modern data analysis methods, particularly correlation-regression analysis, are an important aspect for ensuring the effectiveness of marketing research, helping enterprises determine relationships among different variables and predict their impact on marketing performance results. The use of this method allows enterprises to make more justified decisions, optimize marketing campaign budgets, and improve the efficiency of communications with the target audience.

Table 1

Applications of correlation and regression analysis in corporate marketing

Focus Area	**Application**
1	2
Correlation between advertising expenditures and sales volume	Identifying the nature and significance of how advertising expenses impact sales volume
Impact of advertising initiatives on brand awareness	Assessing how changes in the structure and amount of advertising expenditures affect brand awareness and popularity
Customer satisfaction analysis	Analyzing the correlation between customer satisfaction levels (based on surveys) and customer loyalty (repeat purchases, referrals)
Target segment identification	Utilizing correlation analysis to identify shared customer characteristics across different market segments
Predictive modeling	Utilizing regression analysis to develop sales forecasting models based on historical data
Marketing personalization	Developing personalized marketing campaigns tailored to the identified customer segments
Behavioral pattern analysis	Identifying relationships between website user behavior (time on page, page views) and conversion rates
Assessment of seasonal factors	Analyzing the impact of seasonal fluctuations on sales and developing corresponding strategies
Market needs assessment	Identifying correlations between product features and market needs to optimize the product portfolio

End of table 1

1	2
Product features evaluation	Examining how various product attributes (quality, functionality, design) influence purchasing decisions
Price elasticity analysis	Determining the relationship between product price changes and sales volume
Market position analysis	Identifying the relationship between competitors' marketing strategies and their market positions.

Correlation and regression analysis plays a pivotal role in a company's marketing system, providing a profound understanding of the interrelations between various marketing variables and facilitating informed decision-making. Given the current crisis-driven operating environment for domestic enterprises – characterized by economic and political instability, rising inflation, and shifting consumer needs – companies must utilize their resources rationally, mitigate risks, and enhance the effectiveness of marketing initiatives. In this context, the application of this method enables enterprises to effectively analyse the impact of marketing expenditures on sales volumes, identify the most efficient promotional channels and market segments, and forecast future performance indicators.

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