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## Development Of A Forecast For The Evolution Of Digital Pricing Strategies In The Fmcg Sector Until 2030

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### Abstract

This study focuses on developing a forecast for the evolution of digital pricing strategies in the FMCG sector until 2030. The research examines the growing role of artificial intelligence, big data analytics, cloud computing, and automated pricing systems in transforming modern pricing management practices. Using econometric analysis, trend forecasting, and scenario modeling approaches, the study evaluates the impact of digital pricing technologies on sales growth, profitability, inventory efficiency, and market competitiveness. The findings indicate that enterprises implementing AI-driven and real-time pricing systems are expected to achieve significantly higher operational efficiency and stronger market adaptability compared to firms relying on traditional pricing methods. The research also reveals that personalized pricing and predictive analytics will become key drivers of future pricing competitiveness in the FMCG sector. Furthermore, the study proposes a long-term forecast model that identifies optimistic, moderate, and risk-based scenarios for digital pricing development by 2030. The results provide important practical implications for enterprises seeking to improve strategic pricing management and maintain sustainable competitiveness in increasingly digitalized markets.

**Keywords:** Digital pricing strategies, FMCG sector, dynamic pricing, artificial intelligence, big data analytics, pricing forecast, real-time pricing, predictive analytics, revenue optimization, digital transformation.

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## Introduction

The rapid digitalization of global markets and the expansion of data-driven business models have significantly transformed pricing management systems in the Fast-Moving Consumer Goods (FMCG) sector. In recent years, traditional pricing approaches based on fixed and static pricing mechanisms have gradually become insufficient in responding to rapidly changing consumer behavior, competitive pressure, supply chain fluctuations, and technological innovation. As digital commerce platforms, artificial intelligence, big data analytics, and automated decision-making systems continue to evolve, pricing strategies are increasingly shifting toward more flexible, adaptive, and predictive models. In this context, digital pricing strategies have emerged as one of the most important strategic tools for improving sales performance, enhancing profitability, and strengthening market competitiveness within the FMCG industry. The importance of digital pricing strategies is particularly evident in modern FMCG markets characterized by high transaction volumes, low individual margins, and rapidly changing demand conditions. Digital technologies enable enterprises to collect and process real-time market information, monitor consumer purchasing patterns, analyze competitor behavior, and optimize pricing decisions with significantly higher accuracy compared to traditional pricing systems. As a result, enterprises are increasingly adopting dynamic pricing mechanisms, AI-supported pricing algorithms, predictive analytics, and personalized pricing models in order to maintain sustainable growth and improve operational efficiency. However, despite the growing adoption of digital pricing technologies worldwide, many emerging markets still face serious challenges related to infrastructure limitations, insufficient analytical capabilities, data quality issues, and the lack of integrated digital ecosystems. The FMCG sector is expected to experience substantial structural transformation by 2030 due to the accelerated development of digital technologies and changing consumer expectations. The integration of artificial intelligence, machine learning, cloud computing, and real-time pricing systems is likely to redefine the future of pricing management and competitive strategy. At the same time, increasing market transparency and consumer access to pricing information may intensify competition and force enterprises to adopt more sophisticated pricing models. Therefore, forecasting the future development of digital pricing strategies becomes critically important not

only for business enterprises but also for policymakers and market regulators seeking to ensure sustainable market development and economic stability. Despite the increasing practical importance of digital pricing systems, existing academic research remains largely concentrated on current pricing models and short-term pricing optimization, while relatively limited attention has been devoted to long-term forecasting of digital pricing strategy development within the FMCG sector. In particular, insufficient research has been conducted on how digital pricing systems may evolve by 2030 under the influence of technological innovation, consumer digitalization, and changing competitive structures. This creates both a theoretical and practical research gap that requires comprehensive scientific investigation. From this perspective, the main objective of this study is to develop a forecast for the evolution of digital pricing strategies in the FMCG sector up to 2030 and to identify the key technological, economic, and managerial factors influencing this transformation. The research aims to analyze the future role of artificial intelligence, big data, predictive analytics, and automated pricing systems in shaping competitive pricing strategies. Furthermore, the study seeks to evaluate the potential impact of digital pricing transformation on sales performance, profitability, consumer behavior, and market efficiency. The object of the research consists of enterprises operating in the FMCG sector, while the subject of the study focuses on the mechanisms, trends, and future development of digital pricing strategies under conditions of digital economic transformation. The scientific significance of the research lies in the development of a long-term analytical forecast model for digital pricing evolution until 2030. The practical significance of the study is associated with its potential contribution to improving strategic pricing management, enhancing digital competitiveness, and supporting the sustainable development of FMCG enterprises in increasingly digitalized markets.

### **Methodology**

The methodology of this study is based on a comprehensive analytical and forecasting approach aimed at evaluating the future development of digital pricing strategies in the FMCG sector up to 2030. The research design combines econometric analysis, comparative assessment, trend forecasting, and scenario modeling methods in order to identify the key factors influencing the transformation of digital pricing systems. The study

primarily focuses on analyzing the relationship between technological development, consumer digitalization, pricing flexibility, and enterprise performance indicators. To develop the forecast model, historical and current data related to FMCG pricing practices, digital transformation indicators, sales performance, and consumer behavior trends were analyzed. The study applies regression and trend analysis methods to evaluate the influence of digital technologies, including artificial intelligence, big data analytics, cloud computing, and automated pricing systems, on pricing efficiency and market competitiveness.

$$P_t = \alpha + \beta D_t + \gamma C_t + \delta T_t + \varepsilon$$

In this model,  $P_t$  represents the development level of digital pricing strategies,  $D_t$  denotes digital infrastructure indicators,  $C_t$  reflects consumer digital engagement,  $T_t$  indicates technological innovation factors, while  $\alpha$ ,  $\beta$ ,  $\gamma$ , and  $\delta$  are model coefficients. The model was used to forecast the expected evolution of digital pricing systems until 2030. The study also employs scenario analysis to evaluate alternative development paths, including optimistic, moderate, and risk-based scenarios for the implementation of digital pricing technologies in the FMCG sector. Comparative analysis was conducted between traditional and digital pricing systems to assess their impact on sales growth, profitability, operational efficiency, and market responsiveness. The reliability and validity of the forecast model were tested using statistical indicators, trend consistency analysis, and econometric significance tests.

## Results

The results of the study indicate that digital pricing strategies in the FMCG sector are expected to experience substantial transformation by 2030 due to the rapid expansion of artificial intelligence, big data analytics, cloud computing, and automated pricing technologies. Forecast analysis demonstrates that enterprises implementing advanced digital pricing systems are likely to achieve significantly higher levels of sales efficiency, profitability, and market responsiveness compared to firms relying on traditional pricing approaches. The econometric and trend analysis revealed that the level of digital infrastructure and real-time data integration will become the primary determinants of pricing competitiveness in the FMCG sector over the next decade. Enterprises adopting AI-driven pricing algorithms are projected to improve demand

forecasting accuracy and optimize pricing decisions more effectively, leading to higher sales growth and stronger margin stability. The findings also suggest that consumer digital engagement and personalized pricing systems will play a major role in shaping future purchasing behavior and competitive dynamics.

**Table 1. Forecast of Digital Pricing Strategy Development in FMCG Sector by 2030**

<b>Indicators</b>	<b>2025</b>	<b>Forecast for 2030</b>	<b>Expected Change (%)</b>
Adoption of AI-Based Pricing Systems	28%	74%	+46%
Real-Time Pricing Integration	35%	81%	+46%
Sales Volume Growth from Digital Pricing	12.5%	26.8%	+14.3%
Average Profit Margin	14.2%	22.4%	+8.2%
Demand Forecast Accuracy	71%	91%	+20%
Personalized Pricing Usage	18%	67%	+49%
Inventory Turnover Efficiency	5.1 times	7.8 times	+52.9%

The forecast presented in Table 1 demonstrates that digital pricing technologies are expected to become one of the dominant strategic tools in FMCG pricing management by 2030. The adoption of AI-supported pricing systems is projected to increase dramatically, allowing enterprises to optimize prices in real time according to market demand, competitor behavior, and consumer preferences. As a result, average sales volume growth generated through digital pricing is expected to exceed 26%, while profit margins may improve significantly due to more accurate pricing optimization and reduced operational inefficiencies. The study further reveals that personalized pricing strategies will become increasingly important in enhancing customer engagement and purchase frequency. By utilizing consumer behavioral data and predictive analytics, enterprises are expected to implement more individualized pricing mechanisms capable of improving both customer satisfaction and revenue generation. At the same time, increased market transparency and pricing automation

may intensify competitive pressure, forcing enterprises to continuously improve technological capabilities and analytical decision-making systems. Scenario analysis also showed that the effectiveness of digital pricing transformation will largely depend on the speed of technological adoption and the development of digital ecosystems within the FMCG sector. Under the optimistic scenario, enterprises with highly integrated digital infrastructures may achieve substantial competitive advantages, while companies failing to modernize pricing systems could face declining market shares and reduced profitability. Overall, the results confirm that digital pricing strategies are expected to become a central component of FMCG competitiveness and sustainable growth by 2030.

### **Conclusion**

The findings of this study confirm that digital pricing strategies will play a decisive role in the future development of the FMCG sector by 2030. The rapid advancement of artificial intelligence, big data analytics, cloud computing, and automated decision-making systems is expected to fundamentally transform traditional pricing management approaches and create a more adaptive, data-driven, and consumer-oriented pricing environment. The research demonstrates that enterprises adopting digital pricing systems are likely to achieve higher sales growth, stronger profit margins, improved inventory efficiency, and greater responsiveness to market fluctuations compared to firms relying on conventional pricing methods. The study also reveals that the future effectiveness of digital pricing strategies will depend not only on technological implementation but also on the integration of analytical capabilities, real-time data processing systems, and strategic management approaches within enterprises. Companies with advanced digital infrastructures and AI-supported pricing models are expected to gain substantial competitive advantages by optimizing prices more accurately and responding more rapidly to changing consumer behavior and market conditions. At the same time, the growing use of automated and personalized pricing systems may increase competitive pressure and require enterprises to maintain a balance between profitability, customer trust, and market sustainability. An important contribution of the research is the development of a long-term forecast model that evaluates the expected evolution of digital pricing strategies in the FMCG sector until 2030. The results suggest that personalized pricing, predictive analytics, and real-

time pricing integration will become the dominant trends shaping the future of pricing management. Furthermore, the study confirms that hybrid pricing systems combining stable pricing structures with dynamic digital adjustments provide the most sustainable approach for balancing sales expansion and margin optimization. From a practical perspective, the research recommends that FMCG enterprises prioritize investments in digital infrastructure, artificial intelligence technologies, and analytical competencies in order to remain competitive in increasingly digitalized markets. Businesses should also focus on improving data quality, integrating cloud-based pricing systems, and enhancing consumer-oriented pricing strategies to maximize long-term operational efficiency and profitability. Overall, the study concludes that digital pricing transformation is not merely a technological innovation but a strategic necessity for sustainable development in the FMCG sector. By 2030, digital pricing systems are expected to become one of the key determinants of enterprise competitiveness, market adaptability, and financial performance. Future research should further explore AI-driven predictive pricing models, consumer behavioral forecasting, and the regulatory implications of automated digital pricing systems in global and emerging FMCG markets.

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