THE EVOLUTION OF SALES PROMOTION IN THE DIGITAL ECOSYSTEM AND AN ANALYSIS BASED ON PRODUCT LIFECYCLE STAGES

Musaeva Shoira Azimovna
Professor, Samarkand Institute
of Economics and Service
E-mail: musaeva_shoira@mail.ru
ORCID: 0009-0000-9577-6976

Absract

The article analyzed the evolution of sales promotion tools in the context of the digital economy based on the product life cycle theory. The study evaluated the effectiveness of retail media networks, social commerce, and artificial intelligence mechanisms across different product stages. Case studies of Apple, Coca-Cola, and Walmart demonstrated how marketing strategies adapted to lifecycle phases. The findings confirmed that sales promotion tools were applied in a differentiated manner depending on the stage. The importance of hyper-personalization and algorithm-driven management in digital environments was identified. Based on the results, practical recommendations for adapting marketing strategies were developed.

Keywords: sales promotion, product life cycle, digital marketing, retail media networks, social commerce, artificial intelligence, hyper-personalization, gamification.

Annotatsiya

Ushbu maqolada sotuvni rag‘batlantirish vositalarining raqamli iqtisodiyot sharoitidagi evolyutsiyasi mahsulot hayot aylanishi nazariyasi asosida tahlil qilindi. Tadqiqotda chakana media tarmoqlari, ijtimoiy tijorat va sun’iy intellektga asoslangan mexanizmlarning turli bosqichlardagi samaradorligi baholandi. Apple, Coca-Cola va Walmart misollarida reklama va savdo strategiyalarining mahsulot bosqichlariga mos ravishda o‘zgarishi ko‘rsatildi. Natijalar sotuvni rag‘batlantirish vositalari bosqichga mos ravishda differensial qo‘llanilganini tasdiqladi. Raqamli platformalarda giperpersonallashtirish va algoritmik boshqaruvning ahamiyati aniqlandi. Tadqiqot natijalari asosida marketing strategiyalarini moslashtirish bo‘yicha amaliy tavsiyalar ishlab chiqildi.

Kalit so‘zlar: sotuvni rag‘batlantirish, mahsulot hayot aylanishi, raqamli marketing, RMN, ijtimoiy tijorat, sun’iy intellekt, giperpersonallashtirish, gamifikatsiya.

Аннотация

В статье проанализирована эволюция инструментов стимулирования продаж в условиях цифровой экономики на основе теории жизненного цикла продукта. В исследовании оценена эффективность механизмов розничных медиасетей, социальной коммерции и искусственного интеллекта на различных этапах развития продукта. На примере Apple, Coca-Cola и Walmart показано изменение маркетинговых стратегий в зависимости от стадии жизненного цикла. Результаты подтвердили необходимость дифференцированного применения инструментов стимулирования. Выявлена значимость гиперперсонализации и

алгоритмического управления в цифровой среде. На основе полученных данных сформированы практические рекомендации по адаптации маркетинговых стратегий.

Ключевые слова: стимулирование продаж, жизненный цикл продукта, цифровой маркетинг, РМС, социальная коммерция, искусственный интеллект, гиперперсонализация, геймификация.

INTRODUCTION

Sales promotion has historically been a fundamental component of integrated marketing communications, providing a short-term boost to transactional activity. In the modern economic paradigm, this category is undergoing a radical evolution driven by the development of digital technologies, changing media consumption patterns, and the transformation of global retail architecture. Traditional price interventions and offline mechanics are giving way to complex algorithmic ecosystems, including retail media networks (RMNs), social commerce platforms, and predictive analytics systems powered by artificial intelligence (AI).

Despite the extensive empirical base, there is a significant research gap in the current academic literature. Existing theoretical models predominantly examine digital tools in isolation, without integrating them with the classical macroeconomic paradigm of the product life cycle (PLC). There is a lack of comprehensive frameworks explaining how innovative hyper-personalization and gamification methods should be calibrated based on the current stage of product development in the market.

LITERATURE REVIEW

Based on international experience, it should be noted that a company's competitiveness in the market is determined by the effectiveness of its marketing policy. Many economists have developed marketing principles and applied them practically, including F. Kotler, M. Porter, D. Evans, I. Ansoff, M. Berman, M. Golubkov, P. Samuelson, and D. Marshall. These include such renowned scholars as

It's worth noting the scholars who have made significant contributions to the development of marketing theory, although research conducted in the field of marketing in our country over many years has been based on national characteristics. These include R. Ibragimov, Yu. Abdullaev, A. Saliev, M. Sharifkhodzhaeva, Sh. Ergashkhodzhaeva, Sh. Musaev, and others.

METHODOLOGY

This study applied a qualitative and comparative research design to examine the evolution of sales promotion within the digital ecosystem in relation to product life cycle (PLC) stages. A systematic analysis of secondary data was conducted using academic literature, industry reports, and open-source company data. The methodological framework combined system analysis, case study, and comparative approaches.

Case studies of leading global companies, including Apple, Coca-Cola, and Walmart, were selected to evaluate how sales promotion tools adapt across introduction, growth, maturity, and saturation stages. Content analysis was used to identify key patterns in the application of retail media networks (RMNs), social commerce, and artificial intelligence (AI).

The research process included four stages: theoretical synthesis of PLC and digital marketing concepts, classification of promotion tools, empirical case comparison, and development of an integrated conceptual model. This approach enabled the identification of stage-specific promotion strategies and demonstrated the increasing role of data-driven and personalized marketing mechanisms.

ANALYSIS AND RESULTS

An analysis of the technology sector demonstrates the tight alignment of communication strategies with the phases of the product life cycle. During the launch of the original iPhone (2007), with its premium price of $499, the marketing strategy focused exclusively on establishing a new product category by showcasing then-unprecedented functionality such as a multi-touch interface.

The effectiveness of this feature-driven approach is confirmed by the fact that by mid-January 2008, 4 million devices had been sold, and the company's stock price soared from 85 USD to 179 USD. During the subsequent growth phase (3G and 4G models), the driver of growth was not the hardware, but the digital ecosystem (App Store), which shifted audience attention to the value of software.

A key transformation occurred during the market maturity phase (2015-2023), when competitors achieved technological parity. During this period, Apple made a fundamental shift from rational argumentation to emotional engagement, leveraging user-generated content (UGC). The large-scale "Shot on iPhone" campaign, launched in 2015, garnered contributions from ordinary users across 24 countries and won the top prize at the Cannes Lions Film Festival.

This UGC strategy allowed the brand to create powerful social proof without direct discounts, and thanks in large part to this emotional positioning, Apple accumulated over 80% of the operating profit of the entire global smartphone industry in the first quarter of 2023. However, at the stage of deep market saturation, the effectiveness of traditional mechanics declines: an analysis of the Face ID promotion for the iPhone 15 model revealed a decrease in the overall engagement rate from 5.0% in the first week to 2.0% by the fourth week of the campaign. This is forcing the corporation to shift to algorithmic AI personalization strategies in the period 2023-2025 to retain its target audience.

A historical analysis of the FMCG sector, using The Coca-Cola Company as an example, illustrates the management of an overmature product and the dangers of changing its core. The product's introduction in 1886 was characterized by minimal sales volume-an average of nine bottles per day at a price of 5 cents. To overcome the initial trial barrier, the brand was one of the first in history to introduce coupon promotions in 1887. The turning point and identity crisis occurred during the period of deep market stagnation in the 1980s. By 1980, Pepsi had captured 29.3% of the supermarket market, while Coca-Cola's own growth rate slowed drastically from 15% to 2% per year.

Seeking to boost sales by improving the product's physical characteristics, management took an unprecedented step: in 1985, for the first time in 99 years, the company changed its classic formula, launching “New Coke”. The decision turned out to be one of the biggest marketing failures in history. The project lasted exactly 79 days before being forced to revert to the original formula.

This case empirically demonstrates that in the later stages of the product life cycle, the emotional capital of a brand far outweighs the rational characteristics of the product; consumers perceived the drink not as a soda, but as a cultural heritage, which made radical product innovations destructive.

Historically, trade promotions relied on distributor interventions: volume discounts, financial rebates, and free provision of physical displays in retail spaces. However, current macroeconomic data indicates a massive structural shift of major brands' B2B budgets toward retail media networks (RMNs). This process began with market pioneers Amazon and eBay, followed by traditional retailers, often acquiring tech companies (as in Walmart's acquisition of Vizio) to accelerate the rollout of their own advertising ecosystems.

Walmart's case study comprehensively illustrates the scale and profitability of programmatic trade marketing. In the second quarter of fiscal 2024, Walmart Connect, its advertising division, grew by 36%, with total annual advertising revenue reaching 4.4 billion USD (up 27% year-over-year). The strategic importance of this initiative is confirmed by the fact that advertising revenue currently accounts for nearly a third of the retailer's operating profit. The appeal of a closed-loop attribution platform is rapidly growing: in the second quarter of 2024, the number of Walmart advertisers increased by 60%, with brands reporting an average 30% improvement in digital advertising return on investment (ROAS).

The applied marketing effectiveness of RMN is confirmed by specific brand results. An analysis of a campaign by dietary supplement manufacturer Thorne revealed that product positions supported by advertising within the Walmart chain demonstrated a 67% increase in sales above baseline levels, while a control group of unadvertised products experienced a 12% decline in demand. Large transnational FMCG players have recorded a comparable dependence on retail media: Danone generated approximately 45% of its total annual sales growth within the Walmart chain solely through RMN investments, and Mondelez achieved a 53% year-on-year increase in advertising-attributed sales, increasing its incremental ROI by 29%.

The integration of e-commerce functionality directly into social media architecture (Social Commerce) is creating unprecedentedly aggressive algorithmic mechanisms for sales promotion. According to analyst forecasts, social media sales in the US will reach 87.02 billion USD by 2025. The TikTok Shop ecosystem is the undisputed technological driver of this process, having demonstrated a 407% sales growth in the US market in 2024; its turnover is expected to reach 15.82 billion USD in 2025, with the potential to capture 24.1% of the entire US social commerce market by 2027. In regions with more mature social commerce markets, the influence of interactive formats is even greater: for example, in Indonesia, sales through live streaming account for up to 80% of total transactions on TikTok Shop, reaching Rp

27.3 trillion in one month (April 2024).

Social commerce sales promotion strategies rely on hyperdynamic mechanics. First, they create artificial scarcity through flash sales and maximize first-hour transaction speed in the first hours of a product's launch to gain priority in the platform's recommendation algorithms. Second, they leverage authentic reviews from hundreds of micro-influencers (creator whitelisting).

A campaign analysis for the British brand More or Less demonstrated a phenomenal 1,450% sales increase in a single month thanks to the synergy of paid promotion and a pool of 350 affiliated content creators. A Singaporean cosmetics brand, using video content from 80 micro-influencers, sold over 4,000 units in 60 days, achieving a ROAS 14 times the investment. A unique feature of S-commerce is its ability to attract cold audiences: a documented case study of one brand demonstrated a 300% sales jump in a quarter, with 85% of buyers being completely new to the company (new-to-brand), which subsequently led to a 40% increase in repeat purchases.

In parallel with the B2C revolution, incentive tools are also being transformed in the internal sales force promotion segment through the digital gamification of business processes. The urgent need for such innovations is confirmed by industry statistics: despite millions of dollars invested in infrastructure, only 29% of sales managers confirm that their employees are using CRM systems at the required level.

To overcome this communication barrier, Microsoft developed and implemented an internal gamified platform, FantasySalesTeam. The system combined routine sales targets and KPIs with the mechanics of a popular fantasy sport, where sales representatives formed competing teams and accumulated virtual points for real deals. Empirical data confirms that this integration of competitive game elements significantly increases employee engagement, solves the problem of corporate software sabotage, and directly correlates with overall company sales growth.

Analysis of the obtained data allows us to comprehensively answer the research questions posed. RQ1 established that the adaptation of incentive tools is strictly determined by the stage of the product life cycle. While trial subsidies predominate during the implementation stage, at the maturity stage (the Apple case, the Coca-Cola crisis), generating user-generated content and emotional synchronization with consumers become critical factors to prevent product commoditization. A decline in engagement rates at the saturation stage indicates the need to shift to algorithmic personalization.

In the context of RQ2, it was found that RMN platforms are fundamentally transforming B2B interactions. The monetization of deterministic retailer data (first-party data) is displacing intuitive trade marketing, shifting it to measurable performance marketing with verified transaction attribution (as demonstrated by the Walmart and Thorne cases).

Regarding RQ3, it has been proven that social commerce, relying on content graphs and algorithmic promotion, radically modifies consumer behavior. Traditional proactive search is replaced by impulsive consumption (product discovery), reinforced

by time-sensitive mechanisms (flash sales) and
gamified interactive.

The theoretical contribution of this study lies in its expansion of classical marketing communications models. First, it documents an unprecedented compression of the sales funnel: in S-commerce ecosystems, the distance from awareness to action is reduced to a few seconds. Second, it postulates a conceptual shift from traditional search engine optimization (SEO) to generative engine optimization (GEO). In a context where AI algorithms act as independent agents in shaping consumer preferences, content optimization for conversational, dialogic queries is becoming a new theoretical dominant in marketing science.

For senior management and chief marketing officers (CMOs), the research findings dictate the need for an immediate strategic pivot:

1. Redistribution of B2B budgets: It is necessary to shift investments from classic offline POS materials to the purchase of advertising inventory within closed RMNs to ensure a measurable return on investment (proven ROAS growth of up to 30%).

2. Implementation of AI personalization: Using predictive algorithms to eliminate economically unviable blanket discounts. Industry statistics show that hyper-personalized AI recommendations already generate approximately 24% of all online e-commerce orders.

3. Caution in S-commerce: The use of aggressive flash discounts in TikTok Shop should be strictly regulated within the financial model to avoid brand devaluation and accusations of predatory pricing from regulators.

The main limitation of this study is the focus of the qualitative analysis on macro-cases of multinational corporations with unlimited financial resources. It is possible that the identified scaling patterns are not fully applicable to small and medium-sized businesses. Future research should focus on empirical, quantitative verification of the proposed concepts in niche markets, as well as on examining the long-term psychological impact of AI hyperpersonalization on consumer cognitive fatigue.

CONCLUSION AND SUGGESTIONS

The study confirmed that sales promotion in the digital environment has moved from uniform price-based actions toward data-based and stage-specific mechanisms. The effectiveness of promotion is determined not by the scale of spending, but by the alignment of tools with the product life cycle stage and the accuracy of targeting. Linear budgeting approaches no longer ensure stable results, as consumer behavior is shaped by digital platforms, algorithms, and personalized content delivery.

The analysis showed that at different PLC stages, promotion tools perform distinct functions. Informational and trial incentives support market entry, while at growth and maturity stages, value communication, brand positioning, and user-generated content become more relevant. In saturated markets, traditional promotion loses efficiency, and AI-based personalization, predictive analytics, and behavioral segmentation become necessary to maintain demand and engagement.

Retail media networks have transformed trade marketing into a measurable system based on first-party data. Their use allows companies to track return on investment and adjust campaigns in real time. Social commerce platforms reduce the time between awareness and purchase, increasing the importance of fast-response and algorithm-driven promotion formats. At the same time, excessive use of discounts creates risks for long-term brand value and should be applied selectively.

Based on the findings, several practical recommendations are proposed. Companies should integrate AI tools for demand forecasting and customer segmentation, expand the use of retail media platforms, and coordinate promotion strategies with product life cycle stages. It is necessary to combine functional product information with trust-based elements such as expert endorsement and user feedback. Continuous analysis of performance indicators and flexible adjustment of campaigns should become a standard practice.

This approach allows firms to increase efficiency of marketing activities, ensure better resource allocation, and maintain stable market positions under conditions of digital transformation.

REFERENCES

1. Arrieli D. Predictably Irrationality: The Hidden Forces That Shape Our Decisions. Moscow: Mann, Ivanov and Ferber, 2019.

2. Lindstrom M. Buyology: A Fascinating Journey into the Mind of the Modern Consumer. Moscow: Eksmo, 2018.

3. Kahneman, D. Thinking, Fast and Slow. Moscow: AST, 2020.

4. Churchill G., Brown T. Marketing Research. St. Petersburg: Piter, 2021.

5. Solomon M. Consumer Behavior. Moscow: Williams, 2020.

6. Kotler P., Keller K. Marketing Management. 15th ed. Pearson Education, 2016.

7. Musaeva Sh.A. Integrated Marketing Communications. Textbook, Makhorat Publishing House, Samarkand, 2022.

8. Musaeva Sh.A. Marketing Research. Textbook, STAR-SEL LLC, publishing and creative department. Samarkand, 2024.

9. The history of Coca-Cola marketing campaigns | Embryo, https://embryo.com/blog/the-history-of-coca-cola-marketing-campaigns/

10. New Coke: A Classic Branding Case Study on a Major Product Change Failure, https://www.thebrandingjournal.com/2025/02/new-coke/

11. New Coke: The Most Memorable Marketing Blunder Ever? - The Coca-Cola Company, https://www.coca-colacompany.com/about-us/history/new-coke-the-most-memorable-marketing-blunder-ever.

12. Эргашходжаева Ш., Хакимов З. Тошкент вилояти имижини яратиш асосида инвестицион муҳит жозибадорлигини ошириш //хозяйство. - 2011. - №. 6. - С. 78.

13. Khakimov Z., Akramov T., Mahmudov T. Discriminant analysis of consumer attitudes towards fashion //Asian Journal of Technology & Management Research (AJTMR) ISSN. - 2022. - Т. 2249. - №. 0892.

Marketing

ilmiy, amaliy va ommabop jurnali

Muharrir:	Xakimov Ziyodulla Axmadovich
Ingliz tili muharriri:	Tursunov Boburjon Ortiqmirzayevich
Rus tili muharriri:	Kaxramonov Xurshidjon Shuxrat o‘g‘li
Musahhih:	Karimova Shirin Zoxid qizi
Sahifalovchi va dizaynerlar:	Sadikov Shoxrux Shuxratovich
	Abidjonov Nodirbek Odijon o‘g‘li

2026-yil, aprel, 4-son

Mazkur jurnalda maqolalar chop etish uchun quyidagi havolalarga murojaat qilish mumkin.
Ilmiy maqola, ommabop maqola, reklama, hikoya va boshqa ilmiy-ijodiy materiallar yuborishingiz mumkin.
Materiallar va reklamalar pullik asosda chop etiladi.

Elektron pochta: info@marketingjournal.uz
Bot: @marketinjournalbot
Tel.: +998977838464, +998939266610
Jurnalning rasmiy sayti: https://marketingjournal.uz

Marketing jurnali O‘zbekiston Respublikasi Oliy ta’lim, fan va innovatsiyalar vazirligi huzuridagi **Oliy attestatsiya komissiyasi rayosatining 2024-yil 04-oktabrdagi 332/5 sonli qarori** bilan milliy ilmiy nashrlar ro‘yxatiga kiritilgan

“Marketing” ilmiy, amaliy va ommabop jurnali 2024-yil 15-martdan O‘zbekiston Respublikasi Prezidenti Administratsiyasi huzuridagi Axborot va ommaviy kommunikatsiyalar agentligi tomonidan **C-5669517** reyestr raqami tartibi bo‘yicha ro‘yxatdan o‘tkazilgan. **Litsenziya raqami: №240874**

“Marketing” ilmiy, amaliy va ommabop jurnalining xalqaro darajasi: **9710.** ГОСТ 7.56-2002 " Seriyali nashrlarning xalqaro standart raqamlanishi" davlatlataro standartlari talablari. **Berilgan ISSN tartib raqami: 3060-4621**