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THE IMPACT OF DATA-DRIVEN MANAGEMENT ON TRADE PERFORMANCE IN DIGITAL TRADE PLATFORMS

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Abstract: This article examines the impact of data-driven management on trade performance in digital trade platforms and substantiates the methodological importance of integrating data resources into strategic, tactical, and operational management processes. The rapid development of e-commerce, artificial intelligence, big data analytics, cloud technologies, digital payment systems, recommender systems, and platform-based business models has fundamentally changed the mechanisms of trade management. Digital platforms continuously generate large volumes of customer, product, transaction, seller, marketing, logistics, payment, and behavioral data. However, data themselves do not automatically create economic value; their contribution to trade performance depends on the ability of platform operators to transform data into analytical insights and convert these insights into effective managerial decisions. The article analyzes the impact of data-driven management on customer segmentation and personalization, demand forecasting, marketing effectiveness, customer retention, pricing, recommender systems, inventory management, seller-performance monitoring, and operational coordination. Recent empirical studies demonstrate that big data analytics capabilities can positively influence organizational performance and that marketing analytics strengthens customer agility and customer satisfaction. The study also shows that the effectiveness of data-driven management is determined by data quality, analytical capability, technological integration, organizational agility, professional competencies, and data governance. Based on the analysis, an integrated mechanism of “data → analytics → managerial decision → commercial action → trade performance → feedback” is proposed. A system of indicators for assessing the impact of data-driven management on digital trade performance is also developed.

Keywords: data-driven management, digital trade platforms, trade performance, e-commerce, big data analytics, marketing analytics, artificial intelligence, customer analytics, predictive analytics, digital transformation.

Annotatsiya: Ushbu maqolada ma'lumotlarga asoslangan boshqaruvning raqamli savdo platformalaridagi savdo samaradorligiga ta'siri o'rganilgan hamda ma'lumotlar resurslarini strategik, taktik va operatsion boshqaruv jarayonlariga integratsiya qilishning metodologik ahamiyati asoslab berilgan. Elektron tijorat, sun'iy intellekt, katta ma'lumotlar tahlili, bulutli texnologiyalar, raqamli to'lov tizimlari, tavsiya tizimlari va platformaga asoslangan biznes modellarining jadal rivojlanishi savdoni boshqarish mexanizmlarini tubdan o'zgartirdi. Raqamli platformalar doimiy ravishda mijozlar, mahsulotlar, tranzaksiyalar, sotuvchilar, marketing, logistika, to'lovlar va xulq-atvorga oid katta hajmdagi ma'lumotlarni shakllantiradi. Biroq ma'lumotlarning o'zi avtomatik ravishda iqtisodiy qiymat yaratmaydi; ularning savdo samaradorligiga qo'shadigan hissasi platforma operatorlarining ma'lumotlarni tahliliy xulosalarga aylantirish va ushbu xulosalarni samarali boshqaruv qarorlariga tatbiq etish qobiliyatiga bog'liq. Maqolada ma'lumotlarga asoslangan boshqaruvning mijozlarni segmentatsiyalash va shaxsiylashtirish, talabni prognozlash, marketing samaradorligi, mijozlarni ushlab qolish, narxlash, tavsiya tizimlari, zaxiralarni boshqarish, sotuvchilar faoliyatini monitoring qilish hamda operatsion muvofiqlashtirishga ta'siri tahlil qilingan. So'nggi empirik tadqiqotlar katta ma'lumotlar tahlili imkoniyatlari tashkilot faoliyati samaradorligiga ijobiy ta'sir ko'rsatishi, marketing tahlili esa mijozlarning moslashuvchanligi va qoniqishini oshirishini ko'rsatmoqda. Tadqiqot, shuningdek, ma'lumotlarga asoslangan boshqaruv samaradorligi ma'lumotlar sifati, tahliliy salohiyat, texnologik integratsiya, tashkiliy moslashuvchanlik, professional kompetensiyalar va ma'lumotlarni boshqarish tizimiga bog'liqligini ko'rsatadi. Tahlil asosida “ma'lumotlar → tahlil → boshqaruv qarori → tijoriy harakat → savdo samaradorligi → qayta aloqa” integratsiyalashgan mexanizmi taklif etilgan. Shuningdek, ma'lumotlarga asoslangan boshqaruvning raqamli savdo samaradorligiga ta'sirini baholash uchun ko'rsatkichlar tizimi ishlab chiqilgan.

Kalit so'zlar: ma'lumotlarga asoslangan boshqaruv, raqamli savdo platformalari, savdo samaradorligi, elektron tijorat, katta ma'lumotlar tahlili, marketing tahlili, sun'iy intellekt, mijozlar tahlili, prognozli tahlil, raqamli transformatsiya.

Аннотация: В статье исследуется влияние управления на основе данных на эффективность торговли на цифровых торговых платформах и обосновывается методологическая значимость интеграции информационных ресурсов

в процессы стратегического, тактического и операционного управления. Стремительное развитие электронной коммерции, искусственного интеллекта, аналитики больших данных, облачных технологий, цифровых платежных систем, рекомендательных систем и бизнес-моделей, основанных на платформах, коренным образом изменило механизмы управления торговлей. Цифровые платформы непрерывно генерируют большие объемы данных о клиентах, продуктах, транзакциях, продавцах, маркетинге, логистике, платежах и поведении пользователей. Однако сами по себе данные автоматически не создают экономическую ценность; их вклад в эффективность торговли зависит от способности операторов платформ преобразовывать данные в аналитические выводы и превращать эти выводы в эффективные управленческие решения. В статье анализируется влияние управления на основе данных на сегментацию и персонализацию клиентов, прогнозирование спроса, эффективность маркетинга, удержание клиентов, ценообразование, рекомендательные системы, управление запасами, мониторинг эффективности продавцов и операционную координацию. Современные эмпирические исследования показывают, что возможности аналитики больших данных могут оказывать положительное влияние на эффективность деятельности организаций, а маркетинговая аналитика способствует повышению гибкости и удовлетворенности клиентов. Исследование также показывает, что эффективность управления на основе данных определяется качеством данных, аналитическими возможностями, технологической интеграцией, организационной гибкостью, профессиональными компетенциями и управлением данными. На основе проведенного анализа предложен интегрированный механизм «данные → аналитика → управленческое решение → коммерческое действие → эффективность торговли → обратная связь». Кроме того, разработана система показателей для оценки влияния управления на основе данных на эффективность цифровой торговли.

Ключевые слова: управление на основе данных, цифровые торговые платформы, эффективность торговли, электронная коммерция, аналитика больших данных, маркетинговая аналитика, искусственный интеллект, аналитика клиентов, прогнозная аналитика, цифровая трансформация.

INTRODUCTION

Digital transformation is fundamentally changing the economic nature of trade, customer behavior, competition, and the mechanisms through which commercial enterprises make managerial decisions. Traditional trade management was largely based on retrospective accounting information, historical sales statistics, periodic market research, and managers' professional experience. In digital trade platforms, by contrast, practically every interaction between the customer and the platform generates a digital signal. Search queries provide information about emerging demand, product views indicate consumer interest, clicks reflect engagement, abandoned shopping carts reveal possible barriers to purchase, completed transactions represent realized demand, while customer reviews, returns, complaints, payment behavior, and delivery information provide additional evidence about the overall quality of the customer experience.

The development of e-commerce has further increased the economic value of such information. The OECD's revised definition of e-commerce in 2025 reflects changes in the nature of digital commerce by providing updated guidance on digital intermediaries, subscriptions, emerging ordering channels, and artificial-intelligence-assisted transactions [1]. These developments demonstrate that digital trade is moving toward increasingly automated and data-intensive commercial models, in which managerial decisions are directly connected with digital information flows.

Under these conditions, data become one of the most important strategic resources of digital trade platforms. However, the competitive advantage of a platform is not determined simply by the volume of data accumulated. Economic value is created when data are collected systematically, integrated across different functional areas, analyzed correctly, converted into managerial knowledge, and used to support concrete commercial actions. Consequently, the transition from traditional management to data-driven management represents a transition from intuition-dominated decision-making toward an evidence-based management model.

Data-driven management can therefore be defined as a management approach in which strategic, tactical, and operational decisions are systematically supported by the collection, integration, processing, analysis, and interpretation of relevant data. Its distinctive characteristic is the transformation of data from a passive reporting resource into an active management instrument. A developed data-driven management system should answer a sequence of interrelated questions: What happened? Why did it happen? What is likely to happen next? What should management do? What economic effect did the decision generate?

Accordingly, the development of analytical management can be represented through the following sequence:

Descriptive analytics → Diagnostic analytics → Predictive analytics → Prescriptive analytics → Managerial decision → Commercial action → Performance assessment → Organizational learning.

This sequence is particularly relevant for digital trade platforms because the effectiveness of competition increasingly depends on the speed with which market signals are identified and transformed into managerial

responses. Changes in customer preferences, competitor prices, promotional effectiveness, demand structure, and inventory availability may occur rapidly. A platform capable of identifying these changes earlier and adjusting its commercial decisions faster than competitors may achieve a significant competitive advantage.

The purpose of this article is therefore to determine the principal mechanisms through which data-driven management affects trade performance in digital trade platforms, systematize modern scientific approaches to this relationship, and develop an integrated framework for assessing the economic effectiveness of data-driven management.

REVIEW OF LITERATURE ON THE SUBJECT

The relationship between data analytics and organizational performance has become an important direction of contemporary management and information-systems research. Existing studies increasingly emphasize that the economic value of data cannot be explained solely by information technology infrastructure. Rather, value emerges through a combination of technological resources, analytical competencies, organizational processes, and the ability of managers to act upon analytical results.

Welbotha and van den Berg investigated big data analytics capabilities in the retail sector and identified three interconnected groups of capabilities: tangible, human, and intangible big data analytics capabilities. Their empirical findings demonstrate a positive and significant relationship between all three dimensions and organizational performance among retailers. The study indicates that stronger analytics capabilities may contribute to improvements in productivity, sales revenue, profit margins, customer retention, and return on investment [2]. This finding is particularly important for digital trade platforms because it indicates that investments in digital infrastructure alone are insufficient without specialists, organizational competencies, and a management culture capable of using analytical information.

Agag et al. examine the relationship between marketing analytics, customer agility, and customer satisfaction. Their longitudinal research demonstrates that the use of marketing analytics positively influences customer agility, while customer agility subsequently contributes to higher customer satisfaction. The authors also find that the influence of analytics on customer agility becomes stronger when market turbulence is high [3]. This result suggests that data-driven management has particularly high strategic value in rapidly changing digital markets, where the speed of response to customer signals becomes an important competitive capability.

Lin, Wu, and Luo examine big data analytics capability from the perspective of organizational resilience. Based on evidence from 213 firms, their study demonstrates that proactive and reactive organizational resilience mediate the relationship between big data analytics capability and firm performance. The research also indicates that environmental dynamism can strengthen the importance of analytics-supported resilience [4]. From the perspective of digital trade, this implies that analytics creates value not only by improving individual decisions but also by increasing an organization's capacity to anticipate market changes, adapt resources, and respond to disruptions.

Research has also extended data-driven management from predictive analysis toward prescriptive decision-making. Feng et al. develop a profit- and AUC-focused prescriptive analytics approach for managing customer churn in e-commerce. Their model takes customer lifetime value and incentive costs into account and attempts to identify economically optimal retention actions instead of merely maximizing predictive accuracy [5]. This approach has major methodological importance because it demonstrates that the effectiveness of an analytical system should ultimately be evaluated by its economic contribution rather than by technical model accuracy alone.

Hu, Xie, and Zhang examine data-driven service strategies in competing e-commerce platforms and conclude that the implementation of data-driven services can influence platform profit, consumer welfare, and overall system performance. At the same time, their results demonstrate that continuously increasing the level of data-driven services does not automatically lead to continuously increasing platform-system performance [6]. Therefore, the economic effect of data-driven management depends on the relationship between the benefits generated and the costs associated with data, technology, competition, and platform operating models.

Platform governance represents another important research direction. Li et al. show that monitoring and community-building mechanisms in B2B e-commerce platforms can improve seller firms' sense of belonging, relationship satisfaction, and performance. Their findings demonstrate that platform performance depends not only on customer analytics but also on how data and governance mechanisms are used to manage relationships with sellers and other ecosystem participants [7].

The review of the literature therefore suggests that the relationship between data-driven management and trade performance is not a simple direct relationship. Instead, data create economic value through several mediating mechanisms, including analytical capability, customer agility, organizational resilience, personalization, prescriptive decision-making, platform governance, and operational coordination.

RESEARCH METHODOLOGY

This study applies a systematic, comparative, and analytical research approach to examine the impact of data-driven management on trade performance in digital trade platforms. The research is based on the analysis and synthesis of recent scientific publications, international reports, and empirical studies related to digital trade, big data analytics, marketing analytics, customer behavior, and platform management. Comparative analysis was used to identify the main mechanisms through which data-driven management influences commercial performance, while a system-based approach was applied to structure these mechanisms into an integrated framework. In addition, key performance indicators were grouped into market, customer, marketing, operational, financial, and analytical dimensions in order to evaluate the effectiveness of data-driven management comprehensively.

ANALYSIS AND RESULTS

The conducted analysis demonstrates that the impact of data-driven management on trade performance should be understood as a sequential economic mechanism rather than as a direct result of data accumulation. The first stage of this mechanism is the creation of a reliable data foundation. Digital trade platforms generate customer data, transaction data, product data, seller data, marketing data, payment data, inventory information, logistics information, reviews, and service interactions. If these information flows remain fragmented across separate systems, the platform cannot obtain an integrated view of commercial activity. Therefore, the first condition for effective data-driven management is the creation of an integrated data architecture in which different information sources are connected through standardized identifiers, definitions, and analytical processes.

Data quality is particularly important. Inaccurate inventory information may cause cancelled orders; duplicated customer profiles may distort customer-acquisition indicators; incomplete transaction records may lead to incorrect demand forecasts; inaccurate marketing attribution may result in inefficient advertising-budget allocation; and inconsistent seller information may distort platform rankings. Consequently, data quality should be considered an economic variable. Poor-quality data ultimately result in lost revenue, unnecessary expenditure, weak customer experience, and incorrect managerial decisions.

The second major mechanism is customer analytics. Digital platforms can identify differences among customers according to purchase history, frequency, monetary value, product preferences, browsing patterns, price sensitivity, promotional response, loyalty, and churn probability. This allows a transition from mass marketing toward increasingly precise forms of customer management. The evolution can be represented as:

Mass marketing → Segmentation → Micro-segmentation → Personalization → Predictive personalization → Next-best-action management.

At the initial level, trade enterprises divide consumers into broad segments. At higher levels of analytical maturity, algorithms can determine what product should be offered to a particular customer, through which channel, at what time, and with what incentive. Such decisions can influence conversion rate, average basket size, customer retention, repeat purchase, and customer lifetime value. In this context, marketing analytics becomes directly linked to commercial effectiveness rather than remaining an isolated marketing function.

The findings of Agag et al. are important in this regard because they demonstrate that analytics creates customer agility, which subsequently contributes to customer satisfaction [3]. This means that the central economic effect of analytics does not necessarily arise from the analytical model itself, but from the speed and quality with which management responds to the information generated by the model.

The third mechanism is the application of data-driven recommender systems. Digital trade platforms contain thousands or millions of products, making it impossible for customers to examine the entire assortment. Recommendation algorithms reduce this information burden by ranking products according to predicted relevance. From a commercial perspective, recommender systems may influence product discovery, conversion, cross-selling, upselling, basket value, and repeat purchasing.

However, recommender systems should not be evaluated exclusively through technical indicators such as precision or click-through rate. An algorithm that produces more clicks does not necessarily create more profit. Effective management should connect recommendation models with gross margin, inventory position, customer lifetime value, strategic assortment priorities, repeat purchase, and long-term customer satisfaction. Therefore, the transition from technology-oriented recommender systems toward economically oriented recommender management is an important direction for improving data-driven trade performance.

The fourth mechanism is customer retention and churn management. In highly competitive e-commerce markets, customers can switch between platforms relatively easily. Consequently, trade effectiveness depends not only on customer acquisition but also on the ability to maintain profitable customer relationships. Data-driven systems can detect declining purchase frequency, lower engagement, negative service experiences,

changes in product browsing, or other signals associated with potential churn.

Feng et al. demonstrate that prescriptive analytics can go beyond simple churn prediction by considering customer lifetime value and the costs associated with retention incentives [5]. This leads to an important management principle: not every customer predicted to churn should automatically receive a retention incentive. A data-driven management system should determine whether intervention is economically justified and what type of intervention maximizes expected profit.

The fifth mechanism is demand forecasting and inventory management. Historical transaction data can be combined with search trends, browsing activity, seasonality, promotions, pricing, product availability, and other variables to generate more precise demand forecasts. Better demand forecasts allow trade platforms to optimize inventory levels and reduce both stockouts and excessive inventories.

This relationship has a direct impact on trade performance. Marketing systems may successfully stimulate customer demand, but if the required product is unavailable or delivery time is unacceptable, the platform loses the transaction. For this reason, data-driven management should connect marketing analytics with procurement, inventory, logistics, and fulfillment management. Digital trade performance is achieved when the digital front end and operational back end operate as an integrated system.

Pricing and promotional decisions represent another important application. Digital platforms receive continuous information regarding demand, competitor prices, inventory levels, consumer response, and marketing effectiveness. This creates opportunities for more flexible pricing. However, data-driven pricing should not be confused with simply changing prices more frequently. The objective should be to identify a price that balances demand, margin, inventory conditions, competitive position, and long-term customer value.

The same principle applies to discounts. If a platform provides a discount to a customer who would have purchased the product at the regular price, part of the potential margin is unnecessarily lost. Predictive and prescriptive analytics can estimate which customers require an incentive and which are likely to purchase without one. Consequently, data-driven promotion management can reduce ineffective discounts and improve promotional profitability.

Another major direction is marketing-budget allocation. Digital trade platforms frequently invest simultaneously in search advertising, social media, display advertising, marketplaces, mobile notifications, email marketing, affiliate channels, and other communication instruments. Traditional attribution approaches may incorrectly assign sales to the final customer touchpoint and therefore distort managerial decisions. Data-driven marketing analytics can evaluate the contribution of different channels across the customer journey and support more rational resource allocation.

The economic result should therefore be measured not only by advertising clicks or impressions but by indicators such as incremental sales, customer acquisition cost, contribution margin, customer lifetime value, marketing return on investment, and repeat purchase. This shifts marketing performance assessment from activity indicators toward value indicators.

Data-driven management is also important on the seller side of platform ecosystems. A marketplace depends heavily on the behavior and performance of independent sellers. Poor seller performance can cause delivery delays, cancellations, low product quality, customer complaints, and reputational damage to the entire platform. Data analytics makes it possible to construct multidimensional seller-performance profiles based on sales volume, delivery reliability, product availability, cancellations, returns, customer reviews, complaint frequency, and compliance with platform requirements.

Li et al. show that platform-governance mechanisms, including monitoring and community-building, can improve relationships and seller performance [7]. Therefore, seller analytics should not be used solely for control and penalties. It should also identify sellers requiring training, operational assistance, or commercial development. This creates a shift from seller monitoring toward seller development based on data (Table 1).

Table 1.
Main mechanisms through which data-driven management affects trade performance¹

Data-driven management area	Main analytical instruments	Managerial decision	Expected trade-performance effect
Customer analytics	Segmentation, RFM, CLV, behavioral analytics	Customer prioritization	Higher conversion and retention

¹ Source: developed by the author based on [2]–[7].

Personalization	AI and predictive models	Individual offers and communication	Higher customer response
Recommender systems	Collaborative, content-based and hybrid models	Product-ranking decisions	Higher basket value and cross-selling
Churn management	Predictive and prescriptive analytics	Targeted retention actions	Lower customer loss
Demand forecasting	Time-series and machine-learning models	Procurement and inventory planning	Lower stockouts and excess stock
Pricing analytics	Elasticity and demand models	Price optimization	Higher margin and sales efficiency
Marketing analytics	Attribution and campaign analytics	Budget reallocation	Higher marketing ROI
Seller analytics	Performance scoring	Seller support and monitoring	Improved marketplace quality
Logistics analytics	Delivery and fulfillment analytics	Operational optimization	Faster and more reliable delivery

The analysis indicates that data-driven management should also be evaluated according to its economic return. A common managerial mistake is to measure digital transformation through the amount invested in software, cloud infrastructure, artificial intelligence, or data specialists. These are input indicators rather than final results. The relevant question is whether the analytical capability produces additional economic value.

For this purpose, the economic value of data-driven management can be conceptually expressed as:

$$\text{DDMV} = \Delta R + \text{CS} + \text{AL} - \text{DTC} - \text{IC} - \text{RA}$$

where DDMV represents Data-Driven Management Value, ΔR is incremental revenue generated through improved decisions, CS represents cost savings, AL represents avoided losses, DTC indicates data and technology costs, IC represents implementation and integration costs, and RA represents risk adjustment.

Incremental revenue can arise from increased conversion, larger average baskets, stronger customer retention, better cross-selling, or higher seller activity. Cost savings may originate from more efficient marketing expenditures, reduced inventory costs, process automation, and lower fulfillment expenditure. Avoided losses include prevented churn, fraud, stockouts, ineffective promotions, and operational failures. This approach allows data-driven management to be evaluated as an economic investment rather than merely as a technological modernization initiative.

The research also demonstrates that the relationship between data-driven services and platform performance is not unlimited. Hu et al. show that continuously increasing data-driven service levels does not necessarily produce continuous improvements in system performance [6]. This means that the economic principle of marginal efficiency should also apply to data-driven investment. Beyond a certain point, additional analytical sophistication may generate lower incremental value than its cost.

Therefore, an integrated model for evaluating the impact of data-driven management on trade performance is proposed. The model consists of six interrelated factors: Data Quality (DQ), Analytical Capability (AC), Decision Agility (DA), Customer Orientation (CO), Operational Integration (OI), and Data Governance (DG).

Conceptually:

$$\text{Trade Performance} = f(\text{DQ}, \text{AC}, \text{DA}, \text{CO}, \text{OI}, \text{DG})$$

Data quality creates a reliable informational foundation. Analytical capability transforms data into managerial knowledge. Decision agility determines the speed at which analytical knowledge is converted into action. Customer orientation ensures that decisions generate customer value. Operational integration connects demand-generation activities with supply, inventory, payment, and logistics capabilities. Data governance supports accuracy, privacy, accountability, security, and responsible use of analytical models.

These factors are complementary. Advanced analytics with poor-quality data may generate incorrect decisions. High-quality analytics without managerial agility may remain unused in dashboards. Effective customer personalization without operational integration may create demand that cannot be fulfilled. Strong automation without data governance may create reputational, privacy, or algorithmic risks. Therefore, the highest economic effect occurs when all elements develop in a balanced manner (Table 2).

Table 2.

Proposed indicator system for assessing the effectiveness of data-driven management²

Assessment dimension	Key indicators	Expected result
Market performance	Sales growth, GMV growth, market share	Increased market position
Customer performance	Conversion, retention, repeat purchase, CLV	Stronger customer value
Marketing performance	CAC, marketing ROI, campaign profitability	Efficient resource allocation
Operational performance	Inventory turnover, stockout rate, fulfillment time	Lower operating costs
Financial performance	Gross margin, contribution margin, ROI	Higher economic efficiency
Analytics performance	Forecast accuracy, recommendation accuracy, decision speed	Higher decision quality
Platform performance	Seller retention, transaction activity, dispute rate	Stronger ecosystem performance

Based on the conducted analysis, the complete data-driven management cycle for digital trade platforms can be expressed as:

Data generation → Data integration → Data quality control → Analytical processing → Insight generation → Managerial decision → Commercial implementation → Performance measurement → Feedback → Organizational learning.

The feedback element gives digital trade platforms a particularly important advantage. Every implemented decision generates additional information. A personalized recommendation generates a customer response; a pricing decision produces demand elasticity information; a retention campaign generates evidence about incentive effectiveness; an inventory decision produces fulfillment outcomes. If the platform systematically captures these results, every management cycle improves the knowledge base for subsequent decisions.

For this reason, the ultimate goal of data-driven management is not simply automation. Its deeper purpose is the creation of an organizational learning system in which commercial decisions continuously improve on the basis of new evidence.

The results of the research make it possible to conclude that digital trade platforms should move through several levels of analytical maturity. At the first level, data are used primarily for reporting. At the second, managers identify the causes of past performance. At the third, predictive models forecast customer demand and operational conditions. At the fourth, prescriptive systems recommend optimal managerial actions. At the fifth level, AI-supported systems integrate real-time data with automated decision support while maintaining human oversight.

Thus: Reporting → Diagnosis → Forecasting → Prescription → Intelligent Decision Support → Continuous Learning.

The higher the analytical maturity of the platform, the greater its potential to convert data into economic value. Nevertheless, higher technological sophistication should always be accompanied by stronger governance. Data-driven trade platforms process customer identities, behavioral information, transaction histories, financial information, and seller data. Therefore, privacy, cybersecurity, access rights, model validation, algorithmic bias, and managerial accountability should form part of the data-driven management architecture.

Overall, the results show that data-driven management positively influences trade performance when data are converted into economically meaningful decisions rather than merely accumulated. The principal channels of influence are customer personalization, marketing agility, customer retention, demand forecasting, recommender systems, pricing optimization, inventory management, marketing-budget allocation, seller management, and operational coordination. The empirical literature confirms that analytical capabilities can improve organizational performance and that their effectiveness is mediated by customer agility and organizational resilience [2]–[4]. At the same time, data-driven services should be evaluated according to their marginal economic value because excessive investment without corresponding commercial returns does not necessarily improve platform performance [6].

Consequently, the strategic principle for digital trade platforms should not be “collect as much data as possible,” but rather “generate the greatest possible managerial and economic value from relevant, reliable, and timely data.” The sustainable competitive advantage of a digital trade platform will increasingly depend on how quickly it can transform a market signal into analytical knowledge, knowledge into a managerial decision, the decision into commercial action, and commercial action into measurable customer and economic value.

² Source: author's methodological development.

CONCLUSIONS AND SUGGESTIONS

The results of the study demonstrate that data-driven management has become one of the most important determinants of trade performance in digital trade platforms. The increasing volume and diversity of customer, transaction, seller, marketing, logistics, payment, and operational data create new opportunities for improving the quality, speed, and accuracy of managerial decision-making. However, the economic value of data is realized only when information is systematically collected, integrated, analyzed, interpreted, and transformed into specific managerial actions. Therefore, the effectiveness of data-driven management should not be evaluated by the amount of data accumulated or by the level of technological investment alone, but by its actual contribution to sales growth, customer retention, marketing efficiency, operational performance, and profitability.

The analysis shows that data-driven management affects trade performance through several interconnected mechanisms. Customer analytics and personalization improve the relevance of commercial offers and strengthen conversion and repeat purchasing. Predictive analytics enables more accurate forecasting of demand and customer behavior, while prescriptive analytics supports economically justified decisions regarding retention, pricing, promotions, and resource allocation. Recommender systems contribute to product discovery, cross-selling, and customer engagement, whereas integrated inventory and logistics analytics help reduce stockouts, delivery delays, and operational inefficiencies. At the same time, seller-performance analytics strengthens platform governance and improves the overall quality of marketplace interactions.

An important result of the study is that the relationship between data-driven management and trade performance is not direct or automatic. Data create economic value through a combination of data quality, analytical capability, decision agility, customer orientation, operational integration, and data governance. Weakness in any of these components can significantly reduce the effectiveness of the entire management system. High-quality data without sufficient analytical capability cannot generate meaningful insights, while advanced analytics without managerial agility may remain unused in practical decision-making. Similarly, effective customer personalization without operational integration may generate demand that the platform is unable to fulfill.

Based on these findings, the study proposes the integrated mechanism of “data → analytics → managerial decision → commercial action → trade performance → feedback” as the conceptual basis of data-driven management in digital trade platforms. The feedback component is particularly important because every implemented decision generates new information that can be used to improve subsequent decisions. In this way, digital trade platforms can develop from conventional reporting systems toward continuous organizational learning and adaptive management.

The study also proposes that the effectiveness of data-driven management should be assessed through a balanced system of market, customer, marketing, operational, financial, analytical, and platform-performance indicators. Such an approach makes it possible to distinguish between superficial improvements in individual digital metrics and genuine economic value creation. For example, an increase in clicks, traffic, or gross sales should not automatically be interpreted as improved performance if it is accompanied by excessive customer acquisition costs, declining margins, high return rates, or reduced customer retention.

From a practical perspective, digital trade platforms should focus on creating integrated data infrastructures, improving data quality, strengthening analytical competencies, developing AI-supported predictive and prescriptive systems, and linking analytical results directly with commercial and operational decision-making. Particular attention should also be paid to the development of qualified personnel capable of interpreting analytical results and using them in management practice. At the same time, privacy protection, cybersecurity, model validation, transparency, and managerial accountability should form an integral part of data governance.

Thus, the main strategic principle for digital trade platforms should shift from “collecting more data” to “creating greater economic and managerial value from relevant, reliable, and timely data.” In the long term, the competitiveness and trade performance of digital platforms will increasingly depend on their ability to transform market signals into analytical knowledge, knowledge into effective managerial decisions, and managerial decisions into measurable customer and economic value. Consequently, data-driven management should be regarded not merely as a technological tool, but as an integrated strategic management mechanism capable of improving trade efficiency, strengthening customer relationships, increasing organizational adaptability, and ensuring sustainable competitive advantage in the digital economy.

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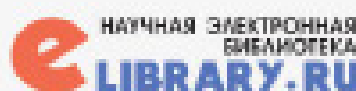
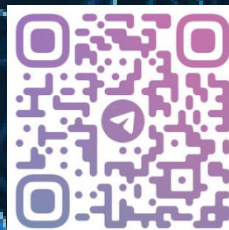
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