Generative AI-based predictive analytics as a strategic planning tool in the U.S. B2B sector

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Abstract: This article examines the application of predictive analytics based on generative artificial intelligence as a tool for strategic planning in the business-to-business sector of the USA. It explores how modern architectures enable the analysis of structured and unstructured data, generating scenario forecasts and personalized managerial recommendations. The evolution of forecasting methods is analyzed, from classical statistical models and machine learning algorithms to cognitive systems capable of generating strategic scenarios. Particular attention is paid to the advantages of generative analytics under conditions of high uncertainty and complexity of business processes. Practical application cases are presented, and potential limitations related to interpretability, ethics, and data security are considered.

Keywords: Generative Artificial Intelligence, Strategic Planning, Predictive Analytics, Business-to-Business.

I. Introduction

The modern business-to-business (B2B) economy in the USA is characterized by a high level of digitalization, increasing competition. Companies face the necessity of making strategic decisions promptly based on large volumes of heterogeneous data, including information on customers, operational efficiency, market condition changes, and macroeconomic factors. Under such conditions, the importance of advanced analytical technologies that can not only interpret historical data but also generate well-grounded forecasts for the future is growing.

One of the most promising directions in analytics is the use of generative artificial intelligence (GenAI). It demonstrates the ability to create realistic texts, create strategic scenarios, identify hidden dependencies, and formulate hypotheses based on semi-structured and unstructured data sources. Its application goes beyond traditional business intelligence and allows companies to develop more flexible and adaptive development strategies. The purpose of this article is to analyze the potential of GenAI in the field of predictive analytics as a strategic tool for companies in the B2B sector of the USA.

II. Overview of Existing Predictive Analysis Methods

Predictive analysis is a group of methods and methodologies aimed at forecasting future events or system conditions based on historical data. Over the past few decades, it has become an essential element of strategic planning, especially in the context of high market volatility and growing amounts of data. The evolution of approaches has progressed from traditional statistical models to modern machine learning (ML) methods, each of which has both scientific value and practical significance for business applications.

Traditional statistical forecasting methods, such as autoregressive models, moving averages, exponential smoothing models, and regression analysis, have long served as the primary tools for quantitative predictions. They are characterized by high interpretability, stability when working with small data volumes, and widespread use in econometrics and managerial accounting [1].

Significant progress in the field has been achieved with the emergence of ML methods, including decision tree models, random forest, gradient boosting, neural nets, and support vector machines. They can identify complex relationships between variables, controlling for non-linear relationships automatically, and learning from data structure changes. This approach does not require strict assumptions about data distribution and can effectively work with unstructured information, including textual and behavioral data.

Despite their high potential, existing methods have certain limitations. Classical statistical models poorly adapt to rapidly changing data and lose accuracy in the presence of hidden factors or violations of assumptions. In turn, ML requires significant computational resources, extensive training datasets, and often suffers from a lack of interpretability. Also, they are prone to the quality of input data and vulnerable to overfitting, especially where observations are few. This creates a requirement to compromise on the accuracy of predictions and interpretability of the models used, especially for critical business decisions when causal relations have to be explained.

The present toolkit is a multifaceted field that combines the rigor of statistical methods and the adaptability and multiplicity of ML. None of the approaches is universal, however, and the specific choice has to be governed by the task type, data characteristics, and requirements on interpretability and reliability of the

results. It is against this background that interest arises in the application of GenAI, which is capable of combining the power of predictive models with the cognitive capabilities of generating scenarios, hypotheses, and strategic conclusions.

III. Features of Genai and Its Application in Predictive Analytics for the B2b Sector

The development of GenAI technologies has opened a new stage in the evolution of intelligent analytical systems, due to their ability to synthesize new data, hypotheses, and scenarios based on existing information arrays. Their cognitive potential lies not only in the ability to formulate forecasts but also in modeling alternative future states of systems.

From a technical perspective, it is based on deep learning architectures such as transformers, autoencoders, and generative adversarial networks. The principle of their operation is probabilistic prediction of the next element in a sequence, which, combined with training on diverse data, enables these models to extract latent dependencies and construct semantically grounded predictions.

Its application in predictive analytics offers a range of advantages. Such models are capable of working with unstructured data, which expands analytical horizons beyond numerical arrays. They also possess a high degree of adaptability and can quickly generate forecasts based on limited context, making them effective in situations with a shortage of training data [2]. Additionally, they enable the automation of scenario analysis by creating multiple possible development paths and their accompanying justifications. These capabilities make GenAI especially attractive in situations where traditional methods prove insufficiently flexible or are confined to descriptive analytics. Table 1 presents a comparison of the generative approach with established business analytics models.

Table 1. Comparison of generative and traditional approaches [3, 4]

Criteria	Traditional	Generative
Type ofanalysis	Descriptiveanddiagnostic.	Predictiveandscenarioanalysis.
Data source	Structured data from internal systems.	Structured and unstructured data, including external sources.
Resultformat	Graphs, tables, and standard reports.	Text scenarios, hypotheses, explanations, personalized recommendations.
Adaptabilitytochange	Limited, requiresmanualconfiguration.	High, thanks to learning from new data and context.
Generation ofstrategicscenarios	Missingorlimited.	Built-in ability to create alternative scenarios and forecasts.

According to the author, the comparative analysis shows that generative analytics fundamentally differs from traditional approaches both in the nature of the data processed and in the depth of analytical capabilities. These differences are especially important in the case of highly volatile markets, where not only the past must be comprehended but also the future must be simulated, taking into consideration several variables and uncertainties.

In this context, the unique characteristics of the B2B sector are very favorable for the application of generative models. This is a highly competitive segment of the economy in which decisions on procurement, strategic partnerships, and investments are made based on multicriteria analysis, and contracts have a long life cycle. Predictive analytics based on GenAI demonstrates a wide range of applications in the B2B sector, reflecting its complex structure (fig. 1).
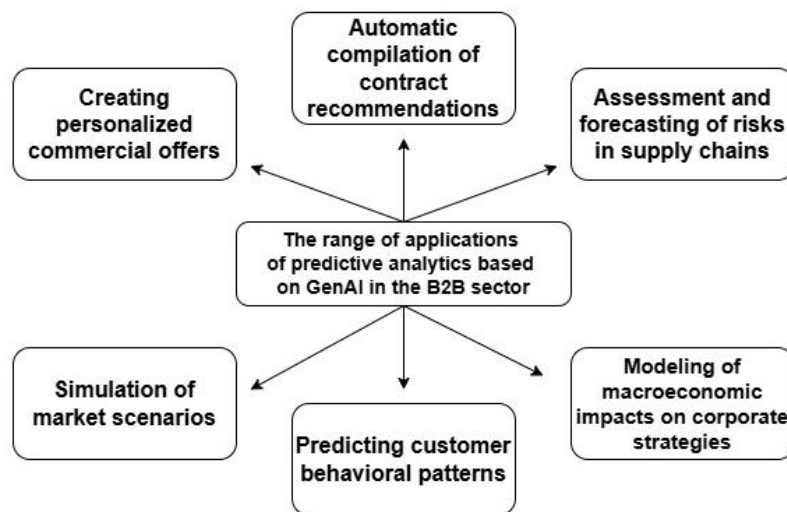
Figure 1: The range of applications of predictive analytics based on GenAI in the B2B sector

One of the most practice-oriented directions is the **creation of personalized commercial offers [5]**. Models based on GPT architectures are capable of analyzing client specifics, including their past activity, industry preferences, economic behavior, and even business communication style. This makes it possible to offer proposals that are maximally customized to the requirements and expectations of a particular counterparty. This is especially applicable in the B2B market, where one-size-fits-all solutions prove to be useless.

Equally significant is its use for the **automatic generation of contractual recommendations**. These may include optimal delivery terms, payment models, acceptable risks, and even legally sound formulations [6]. By comparing similar contracts and industry benchmarks, the system can propose settings that favor the interests of both parties, thereby reducing the agreement process and transactional costs.

Another critical area is **supply chain risk evaluation and prediction**. They predict potential disruptions based on external influences such as geopolitical tensions, fluctuations in raw material prices, or failure to comply with regulatory standards. In addition, they can generate alternative response scenarios to these risks, including optimization of delivery routes and redistribution of contractual obligations.

Of particular value is the **modeling of macroeconomic impacts on corporate strategies**. Here, GenAI is used to construct scenarios reflecting potential changes in tax policy, inflationary trends, capital market behavior, or regulatory initiatives. Such scenarios enable companies not only to assess potential threats but also to prepare adaptive development strategies in a complex external environment.

Additionally, the models are applied to **predict customer behavioral patterns**, including the probability of deal closure, forecast of refusals or churn, as well as the optimal timing and form of interaction. By analyzing communication history, content, and general behavioral indicators, they generate personalized recommendations for sales and marketing departments, improving the accuracy and relevance of business initiatives.

Finally, one of the most promising functions is the **simulation of market scenarios**. They can predict the impact of technological innovations, international conflicts, climate change, or regulatory decisions on specific industries or companies. This allows management not only to see likely trajectories of market development but also to shape more resilient strategies, taking into account a wide range of external variables.

Thus, GenAI becomes not merely an analytical tool but a full-fledged participant in the strategic process. It is capable of complementing and enhancing managerial competencies by providing more accurate, timely, and comprehensive support for decision-making.

Successful cases of its implementation in the strategic processes of B2B companies can already be observed today. For example, the consulting corporation **PwC** announced a large-scale initiative to integrate the GPT model from OpenAI into its business infrastructure to enhance the efficiency of client analysis and support strategic decision-making. It developed a system for the automated generation of client analytical reports, including analysis of financial and non-financial risks, as well as the assessment of potential opportunities. Therefore, they could generate real-time personalized recommendations to customers, based on the nature of their industry and business goals [7]. This example shows how GenAI can be infused deeply into the B2B firms' strategic processes and transform the approach towards analysis, planning, and decision-making.

While with a wide range of applications, within the arenas of predictive analytics and strategic planning in the B2B world, it is not completely free of significant constraints and dangers. An understanding of these is necessary for the correct and effective utilization of the technology in business application.

Perhaps one of the most contentious issues is the **ethical aspect of using generative models**, especially when they are utilized to come up with interpretations, conclusions, or recommendations on their own. Since they make choices based on probability estimates and tendencies in the training corpus, biases, distortions, and outdated opinions may exist in the source material [8]. This can lead to the generation of false or misleading information, particularly in critical managerial contexts where decisions affect financial stability or adherence to laws. Erroneously deduced conclusions or strategic recommendations can cause significant economic and reputational damages to a company.

In addition, the **problem of interpretability and transparency** remains a substantial limitation for the broad application of GenAI in a strategic context. Unlike traditional analytical systems, which are based on explicitly defined algorithms and metrics, generative models often function as a «black box». Their outputs, although potentially accurate in result, are difficult to explain and verify. This lowers the level of trust management and renders it challenging to make well-founded decisions, especially in cases where one has to document the reasoning and logic used in selecting a particular strategy [9].

Another consideration is **confidentiality and data protection**. Generative models require access to large datasets, which can be sensitive company information. When cloud-based or third-party AI services are used, there is a potential for unauthorized use, data breaches, or misuse outside the organization. This is particularly worrying in regulated industries, as failure to comply with information security requirements can lead to legal penalties. In addition, data protection law compliance regarding personal information is also in doubt, especially when data utilized by the model can to a certain extent be reconstructed from its outputs.

Thus, despite the high potential of GenAI in the field of strategic analytics, its implementation must be accompanied not only by technical but also by regulatory, ethical, and organizational preparation. Internal protocols for validating conclusions, quality control systems, and measures to ensure transparency and data protection are necessary. Only under these conditions can it serve as a reliable and responsible partner in the strategic decision-making process.

IV. Conclusion

The development of GenAI represents a qualitative shift in approaches to business analytics and strategic management in the B2B sector of the USA. In an environment of intense competition, complex supply chains, and the need for rapid response to external and internal challenges, its application allows organizations to move from retrospective analysis to proactive modeling of the future. Its capacity to process structured and unstructured data, generate adaptive forecasts, and construct scenarios make it a priceless tool in assisting managerial decisions across all organizational levels of corporate hierarchy.

However, one must point out the existence of constraints and dangers related to ethics, interpretability, and data protection. Ignoring these issues can negate the positive effects of adopting the technology and lead to flawed or even dangerous decisions. Therefore, sustainable and responsible use of GenAI must be accompanied by the development of ethical standards, model audit procedures, and organizational measures to ensure transparency and protection of corporate information.

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