

A Pilot Study of Business Intelligence in Strategic Decision Making of Pune IT Firms

Nikhil Kiran Patil

Researcher, School of Management Studies, KBC North Maharashtra University, Jalgaon Maharashtra

Abstract—In the contemporary digital economy, organizations increasingly rely on data-driven insights to guide strategic decisions and maintain competitive advantage. Business Intelligence (BI) systems enable firms to collect, integrate, analyze, and visualize large volumes of organizational data, allowing managers to make more informed and timely decisions. This pilot study examines the role of Business Intelligence in supporting strategic decision-making and business development within selected IT firms located in Pune, India. A structured questionnaire was developed based on existing literature and distributed to a small sample of IT professionals and managers. The pilot study aimed to validate the research instrument and explore preliminary perceptions regarding the effectiveness of BI tools. The results indicate that BI systems are widely perceived as valuable for improving decision quality, enhancing operational efficiency, and identifying business opportunities. Reliability analysis using Cronbach's alpha demonstrated strong internal consistency of the survey instrument. The findings confirm that Business Intelligence plays a significant role in enabling data-driven strategic decisions in IT organizations. This pilot study also establishes a foundation for a larger empirical investigation into the relationship between BI capabilities and organizational performance.

I. INTRODUCTION

Organizations today operate in highly dynamic and data-intensive environments. Rapid technological advancements and the increasing availability of digital information have significantly transformed how businesses manage operations and make strategic decisions. Companies generate enormous volumes of data through daily activities such as customer interactions, operational processes, and market transactions. However, the real challenge lies not in collecting data but in converting it into meaningful insights that support effective decision-making.

Business Intelligence (BI) has emerged as a critical technological solution that helps organizations address this challenge. BI systems integrate data from multiple sources and provide analytical tools that allow managers to monitor performance, identify patterns, and evaluate potential opportunities. Through dashboards, reports, and advanced analytics, BI platforms transform raw data into actionable knowledge that supports both operational and strategic decisions.

Pune has developed into one of India's leading technology hubs, hosting numerous software companies, multinational corporations, and IT service providers. Many of these organizations have adopted BI tools such as Microsoft Power BI, Tableau, and Qlik Sense to enhance their analytical capabilities. In this context, understanding how BI systems influence strategic decisions in IT firms becomes particularly relevant.

II. LITERATURE REVIEW

Business Intelligence has attracted considerable attention in both academic research and industry practice over the past two decades. Scholars have emphasized the importance of BI systems in improving organizational decision-making and performance.

Ranjan (2005) defined Business Intelligence as a collection of tools and technologies that enable organizations to gather, store, analyze, and present data to support managerial decisions. Davenport and Kim (2013) highlighted the growing importance of analytics-driven decision-making in modern organizations.

Recent studies have also emphasized the strategic value of Business Intelligence. Ragazou and Passas (2023) found that BI systems significantly enhance

organizational competitiveness by enabling faster information processing and improved market responsiveness. Despite the increasing interest in BI research, several gaps remain in the literature regarding the direct impact of BI systems on strategic decision-making in regional IT sectors.

III. RESEARCH OBJECTIVES

1. To examine the role of Business Intelligence tools in strategic decision-making within IT firms.
2. To evaluate the perceived impact of BI systems on business development and organizational competitiveness.
3. To explore how predictive analytics and real-time data influence managerial decision processes.
4. To validate the research instrument for a larger empirical study.

IV. RESEARCH METHODOLOGY

This study adopts a quantitative research approach using a survey-based methodology.

A structured questionnaire was developed based on insights from existing literature on Business Intelligence and strategic management. The questionnaire consisted of five sections covering key dimensions of BI usage: BI and Strategic Decision-Making, BI and Business Development, BI and Competitive Advantage, Real-Time Data and Predictive Analytics, and Future BI Framework for Organizational Growth.

The pilot study involved 30 respondents working in IT firms located in Pune. Participants included project managers, business analysts, data scientists, and IT professionals who regularly interact with BI tools in their organizations.

Data were collected through an online survey. Descriptive statistical techniques were used to analyze the pilot survey data. Cronbach's alpha was used to measure internal consistency of the questionnaire items.

V. PILOT STUDY FINDINGS

The pilot study revealed generally positive perceptions regarding the usefulness of BI systems. Most respondents agreed that BI dashboards and reporting

tools significantly improve the speed and accuracy of strategic decision-making.

Participants emphasized the importance of real-time data and predictive analytics in modern business environments. Many respondents reported that BI systems help identify emerging market trends, enabling organizations to respond quickly to competitive challenges.

The reliability analysis produced a Cronbach's alpha value of 0.82, indicating strong internal consistency and confirming that the questionnaire items effectively measure the intended constructs.

VI. CONCLUSION

This pilot study explored the role of Business Intelligence in supporting strategic decision-making within Pune-based IT firms. The findings demonstrate that BI systems are widely perceived as valuable tools for improving decision quality, enhancing operational efficiency, and supporting business development.

The reliability analysis confirms that the survey instrument is suitable for further research. Future research will expand the sample size and employ advanced statistical techniques to examine the relationship between Business Intelligence capabilities and organizational performance.

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