(RESEARCH ARTICLE)

Evaluating the Buy vs Build Dilemma: A Case Study Approach to Corporate Accounting Information Systems

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Abstract

Purpose: This study examines the buy-versus-build dilemma in corporate accounting information systems (AIS), with a particular focus on the decision-making process and its implications for the development of these systems.

Design: This research uses a qualitative method to study The Trio Borneo Medika, a trade company in Indonesia. It includes focus group talks with various departments and analyzes the data based on themes that emerge.

Findings: The study shows that custom-built systems fit specific business needs, but they can lead to longer delivery times and operating problems. Using ready-made software speeds up system setup and enhances business processes by following the best practices in the industry. A hybrid method has been developed as a good solution by combining customized parts with standard software.

Originality/Value: This study adds to existing knowledge by offering practical advice on whether to buy or build in AIS. It shows how combining both options can help achieve a good balance between customization and efficiency.

Keywords: Buy vs. Build Dilemma; Accounting Information System (AIS); Tailored Systems; Ready-made Software; Business Process Standardization; System Development; Indonesia

1. Introduction

Modern organizations face an increasingly critical decision when striving to modernize their operations: is it advisable for them to seek off the shelf software solutions or should they develop in-house specific solution? This decision is well understood among scholars under the broad label of '' buy vs. build'' dilemma (1), and it touches virtually every aspect of firm operation, including accounting information systems AIS. AIS helps in practicing financial honesty and strategic management by providing enough information not only for ethical financial reporting but for organizations' decision-making as well (2). The decision between acquiring an 'Off the Shelf Solution' and 'Developing A System' affects an organization in how much it is willing to spend, their business processes and their ability to adapt to change that may be brought about by the market Environment In the current world.

Although the buy/build decision has been a topic of considerable debate, there is surprisingly little written on how organizations can best approach it, especially when a combination of buying and building strategies are taken. Existing literature, such as Boehm (3), who compared the trade-offs between two approaches to software development, or Sharda et al. (4) who discussed decision-making frameworks, highlights the usefulness and drawbacks of each approach.

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Nevertheless, empirical advice on how hybrid strategies can be employed in actual organizations is limited. These combined approaches make it possible to achieve savings of standard software packages while ensuring high adaptability and relevance of the used applications, which is why their applicability has not been studied extensively enough.

This paper seeks to address this gap by delving into the buy vs. build dilemma through the lens of a real-world case study: The Trio Borneo Medika that deals in medical equipment and pharmaceutical products for distribution. Exploring the strategic management process in this organization, it is possible to investigate how concepts match theory with practice. As a result, this study incorporates a synoptic analysis of the qualitative literature and the findings obtained from Trio Borneo Medika to provide a comprehensive view of the buy versus build scenario. In conclusion, this paper aims at presenting prescriptions for organizations as they seek to embark on AIS development including the strategic implications, risks, and prospects of hybrid AIS.

2. Literature Review

One of the most important decisions that an organization must make is whether to purchase an Information System (IS) or develop it in-house (5). This decision affects not only the work's price and duration in the near future but also its ability to align, perform, and evolve on the strategic level. A "buy" decision, which involves off-the-shelf software, sometimes gives preference in terms of cost and time. On the other hand, the "build" decision, which may involve selecting a custom development of this type, aims at the adaptation of the system to the specific requirements of an organization and possible attainment of a competitive edge due to some special functions (6).

2.1. The "buy versus build" debate

The "buy versus build" debate has been a topic of discussion in information systems development for many years now. Boehm (3) established the discipline software engineering economics pointing out the relations between cost / quality / time. While organizations that implement custom built systems (for example inventory systems as indicated in the research by Rahwani & Nugraha (7)) intend to meet organizational needs that out of the box software cannot satisfy (8). However, Hevner et al. (9) posited that the design science paradigm encompasses orientation toward best practices to make imprint to innovate and at the same time be relevant.

On the other hand, the ready-made software supports the fact that it is cheaper to acquire and can be implemented in the organization in the shortest time possible. According to Sharda et al. (4), such solutions already include the most frequently used best practices allowing organizations to align their processes quickly. According Markus & Tanis (10), some downside include; the need to redesign business processes to fit the functionality of the software which leads to a lot of resistance from the employees.

A critical factor influencing the buy vs. build decision is the availability of skilled resources. Organizations with in-house expertise in software development are often better positioned to pursue a custom-build strategy, as they can tailor solutions to meet precise business needs. Conversely, organizations lacking such expertise may lean towards buying off-the-shelf solutions to mitigate the risks associated with software development (11). Furthermore, training and support provided by software vendors can significantly impact the decision, as organizations must assess the long-term feasibility of maintaining and upgrading the chosen solution.

2.2. The hybrid approaches

Recent studies have explored hybrid approaches that combine the strengths of both strategies. Cram & Newell (12) emphasized the value of agile methodologies and knowledge management in bridging the gap between custom development and off-the-shelf adoption. Similarly, Binzer et al. (13) discussed how cloud-based solutions and low-code platforms enable organizations to customize standard software with minimal effort, enhancing adaptability.

3. Research Method

This qualitative study utilizes a case study methodology to investigate the purchase versus build conundrum at The Trio Borneo Medika. The study included focus group discussions (FGDs) with representatives from the accounting, finance, inventory, sales, marketing, procurement, and human resources departments.

Focus Group Discussions (FGDs) are organized group interviews in which participants engage in dialogue about designated subjects under the direction of a facilitator. Focus group discussions (FGDs) are very effective in eliciting

varied perspectives and revealing intricate insights into group dynamics and decision-making processes (14). This study utilized FGDs to enhance comprehension of the purchase vs construct conundrum by promoting interdepartmental dialogue around difficulties and possibilities in AIS development. Participants conveyed their experiences and viewpoints on system development, facilitating a comprehensive grasp of the organization's difficulties and decisions.

The data obtained from the FGDs were subjected to thematic analysis to discern prevalent themes and patterns. The emphasis was on comprehending the ramifications of developing a bespoke AIS compared to utilizing an off-the-shelf option, as well as assessing the viability of hybrid methodologies.

4. Findings and Discussions

This section covers the study's findings, which are grouped into three major sections: alignment with literature, insights beyond literature, and challenges and practical implications. The first section discusses how the findings correspond with existing literature on the buy vs. create conundrum in AIS, while the second portion expands on the literature by providing new insights into the possible benefits of hybrid approaches and the role of ready-made software in improving business processes. The final section focuses on the unique issues that Trio Borneo Medika had while deciding whether to buy or develop, specifically resistance to standardization and the operational burden of maintaining two systems. These problems highlight the need of careful preparation and effective change management solutions. By addressing these practical ramifications, this part provides a full explanation of the purchase vs. build decision using Trio Borneo Medika's case study.

4.1. Alignment with Literature

The results support earlier studies by Boehm (3) and Hevner et al. (9), indicating that cost, time, and strategic alignment are essential considerations in the buy versus build decision-making process. The decision by Trio Borneo Medika to develop a custom AIS was influenced by the complexity of its business processes and the necessity for a system specifically designed to meet its operational needs. This supports Sommerville's (8) assertion that custom systems are optimal for organizations with distinct workflows.

The challenges encountered during system development, such as extended timelines and dual-system operations, reflect the concerns articulated by Markus and Tanis (10) regarding the risks associated with in-house development. The study corroborates the findings of Agrawal et al. (15) regarding the advantages of off-the-shelf software, demonstrating that pre-existing solutions can enhance operational efficiency when organizations align with standardized workflows.

4.2. Insights Beyond Literature

This research contributes to the existing body of literature by illustrating the potential of pre-existing software to improve the integrity of business processes. The researchers discovered that standardization not only reduced system conversion time and costs but also enhanced operational efficiency by simulating processes with off-the-shelf solutions. This realization undermines the notion that customization is perpetually indispensable for competitive advantage.

The research underscores the promise of hybrid methodologies, in accordance with Hevner et al. (9). Organizations can achieve a balance between efficiency and specialized requirements by integrating key functionalities of off-the-shelf software with custom modules. This method was determined to alleviate the shortcomings of both tactics, providing a viable alternative for firms encountering analogous challenges.

4.3. Challenges and Practical Implications

Unique challenges identified in this study include employee resistance to standardization and the operational strain of maintaining dual systems. Addressing these issues requires effective change management strategies and careful planning. The study emphasizes the importance of aligning system development decisions with organizational goals and resource constraints.

5. Conclusion

This study provides valuable insights into the buy vs. build dilemma in AIS development. While custom-built systems offer alignment with unique business processes, they entail significant risks and operational challenges. Ready-made software, on the other hand, accelerates implementation and enhances business process quality by aligning with

industry standards. A hybrid approach emerges as a viable alternative, combining the strengths of both strategies to balance customization and efficiency.

Future research could explore the role of emerging technologies, such as low-code platforms and cloud-based solutions, in shaping the buy vs. build decision. By integrating these technologies, organizations may further enhance their ability to adapt to dynamic business environments.

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