Evaluation of the Implementation of Simon's Levers of Control at PT ABC

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ABSTRACT

This study aims to evaluate the implementation of Simon's levers of control on the fiber optic project at PT ABC. This research method is qualitative research with a case study approach. Primary data used in this study are the results of interviews. Interviews were conducted with several sources who have the ability and authority to develop a management control system, including: President Director, SGM Human Capital, Project Manager, Operational Staff. Secondary data used are in the form of project progress report documents, meeting minutes, code of ethics and vision of PT ABC. The results of the study show that the implementation of Simon's levers of control on the fiber optic project at PT ABC has proven effective in supporting complex and strategic project management but there are still weaknesses in detecting external problems such as delays due to cable installation permit. This study has research implications, namely to identify the strengths and weaknesses of the implementation of levers of control so that it can maintain competitive advantage PT ABC.

Keywords: Levers of Control; Telecommunication Company

Evaluasi Penerapan Simon's Levers of Control Pada PT ABC

ABSTRAK

Penelitian ini bertujuan untuk mengevaluasi penerapan Simon's levers of control pada proyek fiber optik PT ABC. Metode penelitian ini bersifat penelitian kualitatif dengan pendekatan studi kasus. Data Primer yang digunakan dalam penelitian ini berupa hasil wawancara. Wawancara dilakukan dengan beberapa narasumber yang mempunyai kemampuan dan wewenang untuk menyusun sistem pengendalian manajemen, antara lain: Direktur Utama, SGM Human Capital, Manajer Project, Staf Operasional. Data sekunder yang digunakan berupa dokumen laporan progress proyek, risalah rapat, kode etik dan visi PT ABC. Hasil penelitian menunjukkan penerapan Simon's levers of control pada proyek fiber optik di PT ABC terbukti efektif dalam mendukung pengelolaan proyek yang kompleks dan strategis namun masih terdapat kelemahan dalam mendeteksi masalah eksternal seperti keterlambatan akibat perizinan. Penelitian ini memiliki implikasi penelitian yaitu untuk mengidentifikasi kekuatan dan kelemahan dari penerapan lever's of control sehingga dapat mempertahankan keunggulan kompetitif PT ABC.

Kata Kunci: Levers of Control; Perusahaan Telekomunikasi

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INTRODUCTION

The rapid advancement of the business world creates uncertainty and strategic risks for companies. Management control systems serve as a tool for management to ensure that established strategies are effectively implemented, thereby achieving company goals. By addressing existing challenges, an effective management control system can help companies achieve their desired performance targets (Hermawan et al., 2021). A management control system is also a process designed to enable managers to influence employee behaviour and actions in order to implement established company strategies, as explained by Anthony and Govindarajan (2007).

In this context, management control systems serve as a crucial instrument that assists managers in formulating the steps necessary to achieve strategic goals and maintain the company's competitive advantage. Simons (2000) notes that, in addition to serving as a guide for strategic decision-making, performance control and measurement systems are also designed to ensure the achievement of established company goals and act as a monitoring mechanism for the implementation of the company's strategies.

As businesses grow and operations become more complex, managers may face challenges in communicating strategies and plans due to the emergence of opportunities and threats from various competitors. Control failures are often the first signs of problems such as poor decision-making and missed opportunities that damage an organisation's profit margins and competitive position. To maintain business continuity, control systems need to be formalised.

To maintain growth, organisations must first establish effective profit planning to support decision-making and management control. Performance metrics are crucial, and incentives must be formally linked to achieving these targets. Managers can use variance analysis to monitor the achievement of key targets and profit plans. However, they must also be aware of the risks that may arise from this system, such as employees taking shortcuts or misusing company assets. Therefore, managers need to establish clear boundaries for business behaviour to prevent these risks.

Strategic business control is achieved by integrating four control levers: the belief system, the boundary system, the diagnostic control system, and the interactive control system. Top management must create and communicate core values through formal belief systems, such as vision and mission statements, to motivate, empower, and provide direction to employees. This belief system is crucial for instilling shared values among employees (Mayasari, 2022).

Furthermore, managers must clearly define strategic boundaries to prevent the misuse of resources that are inconsistent with the business strategy. Therefore, managers must declare certain activities off-limits to avoid disruptions such as bad investments and failed projects. Accounting measures should consider not only profitability but also the assets used to generate profits, as the primary metric for evaluation. A balanced scorecard should complement these measures to communicate corporate strategy and strategic initiatives across the business. Furthermore, managers implement interactive controls to focus the organisation's attention on strategic uncertainty and provide impetus for refining and modifying strategies as the competitive market changes.

The implementation of a company's management control system, evaluated through the concept of levers of control, enables managers to understand and address the issues inherent in this concept. By utilising these four controls, companies, especially managers, can more effectively apply control systems to optimally direct corporate management and strategy. Furthermore, the concept of levers of control also provides a framework that helps managers create innovation and ensure controls align with the characteristics of the company they manage.

According to Badu & Micheli (2024), levers of control are considered tools that help signal changes in the internal and external environment, providing valuable information for decision-making and influencing behaviour. Levers of control are also seen as a means of articulating organisational strategy to employees and helping align their tasks with the initiatives implemented by the organisation to achieve its goals. Furthermore, levers of control are viewed as a combination of technical and social controls that engage individuals in conversations about organisational performance. This, in turn, can lead to problem-solving, innovation, and exploration at various levels.

The telecommunications industry plays a vital role in supporting digital transformation and national economic growth. In Indonesia, the demand for fast and reliable internet access is increasing in tandem with technological advancements, shifts in people's digital consumption habits, and the government's strategy to foster a digital economy. Competition in Indonesia's digital telecommunications industry remains intense, with the entry of new players, both domestic and international.

PT ABC, a telecommunications company, has a strategic mandate to expand broadband services to remote areas of the country by developing fiber-optic network infrastructure. Fiber optic infrastructure is the preferred technology due to its high data transmission capacity and improved connection stability compared to other access technologies (Dwiputra et al., 2025). Fiber optic technology plays a key role in supporting 5G networks, which require large bandwidth and low latency. The advantages of fiber optics, such as resistance to electromagnetic interference and minimal signal loss, make them a key solution for modern communications. PT ABC's fiber optic project is designed to support national connectivity, improve internet service quality, and strengthen the company's competitiveness in the increasingly competitive telecommunications industry.

Developing a fiber optic network in Indonesia is a complex process (Dwiputra et al., 2025; Sabila & Warmi, 2025). Fiber optic network construction involves significant investment, a lengthy timeframe, and interaction with numerous external parties, including contractors, suppliers, and local governments. Fiber optic projects present various significant managerial challenges, including project delays, cost overruns, and work quality that does not meet specifications.

Furthermore, the risk of fraud in the procurement of goods and services further complicates the control process. This situation demonstrates the need for a management control system that focuses not only on monitoring financial performance but also on managing strategic risks in fiber optic projects.

In the context of PT ABC, the application of control levers in fiber optic project management is crucial to evaluate. With such a strategically valuable and

high-risk project, implementing an appropriate management control system can help mitigate delays, prevent budget wastage, and support the achievement of the company's strategic goals. As future business prospects and challenges emerge, managerial complexity will increase, and management must have an effective control system in place for strategic project management.

Many studies have been conducted on the four levers of control, such as those by Malik Ibrahim & Silvino Violeta (2023), which aimed to design a management control system (MCS) for start-ups using Simons' Four Levers of Control framework. A study by Barros & Ferreira (2022) examined management control systems and innovation in a Portuguese granulate manufacturing company. Rathnasekara & Gooneratne's (2020) study examined the use of management control systems in manufacturing companies.

This study aims to evaluate the application of Simon's levers of control in PT ABC's fiber optic project. This study also has implications for science, namely providing an empirical illustration of the application of levers of control at the project level, which has been relatively underexplored in the literature. By focusing on the context of the fiber optic project at PT ABC, this study enriches the understanding of how strategic control systems can be implemented at the operational level of the project, not only at the corporate or business unit level.

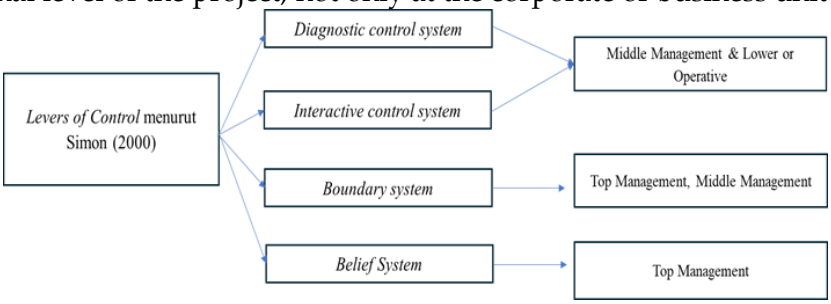

Figure 1. Conceptual Framework

Source: Research Data, 2025

The conceptual framework for this research, shown in Figure 1, was developed using Simon's levers of control theory and hierarchical management to understand authority and responsibility within an organisation. According to Simon, the levers of control consist of: the diagnostic control system, the interactive control system, the boundary system, and the belief system.

The diagnostic control system aims to coordinate and monitor the implementation of intended strategies. This control system directs managers to measure results and compare them with established goals and plans. In the diagnostic system, middle and lower management are authorised to monitor organisational results and correct deviations from planned standards, review reports, and ensure that strategy implementation remains on track.

The interactive control system encourages and guides emergent strategies. In the interactive system, middle and lower management are authorised to communicate strategic uncertainties, guide subordinates in what needs to be done, and take necessary corrective action.

The boundary system aims to provide limits of freedom. In the boundary system, top and middle management are authorised to communicate strategic

domains, develop plans and policies, and ensure the organisation has the personnel to carry out its functions and tasks effectively.

A belief system aims to empower and expand search activities. In a belief system, top management is authorised to communicate the organisation's vision and mission, formulate the organisation's goals and objectives, and develop strategies to achieve them.

RESEARCH METHODS

This research employs a qualitative approach, utilising a case study method. A qualitative approach is a method for studying and understanding the meaning of social or humanitarian issues for individuals or groups (Creswell & Creswell, 2018). A qualitative approach was chosen because it can provide a comprehensive and detailed picture of the phenomenon being studied. The case study method is a type of qualitative research approach that focuses on individual opinions and understanding of behaviour (Yona, 2006). To answer a problem in a case study, "why" and "how" questions can be used (Yin, 2018).

Data sources are categorised into two types: primary data sources and secondary data sources. Primary data were obtained from the subjects or parties being studied using interviews as the research instrument. Interviews were conducted with several sources who have the ability and authority to develop a management control system, including: President Director, SGM Human Capital, Project Manager, Operational Staff. Meanwhile, secondary data were obtained from documents such as fiber optic project progress reports, meeting minutes, company codes of ethics and regulations, and the company's vision and mission.

This research used thematic analysis as an approach to analysing qualitative data. Thematic analysis is a systematic method for examining the entire data set to identify, analyse, and report recurring patterns or themes. This process is not only descriptive in describing the data, but also interpretive, where the researcher actively selects relevant codes, groups these codes, and builds meaningful themes based on Simon's four levers of control.

RESULT AND DISCUSSION

According to Simons (2000), a diagnostic control system is a formal information system used by managers to monitor organisational results and correct deviations from established performance standards. Any formal information system can be used diagnostically if it allows for predetermined objectives, measures outputs, calculates performance variances, and utilises this variance information as feedback to modify inputs or processes, thereby restoring performance to predetermined objectives and standards.

In implementing a diagnostic control system on a fiber optic project, the project manager is authorised to monitor and coordinate project progress and prepare progress reports. Meanwhile, operational staff are authorised to carry out tasks according to established targets, work standards, and procedures, and to report their work results regularly to the project manager. The project manager routinely monitors and evaluates the progress of the fiber optic project to ensure that activities are implemented according to established targets, schedules, budgets, and quality standards.

Table 1. Evaluation of the Implementation of Simon's Levers of Control at PT ABC

Components (Simon, 2000)	Implementation of PT ABC Fiber Optic Project	Evaluation results
Diagnostic Control System	Based on secondary data from project progress reports and interview results, the fiber optic network development project showed a lower level of completion compared to the established timeline. This low progress compared to the timeline and execution issues in the field reflects weaknesses in the management control system, particularly in coordinating the implementation of the intended strategy to ensure it meets targets.	needs improvement
Interactive Control System	Based on the interview results, the project manager has taken strategic steps by creating specific policies to address delays in the fiber optic project. The delays in this project were identified through progress reports that showed significant deviations between actual and planned progress.	Good
Boundary System	Based on secondary data from the code of ethics and interview results, the company has established, disseminated, and enforced prohibited conduct rules for both internal and external parties. In fiber optic projects involving multiple parties and with a high risk of unethical practices, implementing this code of ethics is a key element in managing risk, ensuring compliance, and supporting smooth project implementation.	Good
Belief System	Based on secondary data on the vision, mission and interview results, it was found that PT ABC actively socializes the company's vision with the aim of instilling enthusiasm and a shared vision to work in line with the company's strategic direction.	Good

Source: Research Data, 2025

The fiber optic project is part of PT ABC's strategic initiative to strengthen digital infrastructure and expand high-speed internet coverage across Indonesia. This project serves as a network backbone, connecting key network nodes and supporting both retail and corporate customer services, including fixed broadband, IPTV, and corporate connectivity. The fiber optic project has a 250-day construction period from the signing of the agreement. Delays in the installation of the OSP FO could hamper the development of a national fiber optic network. This could lead to inconsistencies with plans and reduce the realisation of planned infrastructure-based capital expenditure (CapEx).

Based on the fiber optic project progress report, several locations and regions are experiencing slow field progress. This is due to permitting issues for the installation of fiber optics. According to the project progress report, the fiber optic project is experiencing a delay from its 250-day completion target. Interviews with operational staff revealed that outdoor projects can experience delays due to obstacles such as permitting.

"In the field, I ensure that the fiber optic network construction works are carried out according to the established work plan and schedule. (Informant: Operational Staff)

In fiber optic cable installation projects, before installation and field construction begin, we apply for permits from third parties who own the property, area, or land where the project will be implemented. We often encounter permits in the field for fiber optic cable installation that have not yet been issued, resulting in project delays. (Informant: Operational Staff)

The implementation of a diagnostic control system on the PT ABC fiber optic project serves as a control tool to monitor project performance against predetermined targets, particularly in detecting variances between actual realisation and the work completion timeline. This system helps management identify time deviations early, theoretically enabling faster and more precise corrective action. For example, through regular monitoring of project milestones, project managers can identify if network development progress is delayed at a particular stage. This information should serve as the basis for evaluating the causes of delays and adjusting schedules or resource allocations. However, there are significant weaknesses in practice, specifically in the implementation of the intended strategy, which was planned at the beginning of the project. Although the diagnostic system has identified schedule variances, follow-up to adjust the strategy has not been optimal. This is evident in the ongoing project delays, primarily caused by external constraints such as permit issues.

This aligns with research by Badu & Micheli (2024), which shows that the use of diagnostics can direct attention to areas that need improvement. Managers can use performance measurement systems more effectively and understand how targets can be applied to stimulate creativity and innovation. Complex and time-consuming permit issues should have been anticipated during the strategic planning stage. Weaknesses in analysing regulatory risks and the lack of adequate mitigation indicate that coordination between strategic planning and diagnostic controls has not been fully integrated. Diagnostic systems only detect problems at the implementation stage but are not robust enough to drive improvements at the strategic level or the decision-making necessary to resolve permit issues.

According to Simons (2000), an interactive control system encourages ongoing dialogue with subordinates to investigate unexpected changes and find solutions to emerging problems. When implementing an interactive control system on a fiber optic project, the project manager has the authority to lead and facilitate intensive discussions on strategic issues or critical problems that arise during project implementation. Meanwhile, operational staff have the authority to convey actual field conditions and report potential deviations or technical problems. Operational staff are authorised to propose realistic alternative solutions based on technical knowledge and daily work situations.

When faced with problems related to delays in the fiber optic project that exceed the project timeline, the project manager holds discussions with the project team to address the slow progress. These discussions are crucial because they aim to gain a deeper understanding of the fiber optic project's progress and to find optimal solutions to address potential issues. These discussions allow them to share information, conduct evaluations, and plan future strategies together. The

following are the results of interviews with the project manager and operational staff:

> When a project target is not achieved, the first step is to conduct a comprehensive evaluation of the project's progress through a coordination meeting with all project stakeholders. (Informant: Project Manager)
>
> ...then re-evaluate, and so on, to narrow the gap or identify the trustworthy source of the problem. (Informant: Operational Staff)

According to the meeting minutes, the fiber project experienced a delay due to constraints on local permits. The project manager made changes to the strategy implemented at the beginning by introducing policies, such as redesigning the project location for sections/links that were not previously worked on. Based on the results of the interview, the use of an interactive control system encouraged the project manager to implement new strategies to resolve the problem:

> …revise the baseline plan or project schedule. This could mean resequencing work, such as advancing work to other areas where permits have already been processed, while awaiting permits at the affected location. Third, we also prepare mitigation strategies, such as increasing manpower and equipment resources, establishing more intensive communication with local governments to expedite permitting, or adjusting contracts with vendors. (Informant: Project Manager)

Delays in the fiber optic project have resulted in increased costs for PT ABC. In 2024, there will be an increase in the cost of operations and maintenance of telecommunications services. Delays in the fiber optic project not only impact the project completion schedule but also trigger significant cost increases. One of the main factors is the imposition of penalties or fines by the employer, which are usually stipulated in the project contract. These penalties are imposed for each day or period of delay, so the longer the project is delayed, the greater the accumulated costs will be. In addition to direct penalties, delays also increase indirect costs such as additional labour costs, equipment rental extensions, and logistics.

These issues were then discussed at a board meeting (radirtas) as part of the project evaluation. In the radirtas forum, top management discussed the causes of delays in detail, including internal factors such as inadequate planning and external factors such as permit issues. Furthermore, this meeting served as a forum for formulating mitigation measures, such as rescheduling, additional resources, or renegotiating contracts with vendors. The results of the radirtas discussions are expected to form the basis for faster and more coordinated strategic decision-making, preventing similar delays and minimising the risk of cost increases due to penalties.

The implementation of an interactive control system on the fiber optic project serves as a means of intensive communication between management and the project team, allowing them to discuss strategic and critical issues on a regular basis. This control system fosters open dialogue, where project managers, operations teams, and company leaders exchange information on work progress, field obstacles, and new risks that emerge during implementation.

> Routine mechanisms are implemented in each sub-unit. There are weekly meetings, and there are meetings in each directorate. Then there is a meeting for the entire BOD. These are mechanisms for monitoring projects. If the

project is deemed highly strategic and involves all units, a task force is established. (Informant: Project Manager)

Through weekly or monthly coordination meetings, management can monitor project progress in greater detail and not rely solely on formal reports. These interactive discussions also enable management to quickly make corrective decisions or provide additional support when potential delays are identified, for example by adding more manpower, prioritising pending permits, or adjusting budget allocations.

Furthermore, implementing an interactive control system helps align all parties' understanding of the project strategy, ensuring that the project is completed according to specifications and remains a shared focus. Therefore, this system plays a crucial role in increasing the company's flexibility and responsiveness in facing the challenges of complex and dynamic fiber optic projects.

A boundary system is a control tool designed by management to establish limits and rules that all company members must respect. One example of implementing a boundary system within a company is a code of conduct, a written guideline that outlines expected standards of behaviour. A boundary system in a fiber optic project serves as a formal control mechanism to establish behavioural and operational boundaries that must be adhered to by all parties involved in the project. This system helps ensure that project activities are carried out by company policies and regulations.

By establishing clear boundaries, a boundary system prevents deviations or actions that could pose legal, reputational, or financial risks to the company. This system also provides certainty to team members about the scope of their responsibilities and helps minimise conflict and ambiguity in decision-making in the field. Furthermore, implementing a boundary system also supports greater accountability because each team member understands the consequences of violating established boundaries. This is crucial to ensuring that the project is executed on time and meets expected quality.

SGM Human Capital, as part of middle management, plays both a strategic and operational role in supporting good corporate governance. One of its primary responsibilities is to develop, disseminate, and oversee compliance with the company's code of conduct. As middle management, the Human Capital SGM serves as a crucial link between the company's strategic policies (formulated by top management) and the day-to-day operations of employees. Within the context of a boundary system, this authority is crucial in ensuring that all members of the organisation understand and adhere to the boundaries of permitted and prohibited behaviour. The following is an interview with the Human Capital SGM:

"...The company has a disciplinary policy. There are also well-being regulations. We are also working to educate employees about what is and isn't permitted in relation to discipline." (Informant : SGM Human Capital)

PT ABC also implements an obligation for all employees to sign an Integrity Pact, which contains commitments from both employees and management not to violate the established integrity and code of ethics.

"Every year, fellow employees also sign an integrity pact." (Informant: Human capital)

In implementing fiber optic projects, SGM human capital emphasises the importance of a culture of integrity and work ethics through the mandatory signing of an integrity pact. This document serves as a formal, written statement that binds all employees, including the project team, vendors, and subcontractors, to adhere to the principles of honesty, transparency, and compliance with all legal provisions and internal company regulations. This Integrity Pact contains a firm commitment not to engage in corruption, collusion, and nepotism. It prohibits the giving or receiving of gratuities during permit processing, material procurement, or cooperation with third parties. This is particularly relevant in fiber optic projects, which often involve coordination across agencies, local governments, and local vendors, making them vulnerable to potential irregularities. Therefore, implementing an Integrity Pact is a strategic step to maintain public trust, ensure clean project governance, and support the achievement of fiber optic project targets.

According to Simons (2000), a belief system can operate within a company if it has components such as a vision, mission, and values that the company implements and adheres to. In implementing a belief system, the director is the top management authorised to determine the company's strategic direction. The director is also authorised to formulate the company's vision and mission, establish key policies, and ensure all management functions are aligned with the company's strategic objectives. The communication of the company's vision, mission, and values by top management serves to inspire and motivate employees to achieve company goals. As an organisation grows, managers need to formalise the belief system by formulating and communicating it officially. A belief system is a series of explicit definitions of the organisation formally communicated by top managers and systematically reinforced to provide core values, goals, and direction for the organisation.

PT ABC has incorporated and communicated its vision and mission to all levels of the company. PT ABC's vision is "To become the digital telco of choice for advancing society." Furthermore, PT ABC has the following corporate mission:

Accelerate the development of innovative digital infrastructure and platforms that are sustainable, economical, and accessible to all.

Develop superior digital talent that helps drive digital capabilities and the nation's digital adoption rate.

Orchestrating the digital ecosystem to provide the best digital customer experience

In implementing fiber optic projects, a belief system is established to foster a work culture centred on integrity, quality, and achieving the company's strategic objectives. Companies like PT ABC have a vision to become the digital telco of choice. This vision is articulated through a mission to expand the fiber optic network to various regions, to improve high-speed internet access for the public. The following is an interview with the director:

The company's core values, such as integrity, professionalism, customer orientation, and innovation, serve as behavioural guidelines expected of the entire project team. To support the internalisation of these values, the company has undertaken several concrete initiatives. One such initiative is the mandatory signing of an integrity pact for employees and partners. This document outlines a

commitment to work honestly, comply with laws and regulations, and avoid corrupt practices or conflicts of interest.

Furthermore, the values are communicated continuously through various formal and informal channels, such as policy socialisation and coordination meetings. This communication practice aims to foster a shared understanding of the company's values in every aspect of project implementation, including planning, procurement, network construction, and maintenance.

> "...communication with external parties can be done through media such as Instagram, the website, and Investor Relations. Internally, there are many channels, including Instagram and internal groups. These channels also communicate about the company's business transformation and the efforts required to achieve it. (Informant: President Director)

The implementation of a belief system provides several strategic benefits for fiber optic projects. First, this system helps create a shared commitment to achieving project targets with high quality and on time, despite challenges such as difficult geographical conditions or permit constraints. Second, the belief system serves as a preventative mechanism against moral hazard risks, such as the manipulation of progress reports, cost inflation, or the use of substandard materials. Third, shared values facilitate rapid and informed decision-making in the field, particularly in the face of unexpected situations. Thus, the belief system in fiber optic projects serves not only as a declaration of company values but also as a control mechanism that supports the achievement of the project's strategic objectives by establishing a consistent and integrated work culture.

This finding aligns with Hermawan et al. (2021) and Mayasari (2022) findings that companies or business units that implement stronger belief systems will have better managerial performance. These findings have three practical implications. First, companies need to have formal documentation of their core organizational values in the form of vision and mission statements, creeds, and purpose statements. Second, organizational core values must stem from the founders' core values and be clearly defined and stated by management. Finally, a strong leadership tone from the top and leadership by example are key success factors for having a strong belief system in a company.

CONCLUSION

The implementation of Simon's levers of control on the fiber optic project at PT ABC has generally demonstrated effectiveness in supporting the management of this complex and strategically valuable fiber optic project. The implementation of the Diagnostic Control System has become a crucial part of project management through the use of progress reports, which are routinely used to monitor the achievement of cost, quality, and time targets. Through this system, project managers can identify deviations from the initial plan. However, research findings indicate weaknesses in early problem detection, particularly related to delays caused by external factors such as third-party permits. The Interactive Control System has been implemented through cross-functional coordination meetings involving the project manager, technical team, and senior management. This system serves as a forum for sharing critical information, discussing strategic issues, and formulating collective solutions. Research findings indicate that this

interactive forum supports more participatory decision-making.The Boundary System for the PT ABC fiber optic project is reflected in the existence of formalised rules of conduct, including a company code of ethics, an integrity policy, and the requirement to sign an Integrity Pact. This system serves as a crucial instrument for establishing acceptable boundaries of behaviour and preventing ethical lapses within the project environment. A belief system is realised through the development, communication, and dissemination of the company's vision, mission, and values that underpin the organisation's strategic direction. Research indicates that belief systems play a crucial role in fostering shared goals and enhancing project team commitment.

The following are suggestions for companies to ensure the effective implementation of levers of control: Project managers need to improve the quality and frequency of progress reporting on fiber optic projects. The control diagnostic system needs to be strengthened by developing a more structured and detailed progress report format. Furthermore, the reporting frequency needs to be adjusted to enable early detection of timeline deviations, allowing for prompt corrective action; Implement risk-based project planning. During the planning stage, companies need to systematically identify and analyse external risks (especially those related to permits). Developing a mitigation plan is a crucial step to avoid delays and cost increases later on; Strengthen coordination with external parties. Given that permit delays are a significant cause of project deviations, companies need to establish more intensive and proactive relationships with permit agencies. Establishing a dedicated team for permit processing can be a strategy to expedite the process and mitigate similar risks in the future.

This study has several limitations, including the limited number of respondents involved in data collection and the inability to represent all parties involved in the fiber optic project fully. This research is a case study of a telecommunications company, so it cannot be generalised to other companies in different industries and situations. The researchers recommend that future research involve a larger, more diverse number of respondents and include all stakeholders, both internal and external, to obtain a more comprehensive picture.

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