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Simon's Levers of Control Framework: Analyzing its Applicability in Nigeria's Telecommunication Sector

Onyeisue Uzoma Anthony[1] & Awe Ayowale Azeez[2]

ORCID: *[1]— 0009-0009-3567-2775 & [2]— 0000-0003-0226-2234*

[1]Department of Accounting, Finance and Taxation, Caleb University, Lagos, Nigeria
[2]Department of Accounting, Lagos State University, Ojo, Lagos, Nigeria

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***Corresponding Author:** Awe Ayowale Azeez

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Abstract **Original Research Article**

This study examines the application of Simons' Levers of Control (LOC) framework in managing strategic uncertainty, risk, and performance within Nigeria's telecommunications sector. The study is driven by the fact that the interaction between formal and informal control systems under emerging market conditions is not well understood and that infrastructural weaknesses, regulatory forces and levels of competition present special challenges to strategic management. The data were gathered on 50 respondents purposively chosen to use a quantitative research design and included senior executives, strategy managers, compliance officers, operations managers, and technical staff. Descriptive statistics were employed to analyze organizational practices across belief, boundary, diagnostic, and interactive systems.

The findings revealed that although the four levers are in use, there is uneven application of the levers. Belief systems are effective but not consistent within the departments, boundary systems are supported by the regulatory framework like the Nigeria Data Protection Regulation (NDPR, 2019) but compromised by the weak monitoring, and the diagnostic systems are based on the balanced scorecards that are moderately effective. Interactive systems became the most influential and significant lever, which enables flexibility due to the involvement of the regulator and collaboration across the departments.

The study concludes that the strategic control in the telecommunications industry in Nigeria is best implemented in the form of a hybrid model, as formal and informal mechanisms tend to be complementary to one another. It further recommends that companies should deepen belief and diagnostic systems, intensify a policy of boundary controls, and formalize interactive practices towards producing balanced and sustainable strategic management.

Keywords: Simons' Levers of Control (LOC) Framework, Motivation, Strategic Management, Uncertainty, Risk, Performance, and Telecommunications Sector.

Background of the Study

Management control system (MCS) are critical tools that help organizations in directing their behavior, performance, and the realization of strategic goals. One of the most impactful frameworks of cognizing and streamlining control processes, Levers of Control (LoC) framework by Robert Simons has shaped up to be a classic paradigm of introducing a balanced approach towards integrating innovation and control in the management of organizations (Simons, 1995; Soltes, 2024). The model has four pillars that include belief systems, boundary systems, diagnostic control systems and interactive control systems. Belief systems convey the fundamental values and vision of the organization, which influences the motivation and commitment of employees as well as aligning them with the strategic goals (Ojera, Ogutu, Siringi, and Othuon, 2020; Al-Dhubaibi, 2025). Boundary systems also define the scope of what employees can do without facing any risks under non-compliance, unethical conduct, or regulatory infractions (Nikzat, Pouryasori, Shah Hoseini, and Taban, 2019; Benslimane and Benjelloun, 2025). The diagnostic control systems aid in monitoring performance, which allows the management to monitor the progress against the goals and to ensure that operational activities are in line with the organizational strategy (Owolabi, Ajibolade, and Uwuigbe, 2021; Barros and Ferreira, 2022). On the other hand, interactive control systems are concerned with solving strategic doubt by maintaining a constant communication process, enabling learning, innovation, and responsiveness in the changing environment (Knowles, 2023; Kurniawan and Andono, 2023).

The telecommunications industry in Nigeria is highly regulated and dynamic and as such, efficient management control is essential in the industry. That is why companies like MTN, Airtel, and Globacom are under the control of the Nigerian Communications Commission (NCC, 2020) and have to perform and follow the laws that protect data, like the Nigerian Data Protection Regulation (NITDA, 2019). Such regulatory necessities need strong control systems to help reduce compliance and operational risks as well as to help firms to be competitive in the face of technological disruption and competition in the market. Although the significance of MCS is acknowledged, little information is available regarding the use of the LoC framework proposed by Simons in emerging markets, as well as in the Nigerian telecommunication industry. The majority of the existing literature has considered developed markets or other industries, leaving the gap in the understanding of how the LoC system can be adjusted depending on local institutional, cultural, and regulatory contexts (Hermawan, Bachtiar, Wicaksono, and Sari, 2021; Kruis, Speklé, and Widener, 2020; Lativa and Arsjoah, 2024).

This research will fill this gap through the investigation of the applicability of the LoC framework in the telecommunication industry in Nigeria. In particular, it examines how belief systems affect organization culture and strategic fit, how a boundary systems can be used to manage compliance and risk, the performance monitoring system can be done using diagnostic control systems, and how interactive controls provide innovation and adjustability in strategies. Placing Simons framework into the context of the Nigerian telecom companies, the research provides both theoretical and practical information on optimal MCS in the emerging markets.

Finally, the insights into the relevance of LoC to this sector will offer a basis of the managerial strategies that would balance the control and flexibility to improve organizational performance, competitiveness, and survival. This research, through the use of Levers of Control by Simons as a prism of analyzing management control practices, adds to the body of knowledge in terms of aligning the strategy, risk management, and innovation in the Nigeria telecommunications sector that is dynamic as well as being a highly controlled sector.

Statement of the Problem

The Nigerian telecom market has been witnessing a booming growth trend in the last 10 years, in the

form of higher mobile penetration, technological advancement as well as a competitive market environment (NCC, 2020). Although this growth brings opportunities, it also brings complex management issues such as lack of strategic alignment, operational inefficiencies, compliance problems, and challenges in promoting innovation. Numerous telecom firms cannot establish effective management control systems that would strike a balance between the necessity to perform monitoring and the need to adjust to a dynamic environment (Owolabi, Ajibolade, and Uwuigbe, 2021).

Although management control is very essential in the realization of organizational goals, limited empirical data are available on the ways firms in Nigeria implement detailed control systems like the Levers of Control (LoC) system by Simons. The current literature on the topic of LoC has mainly covered the developed countries or industries (including banking, manufacturing, and non-profit organizations) (Hermawan, Bachtiar, Wicaksono, and Sari, 2021; Kruis, Speklé, and Widener, 2020), and the particular institutional, regulatory, and cultural context of telecom companies in Nigeria was largely overlooked. Therefore, it is not known how belief systems, boundary systems, diagnostic controls, and interactive controls are implemented in this industry to promote strategic alignment, risk management, and organizational performance.

Moreover, compliance rules, including the ones suggested by the Nigerian Communications Commission (NCC, 2020) and the Nigerian Data Protection Regulation (NITDA, 2019), increase the difficulty of controlling systems. The problem that companies frequently experience when implementing these requirements is the inability to combine them with the monitoring of the internal performance, the supervision of innovation, and the motivation of employees, which may affect the competitiveness and efficiency of the operations.

This paper fills these gaps by considering the relevance of the LoC framework suggested by Simons to the telecommunications industry of Nigeria. It aims to offer empirical data on the implementation of the four levers of control in order to control strategic goals, compliance, innovation, and organizational performance, which can provide information to academic studies and practice in the emerging markets.

Objectives of the Study

This study aims to analyze the applicability and effectiveness of Simons' Levers of Control framework in managing strategic uncertainty, risk, and performance within Nigeria's telecommunications sector. The specific objectives are:

- To critically examine the four levers of Simons' LOC framework belief, boundary, diagnostic, and interactive systems in the context of Nigerian telecommunications firms.
- To identify the specific challenges Nigerian telecommunications companies, encounter in strategy implementation and control.
- To investigate how formal and informal control mechanism's function and interact in these organizations.
- To develop a contextualized conceptual framework guiding the use of LOC in managing strategy execution under varying degrees of uncertainty and regulatory pressures.
- To provide actionable insights for managers and policymakers improving strategic control in Nigeria's telecommunications industry.

Research Question

This study aims to analyze the applicability and effectiveness of Simons' Levers of Control framework in managing strategic uncertainty, risk, and performance within Nigeria's telecommunications sector. The specific objectives are:

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- To develop a contextualized conceptual framework guiding the use of LOC in managing strategy execution under varying degrees of uncertainty and regulatory pressures.
- To provide actionable insights for managers and policymakers improving strategic control in Nigeria's telecommunications industry.

Literature Review

Conceptual Review

Simons' Levers of Control Framework

The Levers of Control (LoC) model by Simons (1995) is one of the pioneering contributions in the management control systems (MCS) literature that provides the strategic understanding of the way organizations strike a balance between control and innovation.

In contrast to the old models of management control that mostly focused on monitoring, compliance, and efficiency, the conceptual framework by Simons views control as a dynamic control mechanism that can facilitate both strategic disciplineness and organisational flexibilities. This frame renders the LoC framework particularly applicable where there are complex, uncertain and highly competitive conditions. This framework has been extended, refined, and empirically confirmed in other organizational settings since then and has demonstrated its applicability to modern and multifaceted business contexts (Kruis, Speklé, and Widener, 2020; Soltes, 2024).

Origins of Simons' Levers of Control Framework

The LoC framework is conceptually based on the criticism of the classical management control theories by Simons, which were developed in relative stability and concentrated mostly on the mechanisms of financial control. Simons (1995) had proposed in his seminal paper that such traditional systems could not serve the needs of organizations that were in an uncertain and rapidly changing environment since they had a tendency to inhibit innovation and adaptive behavior. Using empirical lessons of organizations that were seeking growth and strategic renewal, Simons hypothesized that successful control requires the application of several mechanisms of control which are complementary and serve different purposes.

This school of thought is also consistent with subsequent conceptualizations in the MCS body of literature that developed control as a way of enabling strategic intentions and not limiting behavior (Barros & Ferreira, 2022). The LoC framework thus is a transition to control-as-strategy versus control-as-compliance, in the understanding that managerial intent, system interaction are the key to successful organizational governance.

Core Conceptual Logic of the Framework

Fundamentally, the LoC framework is founded on the premise that implementing strategies involves dealing with the factual challenges of tension within an organization especially around exploration and exploitation, freedom and constraint and innovation and efficiency. The conceptualization of the control mechanisms by Simons (1995) can be summarized as follows: the control mechanisms were viewed as levers, which managers actively utilize to affect behaviors and bring them into compliance with the strategic goals. The framework consists of four interconnected constructs, i.e. belief systems, boundary systems, diagnostic control systems and interactive control systems.

Notably, the framework does not promote the superiority of one control mechanism. Instead, its intellectual power is in the equilibrium and complement of the four levers. Kruis et al. (2020) underline that the LoC framework is effective due to the interaction between these control mechanisms by

the organizations to form coherent control configurations based on their strategic situations.

Belief Systems

The value oriented inspirational part of control is the belief systems. They are formal and informal systems where organizations communicate their mission, vision and core values. Simons (1995) indicates that beliefs systems encourage employees to seek opportunities based on organizational purpose hence informing strategic exploration without dictating what is to be done.

There is empirical evidence in favor of the conceptual significance of belief systems in determining behavior and performance. As Hermawan et al. (2021) show, high belief systems contribute to the overall performance of managers by generating a sense of connection between the personal objective and the organizational strategy. Likewise, Al-Dhubaibi (2025) maintains that the belief systems are central to the incorporation of control mechanisms because they offer some similar interpretive framework to make decisions. Theory In theory, belief systems serve as enabling controls that facilitate innovation, commitment and strategic consistency in uncertain environments.

Boundary Systems

The restrictive aspect of LoC framework is the boundary systems. They establish tolerable boundaries of conduct by stating risks, activities and what is not allowed. Such systems are normally institutionalized in terms of organizational policies, codes of conduct, and rules of compliance. Simons (1995) theorized that boundary systems are required in order to safeguard organizations against taking excessive risks and engaging in ethical malpractices.

The modern literature supports the topicality of the use of the boundary systems especially in the controlled and risk-sensitive business. According to Benslimane and Benjelloun (2025), one of the aspects that need to be redefined with regards to modern control philosophies is the boundary systems, which make sure that innovation takes place within a well-delimited ethical and strategic scope. In theory, creativity is not repressed by boundary systems; it is merely directed towards areas of organizational strategy which are acceptable and promote controlled experimentation.

Diagnostic Control Systems

A diagnostic control system is a manifestation of the conventional performance-observing element of MCS. These systems compare the results with the predetermined goals and allow the managers to monitor efficiency, effectiveness, and meeting the goals. They are budgets, key performance indicators and performance evaluation systems. Simons (1995) put forward diagnostic controls as mechanisms of running planned processes and accountability based on exceptions management.

Recent literature still emphasizes on the significance of diagnostic controls in performance management. As Barros and Ferreira (2022) note, diagnostic systems can be used to improve the performance of an organization but also aid in innovation by providing structure feedback mechanisms when they are aligned with the strategy. Nevertheless, Kruis et al. (2020) warn that too much dependence on diagnostic controls could restrict flexibility, and such levers should be balanced with other levers.

Interactive Control Systems

The interactive control systems are the most dynamic and strategically oriented lever in the LoC structure. These systems entail frequent and active involvement of senior managers with junior managers in strategic uncertainties, arising risks, and environmental fluctuation. However, in contrast to diagnostic controls, interactive systems are not aimed at regular performance but at learning, dialogue, and strategic sense-making.

Interactive controls have a role in the management of uncertainty as evidenced by empirical evidence. Corduneanu and Lebec (2020) show the application

of the interactive controls to empowerment and retain accountability within a non-profit organization in the UK. On the same note, Georgiou and Favotto (2022) show that interactive and diagnostic controls collaborate effectively to risk management among the public sector organisations. Theoretically, interactive controls are learning processes that help organizations to predict change and real time strategy adjustment.

Integrative and Contemporary Relevance

The decisional strength of the LoC framework by Simons is the unifying design. Belief and interactive systems promote exploration and innovation and the control, discipline, and risk containment are supported by the boundary and diagnostic systems. This balance-driven rationale, as pointed out by Soltes (2024), justifies why the framework remains relevant in the contemporary organizational environment, especially the one that is complex and regulatory.

Overall, the LoC framework offers a rather developed conceptual framework upon the analysis of the organizational design and utilization of management control systems to align strategy, manage risk, and improve performance. Due to its focus on balance, intentionality to managers, and situational adjustment, it would particularly be effective in investigating the management control practices in dynamic sectors and developing economies.

Management Control Systems and the Levers of Control Framework

Management control systems (MCS) are a fundamental tool necessary in an organization to align the activities, performance monitoring systems, and the attainment of strategic goals. The systems offer an orderly way in which the management can shape the behavior, streamline operations towards strategic objectives and respond to dynamic business situations. MCS can generally be characterized as formal and informal procedures, rules and processes that are followed to make decisions, allocate resources and regulate organizational activities (Barros & Ferreira, 2022; Kruis, Speklé, and Widener, 2020). Systems that are structured in nature, e.g. budgets, performance measurement frames, standard operating procedures and reporting lines, are known as formal systems whilst informal systems are a part of norms, values and shared trust which govern the behavior. These elements, when put together, allow organizations to be efficient in their operations and at the same time make a strategic innovation.

According to Barros and Ferreira (2022), a well-organized MCS can not only regulate and monitor the life of the organization but also promote creativity and innovation. On the same note, Kruis, Speklé, and Widener (2020) underscore that MCS play a two-fold role in managing the demand to have a strategic direction and the ability to address uncertainty in the business environment. The capability of the management to track performance and at the same time be agile, is important in complex and fast changing industries like telecommunications to attain sustainable competitive advantage. MCS thus, serve as diagnostic and strategic instruments which lead to organizational learning, risk management and how the operations are aligned to long term objectives.

MCS form the basis of organizational control and the LoC framework by Simons is a delicate framework of operationalizing these systems in a balance that is strategic, risk, performance and innovation. The available resources in international research prove that LoC is applicable to various types of organizations and situations, and it can be applicable to the telecommunications industry in Nigeria. With the help of the analysis of the functioning of the belief systems, the boundary systems, the diagnostic controls and the interactive controls, the organizations will be able to attain the sustainable performance and to be agile within the dynamic and controlled environment. This paper is based on these findings and aims at assessing the relevance and the efficiency of the LoC framework, in the telecommunication sector of Nigeria.

Theoretical Framework

Operationalizing Simons' Levers of Control for Telecommunications Strategy Execution

Simons' Levers of Control (LOC) framework provides comprehensive theoretical constructs to analyze how organizations balance innovation with control to achieve strategic objectives (Simons, 1995). The operationalization of the LOC in the telecommunications industry in Nigeria has involved mapping the four levers (belief systems, boundary systems, diagnostic control systems and interactive control systems) onto the contexts of telecommunication firms; strategic, regulatory and infrastructural.

With the nature of the sector, where technology changes fast, strong regulatory controls, and competition in the market (NCC, 2020), efficient utilization of LOC requires subtle perception of how each lever operates and responds to each other to enable firms to seek innovation yet remain accountable. As an illustration, the belief systems motivate employees to conform to the vision of digital inclusion expansion, whereas the boundary systems create rules that people should follow the standards of regulatory compliance by strictly observing the NCC regulations and data privacy regulations (NDPR, 2019).

Moreover, diagnostic control systems monitor the key performance indicators, including the network availability, the growth of subscribers and revenue levels to respond to deviations (Simons, 1995). The interactive controls enable continuous managerial communication between and among departments and with regulators to dynamically evolve strategy in response to emerging challenges.

Therefore, operationalizing LOC in this respect implies adjusting the general principles of control to technological, institutional, and cultural specificities of the telecom situation in Nigeria.

Mapping the Four Levers to Telecommunications Organizational Practices

Belief Systems: Telecom operators articulate corporate visions emphasizing connectivity, innovation, and customer-centricity. Such belief systems are often shared through internal campaigns, leadership expressions and incentive programs geared towards the development of a common culture and strategic commitment (Knowles, 2023).

Boundary Systems: These come in the form of a mixture of formal regulatory compliance checklists, risk management procedures, ethics codes and technical specifications which establish clear boundaries. As an illustration, the scope of operations is determined by the compliance with the governing conditions of the Nigerian Communications Commission licensing and the provisions of NDPR data privacy.

Diagnostic Control Systems: These controls are broadly used in the form of performance dashboards, financial reporting systems, and network monitoring systems to enable telecom management to gauge progress on service level agreements (SLAs), customer churn, and regulatory reporting accuracy and ensure that they are on track towards meeting the strategic targets (Georgiou & Favotto, 2022).

Interactive Control Systems: In the telecommunication industry, such controls are in the form of cross-functional meetings, strategic review workshops and external stakeholder engagement meetings. They also pay managerial attention to disruptive technology (e.g., 5G), regulation shifts, and innovation priorities to be pursued with learning-based management strategies.

Strategic Uncertainty and Risk Management as Central Constructs

The LOC framework explicitly addresses organizational challenges of strategic uncertainty and risk by balancing control with flexibility (Simons, 1995). Telecom companies in Nigeria operate within a landscape of high unpredictability: the accelerated development of technologies, fluctuations in regulatory policies, the instability of the infrastructure, and the transformation of the consumers. The levers play a different role in the management of these uncertainties-belief systems

give us a vision, boundary systems protect against exposure to illegitimate risks, diagnostic systems measure operational risks, and interactive systems encourage flexibility and exploration.

Understanding this balance is critical to explaining how telecom firms sustain innovation, ensure compliance, and navigate complex strategic landscapes.

Interactions and Dynamic Balances among Levers

The four levers do not operate in isolation; they interact constitutively, producing a system of tension and reinforcement (Barros & Ferreira, 2022). Effective strategic control is possible only through the management of tensions between enabling (belief, interactive controls) and constraining (boundary, diagnostic controls) mechanisms.

For example, excessively strict boundary systems can suppress innovation promoted by belief systems whereas poorly developed diagnostic controls can lower strategic responsibility. This dynamism needs to be balanced by the Nigerian telecommunications companies based on market and regulatory pressures.

Contextualizing Controls within Nigeria's Regulatory and Market Environment

The telecommunications industry in Nigeria has unique institutional features, including the policies of government that promote greater broadband penetration, active data protection enforcement, and competitive deregulation, and they are shaping the control systems (NCC, 2020). Further, infrastructural inadequacies such as network stability and electricity are subject to control that includes formal implementation and informal developments.

It is critical to acknowledge these contextual factors in the appropriate interpretation of the implementation and adaptation of the LOC components.

Propositions and Analytical Expectations

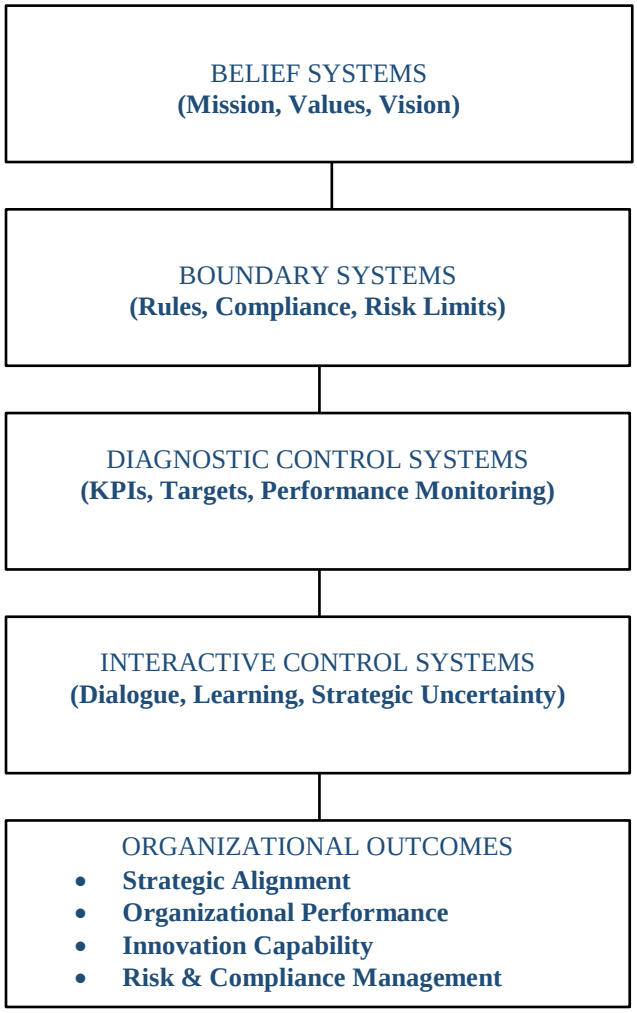
Proposition 1: Nigerian telecommunications firms strategically employ belief and boundary systems to inspire innovation while ensuring regulatory compliance.

Proposition 2: Diagnostic control systems are pivotal in detecting deviations in performance, enabling effective course correction in telecommunications operations.

Proposition 3: Interactive control systems foster organizational learning and responsiveness essential to managing emergent uncertainties in this volatile sector.

Proposition 4: The balance and interaction of the four levers reflect the contextual pressures and organizational cultures distinctive to Nigerian telecommunications firms.

Conceptual Model



Source: Researcher, 2026

Empirical Review

Empirical research on Management Control Systems (MCS), and the Levers of Control (LoC) framework by Simons have grown into the private sector, the public sector and the non-profit sector with overwhelming evidence on the interaction of various control mechanisms in influencing performance, strategy implementation, and organizational efficacy.

Al-Dhubaibi (2025) empirically tested the effectiveness of the interaction of the four levers of Simons to augment the effectiveness of MCS in manufacturing organizations. The survey-based quantitative study with structural equation modelling (SEM) established that balanced utilization of belief, boundary, diagnostic, and interactive controls highly enhance the productivity of an organization. These results support the notion that synergy is a key factor of MCS effectiveness, as opposed to independent use of control mechanisms, and extend the original hypothesis by Simons that equilibrium in levers is what drives MCS effectiveness.

In a single-case study in an innovative company, Barros and Ferreira (2022) examined the connection between MCS and innovation. Their qualitative results show that innovation is driven by the

interactive system and belief systems, and strategic discipline is secured by diagnostic systems. Empirical validation of the study is that innovation is not opposing control but survives where there is flexible implementation of controls. This justifies the applicability of LoC in innovation oriented contexts.

Kruis et al (2020) have carried out a comprehensive empirical study on the balance of firms in terms of control structures. The study made use of archival and survey data to conclude that organizations that have both formal diagnostic controls and informal interactive systems have a better strategic alignment. The research enhances the empirical foundation of the LoC framework and the complementarities between control levers.

Hermawan et al. (2021) evaluated the effect of the Levers of Control on the performance of managers of Indonesian companies. The study, using regression analysis, has shown that belief systems have the greatest positive influence on managerial performance, particularly in high levels of uncertainty in the environment. These results highlight the motivational effect of the belief systems, which goes beyond the framework of Simons to the context of emerging economies.

Corduneanu and Lebec (2020) used a qualitative case study design in a non-profit organization in the UK to discuss the issue of empowerment and control. Their results show tensions between the boundary controls and employee autonomy. Empirically, the study demonstrates that interactive controls are effective in countering the over-restriction by the boundary systems and this indicates the significance of the balance within the framework of the LoC.

Georgiou and Favotto (2022) researched the management control systems of the emergent risks held by the public sector. Their practical experiences show that interactive control systems play a pivotal role in detecting and dealing with the emergent risks, whereas diagnostic controls strengthen accountability. This paper generalizes LoC to risk management in the government.

Georgiou (2025) empirically explored the risk management practices in offices of the public sector through the use of various case studies. The results validate the hypothesis that organizations that are founded on combined levers of control have stronger risk governance frameworks. This paper provides a high level of longitudinal and institutional data to prove the applicability of the Simons model to other types of institutions other than private companies.

Kaveski and Beuren (2020) conducted the survey-based regression analysis of the effect of MCS and creativity on job performance. Results indicate that interactive controls are positively associated with creativity which, in its turn, makes employees perform better. The paper supports the thesis that out of a well-designed design MCS can be facilitating and not limiting.

Ojera et al. (2020) concentrated on the Kenyan sugar industry and assessed empirically the effect of belief control practices on the performance of companies. The outcomes show that there exists a strong positive correlation between belief systems and financial performance, which implies the relevance of motivational and cultural significance of belief controls in the economic development of the developing nations.

Lativa and Arsjoah (2024) investigated the moderating power of the Levers of Control on the relations between culture and strategy and the environmental uncertainty and the firm performance. Through SEM, the research established that a significant boost in the effects of strategy and culture on performance is increasing with LoC. This work of study empirically locates LoC as a mediating construct instead of being a control instrument.

Synthesis and Research Gap

All of these empirical studies affirm that the Levers of Control framework of Simons is a well-developed and flexible model in industries and in different countries. Nonetheless, there is a scarcity of empirical research on the developing economies especially Nigeria, despite the vast international results. In addition, not many studies combine regulatory, technological and institutional environments in analysis of LoC-based MCS. This provides a strong rationale of the current research.

Gaps in Existing Literature

Although there is an abundant literature on the subject of Management Control Systems (MCS) and the Levers of Control (LoC) framework created by Simons, there are several gaps that require attention. Firstly, the empirical data is most often pooled in developed economies and the environment of public or manufacturing sector with scarce focus placed on emerging economies, especially the telecommunication industry in Nigeria that exists in a very regulated and technologically dynamic environment. Second, the previous research tends to consider a single lever of the control separately as such and thus ignores the complementary and balanced application of the four levers as initially suggested by Simons. This restricts the knowledge on the joint effects of the combined control mechanisms on the outcome of organizations. Third, most of the current studies using the cross-sectional designs and focusing on financial performance indicators give little focus on strategic alignment, innovation capacity, and risk management as multidimensional performance indicators. Besides, there is a gap of literature that incorporates regulatory and environmental uncertainty as contextual factors that influence the efficacy of control systems. Lastly, there is insufficient empirical literature that directly correlates MCS practices with industry-specific regulatory of environments, including the telecommunications regulation in Nigeria. This research fills these gaps by taking an integrated approach of LoC perspective in a context of a Nigerian industry to give more empirical evidence on the strategic importance of management control systems.

Methodology

Research Design

The research design employed in this study is based on quantitative research design involving cross-sectional survey that will be used to study the applicability of the Levers of Control framework developed by Simons within the telecommunication industry in Nigeria. Quantitative method is appropriate as it allows objective measurement of the management control practices and statistical testing of the relationships among the variables of the study at a point in time.

Study Area

The research is undertaken in the telecommunication industry in Nigeria, which is a fast changing technological sector with high competitive industry and good regulation. These characteristics render the industry a good setting to analyze the adoption and the usefulness of the formal management control systems.

Study Population

The target population will include senior and middle level employees in the selected telecommunication firms in Nigeria and especially, those in strategic planning, finance, operations, risk management and internal control departments. The reason why these types of employees are intentionally selected is due to their direct participation in the design, implementation, and managing the management control systems.

Sample and Sampling Technique

The study uses a sample size of 50 respondents. Purposive sampling method is used to sample respondents who have enough knowledge and experience in matters pertaining to management control system and organizational strategy. The non-probability sampling technique will provide the assurance that the sampled individuals are information-rich and will be in a position to give out credible data that will be relevant to the objectives of the research. The purposive sampling is the right choice to be made considering the specificity of the study and the managerial orientation of the investigated framework.

Research Instrument

The structured questionnaire is used to collect data based on a Levers of Control framework created by Simons. The tool has closed-ended questions that

assess the belief systems, boundary systems, diagnostic controls and interactive controls and organizational outcomes. The measurement of the responses on a Likert scale is aimed to provide the opportunity to analyze the responses quantitatively.

Data Analysis Strategy

The questionnaires were analyzed with the use of SPSS in a quantitative manner. The analysis will be done in a sequential manner. Participant characteristics and responses to LOC items were described through descriptive statistics (frequency/percentages) to show characteristic and responses. Cronbach alpha was used to test the reliability of the internal consistency of the LOC subscales.

This multifaceted method of analysis allows to conduct an in-depth analysis of the quality of measurement and offers an adequate means of testing the speculative relationships, which are suggested in the LOC paradigm.

Ethical Consideration

There are ethical standards that are highly monitored during the study. All respondents are informed about the purpose of the study and the participation is voluntary, anonymity and confidentiality is assured. Data gathered are utilized only to academic end and other data protocols are managed in accordance with ethical guidelines of research and relevant data protection laws.

Analysis of Results and Discussion of Findings

The section provides comprehensive detail of the research findings resulting from the quantitative analysis of survey data. The data, obtained through a meticulously designed questionnaire, are synthesized and presented in a series of structured tables. The analysis employs descriptive statistics (including frequencies, means and standard deviations). The interpretation of these results seeks to extract meaningful insights and draw conclusions based on empirical evidence.

Table 1: Background Information

Background Information	Classification	Freq (%)
Position of Respondents	Senior Executive	10(19.2)
	Strategic Manager	6(11.5)
	Compliance officer	14(26.9)
	Operations Manager	10(19.2)
	Technical Staff	10(19.2)
Years of Experiences	Less than 1 year	4(8.0)
	1 – 3	15(30.0)
	3 – 5	25(50.0)
	More than 5 years	6(12.0)
	Mobile Network Operator	11(22.0)
	Internet Service Provider	12(24.0)

Type of Telecommunication Organization Worked for.	Infrastructure Provider	17(34.0)
	Regulator	6(12.0)
	Others	4(8.0)

Source: Field Survey, 2026

According to the background data in table 1, the survey has taken a sample that is diverse and experienced in the telecommunications field. Regarding positions, compliance officers occupied the top position at 26.9% and senior executive, operations manager, and technical employees were at 19.2% and 11.5% respectively. In terms of years of experience, fifty percent of the participants possessed experience of 3-5 years, 30% possessed experience of 1-3 years, 12% possessed experience of over 5 years and 8% possessed experience of less than 1 year meaning that the responses made by the interviewees are highly informed by the practitioners who have extensive knowledge of the field. In terms of type of telecommunication organization worked for; the infrastructure providers had the highest presence with 34% followed by internet service providers 24% then mobile network operators 22% and regulators and other players 12% and 8% respectively. This piece highlights the fact that data is based on the experience of the most experienced professionals in the most important spheres of the telecommunications business.

Table 2: Belief Systems: To what extent does your organization communicate and instill core values and mission statements that inspire strategic alignment?

Rating	Frequency	Percentage
Not at all	9	18.0
Slight extent	5	10.0
Moderate Extent	11	22.0
Great Extent	11	22.0
Very Great Extent	14	28.0
Mean	**3.32**	
Standard Deviation	**1.45**	

Source: Field Survey, 2026

The Table 2 results showed that 14(28.0%) perceive their organization to communicate and instill core values to the greatest extent and 11(22.0%) report having this done to them in a great extent and moderate extent respectively. On the other hand, a good minority of 5(10.0%) will not be convinced but 9(18.0%) will say it does it to some little or not at all. The range of 3.32 indicates that the average perception is on the positive side of the scale, which is the great extent. The standard deviation of 1.45 is, however, high, which indicates a strong absence of agreement among the respondents. It means that the

efficiency of communication and inculcation of core values is extremely uneven throughout the organization, probably depending on the department, team, or leadership, resulting in unequal strategic positioning and lack of cohesive corporate culture.

Table 3: Best communication channels or activities used to promote organizational beliefs

Communication Channel	Frequency	Percentage of Responses (n = 213)	Percentage of Cases (n = 60
Training and development programs	39	18.3	65.0
Corporate social responsibility (CSR)	42	19.7	70.0
Employee recognition and award ceremonies	35	16.4	58.3
Social media campaigns	38	17.8	63.3
Digital communication platforms (e.g., intranet, internal WhatsApp/Slack groups)	33	15.5	55.0
Corporate mission and vision statements	26	12.2	43.3
Case Frequency (Number of Channels Selected per Respondents)			
Number of Channels Selected per Respondents		Case Frequency	Percentage
One channel		10	16.7
Two channels		8	13.3
Three channels		11	18.3
Four channels		12	20.0
Five channels		11	18.3
Six Channels		8	13.3

Source: Field Survey, 2026

Table 3 results showed that the most used channel was corporate social responsibility initiatives which are used by 42(70.0%) of the sampled organizations which was closely followed by training and development programs at 39(65.0%) and social media campaign with 38(63.3%). 35(58.3%), 33(55.0%), and 26(43.3%) recognize employees using ceremonies, digital platforms, and corporate mission statements respectively. The analysis of the case frequencies showed that the ones that use only one channel are only 10(16.7%) cases, and most of the organizations 50(83.3%) use more than one channel with the most popular being using four channels 12(20.0%). This means that companies are aware of the value of diversifying and multi-channel strategy to help them develop market organizational beliefs and those action-driven initiatives such as CSR are coupled with educational programs and current communication resources to access employees via different touchpoints.

Table 4: Boundary Systems: How clearly are rules, risk boundaries, and ethical guidelines defined in your organization?

Rating	Frequency	Percentage
Not clear	7	14.0
Slightly clear	2	4.0
Moderately clear	4	8.0
Clear	16	32.0
Very clear	21	42.0
Mean	**4.02**	
Standard Deviation	**1.27**	

Source: Field Survey, 2026

Table 4 results mean that 21(42.0%) find the rules and boundaries very clear and 16(32.0%) find the rules and boundaries clear. Another 4(8.0%) are neutral, 2(4.0%) find them somewhat unclear and 7(14.0%) find them not clear at all. The average score is 4.02 which implies that perceived clarity is high across. Nevertheless, the standard deviation of 1.27 shows that there is a medium degree of disagreement. It means that clarity is good but, probably, there are certain departments, teams, or even areas of policy where ambiguity remains and might cause inequality in the enforcement of rules.

Table 5: Which of the following boundary controls are actively used?

Boundary Control	Frequency	Percentage of Responses (n = 123)	Percentage of Cases (n = 50
Regulatory compliance protocols	31	30.1	62.0
Risk management policies	28	27.2	56.0
Code of conduct	40	38.8	80.0
Operational limits and “red lines”	24	23.3	48.0
Case Frequency (Number of Controls Selected per Respondents)			
Number of Controls Used		Case Frequency	Percentage
One control		13	26.0
Two controls		11	22.0
Three controls		11	22.0
Four controls		15	30.0

Source: Field Survey, 2026

Table 5 showed that code of conduct is the most popular boundary control that was actively used by 40(80.0%) of the organizations with regulatory compliance protocols and risk management policies coming next, at 31(62.0%) and 28(56.0%) respectively. 24(48.0%) of the respondents use

operational limits and red lines. The frequency analysis of the cases showed that just 13(26.0%) of the organizations use a single control of the boundaries and the vast majority 37(74.0%) applies more than one of the mentioned controls where the most frequent is the overall use of all the four controls 15(30.0%). It means that most of the organizations introduce a multi-layered system of boundary controls that provide a powerful ethical basis with codes of conduct and complement it with regulatory, risk, and operational frameworks to establish a resilient system of governance.

Table 6: Challenges your organization faces in enforcing boundary systems

Challenge	Frequency	Percentage of Responses (n = 254)	Percentage of Cases (n = 60
Lack of awareness or understanding of organizational policies among employees	43	16.9	71.7
Weak monitoring and enforcement mechanisms	44	17.3	73.3
Limited resources (financial or human)	42	16.5	70.0
Cultural diversity among staff	32		53.3
Inconsistent enforcement of rules across different departments	33	13.0	55.0
Pressure to meet performance targets	26	10.2	43.3
Case Analysis (Number of Number of challenges per organization)			
Number of Controls Used		Case Frequency	Percentage
One challenge		9	15.0
Two challenges		8	13.3
Three challenges		19	31.7
Four challenges		11	18.7
Five challenges		9	15.0
Six challenges		4	6.7

Source: Field Survey, 2026

The findings of Table 6 showed that the most common challenge was weak monitoring and enforcement mechanisms which were experienced by 44(73.3%) of the organizations with lack of awareness or understanding of the policies among the employees coming second at 43(71.7%) followed by lack of resources at 42(70.0%. The cultural diversity is a challenge to 32(53.3%) of the organizations, inconsistent implementation to 33(55.0%), and pressure to exceed established performance targets to 26(43.3%). The case frequency analysis has shown that only 9(15.0%) organizations had to struggle with one challenge whereas the majority 51(85.0%) faced more than one challenge at once with the prevailing situation being three simultaneous challenges 19(31.7%). This means that the implementation of boundary systems is normally undermined by an intricate network of

problems where resource limitations prevent proper monitoring and communication, and thus resulting in gaps in awareness and inconsistent enforcement as especially observed in the different organizational settings where performance pressures can further complicate compliance.

Table 7: Diagnostic Control Systems: Which performance metrics are routinely monitored in your organization's strategy execution?

Performance Metrics	Frequency	Percentage of Responses (n = 189)	Percentage of Cases (n = 50
Financial performance (Revenue, profit margins)	41	21.7	82.0
Network/service availability and quality	42	22.2	84.0
Customer satisfaction and churn rates	37	19.6	74.0
Compliance with regulatory standards	40	21.2	80.0
Innovation / project milestones	29	15.3	58.0
Case Frequency (Number of Performance Metrics Selected Per Respondents)			
Number of Metric Monitored		Case Frequency	Percentage
One metric		4	8.0
Two metrics		5	10.0
Three metrics		10	20.0
Four metrics		11	22.0
Five metrics		20	40.0

Source: Field Survey, 2026

Table 7 results showed that network/service availability and quality is the most monitored performance measure where 42(84.0**%**) organizations have it, and the second most monitored performance measure is financial performance at 41(82.0**%**) and compliance with regulatory standards at 40(80.0%). Of the 37 organizations, customer satisfaction and churn rates are followed by 37(74.0%) and innovation and project milestones are followed by 29(58.0%). The analysis of the case frequencies indicated that only 4(8.0%) of the organizations only observe one metric, but the overwhelming majority 46(92.0%) observe several metrics at the same time, the most widespread solution is the observation of all five metrics 20(40.0%). It also means that efficient organizations use a balanced scorecard strategy implementation model and integrate both conventional financial and operational measures with customer-focused and innovative measures to ensure the overall performance is visible both in the short-term performance of operational results and strategy-wide strategic goals.

Table 8: How effective are diagnostic systems in detecting deviations and triggering corrective actions?

Rating	Frequency	Percentage
Not effective	10	20.0
Slightly Effective	3	6.0
Moderately effective	8	16.0
Effective	13	26.0
Very effective	16	32.0
Mean	**3.66**	
Standard Deviation	**1.57**	

Source: Field Survey, 2026

Table 8 results showed that 16(32.0%) agree that the diagnostic systems are very effective, 13(26.0%) agree that the systems are effective and 8(16.0%) agree that the systems are moderately effective. On the other hand, 3(6.0%)-3 find them somewhat working and 10(20.0%)-3 find them non-effective. The average rating of 3.38 indicates a moderately positive rating of effectiveness. Nonetheless, the standard deviation of 1.57 is quite high, which means a strong deficiency in agreement among the respondents. This means that diagnostic systems' performance is very unreliable and inconsistent throughout the organization, thereby making it challenging to develop deviations and corrective measures in time.

Table 9: Interactive Control Systems: How often does your organization engage in formal dialogue and learning forums to discuss strategic uncertainties?

Rating	Frequency	Percentage
Never	2	4.0
Occasionally	19	38.0
Frequently	18	36.0
Always	11	22.0
Mean rating	**2.76**	
Standard Deviation	**0.85**	

Source: Field Survey, 2026

Table 9 results showed that 11(22.0%)- report that their organization continuously discusses strategic uncertainties formally, and 18(36.0%)- report that their organization frequently discusses them formally and 19(38.0%)- report that their organization discusses them infrequently. A very minor, 2(4.0%), report that this never happens. The average score was 2.76, indicating that the average response was between occasionally and frequently. The standard deviation of 0.85 shows that there is a

moderate amount of agreement between the respondents. This suggests that the rate of interaction in this regard is not yet centralized as an agreed-upon, everyday strategic ritual in the industry, even though most organizations are appreciating the need to have this dialogue.

Table 10: What forms do interactive controls take in your organization?

Form of Interactive Control	Frequency	Percentage of Responses (n = 142)	Percentage of Cases (n = 50
Cross-departmental strategy meetings	37	26.1	76.0
Workshops with regulators and stakeholders	38	26.8	74.0
Innovation or R&D project reviews	36	25.4	72.0
Feedback sessions and collaborative problem-solving	31	21.8	62.0
Case Frequency (Number of Control Forms Used per Organization)			
Number of Interactive Control Forms Used		Case Frequency	Percentage
One form		7	14.0
Two forms		12	24.0
Three forms		16	32.0
Four forms		15	30.0

Source: Field Survey, 2026

The Table 10 results showed that the most frequent form of interactive control is workshops with regulators and stakeholders as 38(76.0%) organizations use this type of control, cross-departmental strategy meetings with 37(74.0%) organizations, and innovation or R&D projects reviews with 36(72.0%) organizations. Feedback sessions and joint problem solving is applied in 31(62.0%) organizations. The case frequency analysis has shown that only 7(14.0%) of organizations have only one form of interactive control whereas a huge majority 43(86.0%) of organizations use more than one form, with the most common one being the use of three different forms of interactive control 16(32.0%). This means that successful organizations adopt an interactive control system that is diversified and integrates external stakeholders with internal strategic coordination and innovation processes to generate several organizational learning and adaptability to strategic uncertainty.

Table 11: Example of where interactive controls have helped your organization adapt to change or uncertainty.

Example of Interactive Control	Frequency	Percentage of Responses (n = 217)	Percentage of Cases (n = 50
Regular management and strategy meetings	37	17.1	74.0
Cross-departmental collaboration	38	17.5	76.0

Use of customer feedback systems (surveys, call center data, social media)	41	18.9	82.0
Introduction of new technologies (e.g., 5G, fintech services)	36	16.6	72.0
Active engagement with regulators and government agencies	40	18.4	80.0
Continuous monitoring of competitors' activities	25	11.5	50.0
Case Frequency (Number of Examples Cited per Organization)			
Number of Interactive Control Forms Used		Case Frequency	Percentage
One example		5	10.0
Two examples		7	14.0
Three examples		11	22.0
Four examples		12	24.0
Five examples		9	18.0
Six examples		6	12.0

Source: Field Survey, 2026

The Table 11 results showed that the most influential example of interactive controls used to facilitate the adaptation was the usage of customer feedback systems that were mentioned by 41(82.0%) of organizations, next comes the active interaction with regulators 40(80.0%) and the collaboration across departments 38(76.0%). The organizations were found to have regular management meetings 37(74.0%), introduction of new technologies 36(72.0%) and competitors monitoring 25(50.0%). The frequency analysis of the case showed that the most frequent organization provided the number of cases was 5(10.0%) saying they used a single example, and the percentage of those who gave several successful applications was the highest 45(90.0%), the most common being the use of four different adaptive examples 12(24.0%). This means that organizational adaptation prospers based on a multi-faceted framework of interactive controls that integrates the external intelligence collection by customers and regulators with the inside coordination processes and technological innovation that forms an all-encompassing sensing-and-responding process of change and uncertainty navigation.

Table 12: How balanced is the use of the four levers of control (belief, boundary, diagnostic, interactive) in your organization?

Rating	Frequency	Percentage
Very unbalanced	7	14.0
Somewhat unbalanced	3	6.0
Moderately Balanced	7	14.0

Balanced	10	20.0
Very Balanced	23	46.0
Mean rating	**3.86**	
Standard Deviation	**1.50**	

Source: Field Survey, 2026

Table 12 results showed that 23(46.0%) and 10(20.0%) and 7(14.0%) think that it is very balanced and balanced, respectively moderately balanced. On the other hand, they are somewhat and very unbalanced to 3(6.0) and 7(14.0) respectively. The average measure of 3.86 indicates that there is a positive perception of balance overall. The standard deviation of 1.50 however implies a large percentage of dispersion. This means a polarized experience in which a large administrative unit will enjoy a well-integrated control system, and another large section will be severely unbalanced in its operations, resulting in uneven strategic management competencies.

Table 13: Respondents views on lever with Most Significant impact on strategic success

Lever of Control	Frequency	Percentage of Responses (n = 61)	Percentage of Cases (n = 50
Belief Systems	10	16.4	20.0
Boundary Systems	14	23.0	28.0
Diagnostic Control Systems	12	19.7	24.0
Interactive Control Systems	25	41.0	50.0
Case Frequency (Number of Examples Cited per Organization)			
Number of Levers Selected		Case Frequency	Percentage
One lever		41	82.0
Two levers		7	14.0
Three levers		2	4.0
Four levers		0	0.0

Source: Field Survey, 2026

The Table 13 results showed that the interactive control systems are perceived to be the most important lever to strategic success, as 25(50.0%) percent of respondents selected it over boundary systems (14(28.0%)) and diagnostic control systems (12(24.0%)). The most significant impact was found by 10(20.0) percent of respondents to believe systems. The analysis of frequencies in the case showed that too many respondents 41(82.0%) are of the opinion that only one lever is what contributes to strategic success whereas only 9(18.0%) respondents feel that more than one lever causes strategy to be successful. It means that, although the framework proposed by Simons focuses on the balanced utilization of all four levers, the most common way that practitioners can find one of the key drivers of

success is the most interactive controls that imply that organizations can develop the control style dominating their strategic path instead of creating balance among all types of controls.

Table 14: Responses on why respondents believe this lever is most impactful

Reasons for impact	Frequency	Percentage of Responses (n = 194)	Percentage of Cases (n = 50
It aligns employees with the organization's vision and values	30	15.5	60.0
It sets clear rules and limits	35	18.0	70.0
It ensures accountability through performance monitoring	38	19.6	76.0
It encourages collaboration and dialogue	31	16.0	62.0
It motivates employees by linking actions to rewards or recognition	28	14.4	56.0
It supports innovation and adaptability	32	16.5	64.0
Case Frequency (Number of Reasons Cited per organization)			
Number of Levers Selected		Case Frequency	Percentage
One reason		6	12.0
Two reasons		9	18.0
Three reasons		11	22.0
Four reasons		12	24.0
Five reasons		7	14.0
Six reasons		5	10.0

Source: Field Survey, 2026

The findings in Table 14 showed that making the performance accountable with monitoring of performance is considered as the most influential reason of impact of a lever, with 38(76.0%) of the respondents, with a second consideration on clear rules and limits at 35(70.0%) and supporting an innovative and flexible approach at 32(64.0%). Collaborating and discussing were mentioned as encouraging by 31(62.0%) of the respondents, matching the employees to the vision and values by 30(60.0%), and encouraging the employee through rewards by 28(56.0%). The case frequency analysis indicates that only 6(12.0%) of respondents had one reason as to why they were impacted by the different reasons, and the large percentage, 44(88.0%) identified more than one reason, the most prevalent approaches, being to cite four different reasons 12(24.0%). It means that the perceived power of control levers lies in being able to realize a variety of results at the same time and to combine both structural (such as rules and accountability) and adaptive and social (such as innovation and collaboration) features, and not a specific functional feature.

Table 15: How have Nigeria's regulatory frameworks influenced control systems in your organization?

Reasons for impact	Frequency	Percentage of Responses (n = 230)	Percentage of Cases (n = 50
They have strengthened compliance monitoring systems to ensure adherence to industry regulations.	43	18.7	86.0
They have shaped boundary systems by defining ethical standards, data privacy, and acceptable business practices.	45	19.6	90.0
They have increased reporting and documentation requirements, influencing diagnostic control processes.	42	18.3	84.0
They have driven investment in new technologies (e.g., SIM registration databases, cybersecurity tools) to meet regulatory demands.	41	17.8	82.0
They have encouraged greater interaction with regulators, influencing how management engages in strategic decision-making.	30	13.0	60.0
They have introduced stricter penalties for non-compliance, making enforcement of control systems a priority.	29	12.6	58.0
Case Frequency (Number of Influences Cited per organization)			
Number of Influences Cited		Case Frequency	Percentage
Cited 2 influences		4	8.0
Cited 3 influences		6	12.0
Cited 4 influences		11	22.0
Cited 5 influences		14	28.0
Cited 6 influences		15	30.0

Source: Field Survey, 2026

According to the results in Table 15, the regulatory frameworks have had the greatest influence on the boundaries systems by establishing ethical standards and data privacy, which affected 45(90.0%) and 43(86.0%) percent of the organizations, respectively, and reinforced compliance monitoring systems and raised reporting requirements, respectively. The pressures posed by the regulatory bodies have increased investment in technology in 41(82.0%) of the organizations, fostered greater interaction with the regulators in 30(60.0%), and added more severe penalties in 29(58.0%). The case frequency analysis showed that about 4(8.0%) of the organizations had fewer than three influences, but the majority 46(92.0%) had several regulatory influences, and the total impact was experienced in all the six areas in 15(30.0%) of organizations. It means that the regulatory climate in Nigeria has initiated a system-

wide conversion of the organization control systems, which also redefined the ethical limits, expanded the surveillance capacity, promoted the transparency by providing reporting and technology modernization, changed the strategic management interaction, and raised the compliance cost by imposing more strict enforcement measures.

Table 16: Infrastructural or market factors affect the design and effectiveness of control systems

Factor	Frequency	Percentage of Responses (n = 199)	Percentage of Cases (n = 50
Level of network and technological infrastructure (e.g., 4G/5G coverage, fiber optics, base stations)	42	21.1	84.0
Intensity of market competition	35	17.6	70.0
Availability and quality of skilled workforce	39	19.6	78.0
Customer demand patterns and service expectations	28	14.1	56.0
Costs and availability of advanced technology platforms (e.g., CRM, billing, and monitoring software)	30	15.1	60.0
Regulatory and policy environment	25	12.6	50.0
Case Frequency (Number of Factors Cited per organization)			
Number of factors Cited		Case Frequency	Percentage
Two factors		5	10.0
Three factors		9	18.0
Four factors		12	24.0
Five factors		13	26.0
Six factors		11	22.0

Source: Field Survey, 2026

Table 16 results showed that the most important factor that influenced control systems is the level of network and technological infrastructure that influenced 42(84.0%) organizations closely followed by availability and quality of skilled workforce at 39(78.0%) and intensity of market competition at 35(70.0%) results. Some of the reasons that influence 30(60.0%) of the organizations are costs and availability of advanced technology platforms, 28(56.0%) are influenced by customer demand patterns and 25(50.0%) percent are influenced by the regulatory environment. In the analysis of case frequencies, it was found that the limited number of organizations with fewer than three factors 5(10.0%) and the overwhelming number with many factors are encountered at the same time 45(90.0%) with the most frequent one of managing five different factors being 13(26.0%) of the organizations. This means that the design of effective control systems must be holistic and should be able to consider technological

potential, human capital management, competitive forces, client demands, financial limitations, and regulatory adherence at the same time and not just one factor at a time.

Table 17: Responses on informal control mechanisms (e.g., organizational culture, peer pressure) support or conflict with formal levers of control?

Informal Control mechanism	Frequency	Percentage of Responses (n = 199)	Percentage of Cases (n = 50
Strong organizational culture	38	19.1	76.0
Peer pressure & team norms	35	17.6	70.0
Mentorship and informal guidance from senior employees	31	15.6	62.0
Resistance to change due to entrenched habits or subcultures	33	16.6	66.0
Informal communication channels (e.g., social networks, WhatsApp groups)	30	15.1	60.0
Recognition and social approval from colleagues	32	16.1	64.0
Case Frequency (Number of Factors Cited per organization)			
Number of mechanisms Cited		Case Frequency	Percentage
Two mechanisms		6	12.0
Three mechanisms		10	20.0
Four mechanisms		12	24.0
Five mechanisms		11	22.0
Six mechanisms		11	22.0

Source: Field Survey, 2026

Table 17 showed that the most common informal control mechanism is strong organizational culture, perceived to exist in 38(76.0%) of the organizations, then there is peer pressure, and team norms, which were found in 35(70.0%) and 33(66.0%) organizations respectively. Those organizations that reported recognition and social approval by colleagues (32(64.0%), mentorship and informal guidance (31(62.0%), and informal communication channels (30(60.0%)) were seen to do so. The analysis in terms of case frequency showed that only 6(12.0%) of the organizations indicated less than three mechanisms but the prevalent number of mechanisms in an environment was four with four mechanisms present in 12(24.0%) of organizations. This means that formal control systems are embedded in an extensive ecosystem of informal social and cultural influences that may either strongly support or seriously disrupt official policies and procedures, and it was found that the correspondence between formal and informal processes is a decisive factor of organizational control efficacy.

Table 18: How effective do you find Simons' Levers of Control framework in explaining strategic management practices in your sector?

Rating	Frequency	Percentage
Not effective	9	18.0
Slightly Effective	3	6.0
Moderately effective	7	14.0
Effective	13	26.0
Very effective	18	36.0
Mean rating	**3.62**	
Standard Deviation	**1.56**	

Source: Field Survey, 2026

Table 18 results showed that 18(36.0%) find the Levers of Control framework developed by Simons very useful in describing their strategic management practices, 13(26.0%) find it useful and 7(14.0%) find it moderately useful. On the other hand, a significant minority are not convinced because 3(6.0%) reported it to be at least a little effective and 9(18.0%) claimed it not to be at all effective. The average of 3.62 indicates that the mean score is towards the positive, effective perception. The standard deviation is, however, very high at 1.56 which indicates that there is very little agreement among the respondents. This means that although the framework has a wide appreciation among most people, its applicability and explanatory intensity is highly charged on certain organizational settings, sub-sectors or individual understandings in the telecommunications industry.

Discussion of Findings

The findings of this study revealed a complex picture of strategic control within the Nigerian telecommunications sector, largely consistent with yet also challenging Simons' Levers of Control framework. Core values (belief systems) communication and instillation have positive mean perception but of high inconsistency, which could be seen by the large standard deviation value. This is in line with the focus on belief systems as a source of empowerment and intrinsic motivation by Simons (1995), although the relatively large proportion of employees who do not subscribe to this criterion makes the argument that formal mechanisms are not enough to drive change. The findings are indicative to the fact that informal controls, including organizational culture and peer influence as identified by Owolabi., Ajibolade., & Uwuigbe, (2021) are very vital and may not be aligned, leading to lack of peace in the strategic alignment of department and teams, which disrupts a common corporate culture.

The results further demonstrate that organizations employ a diversified, multi-channel strategy to promote beliefs, combining CSR initiatives with training and modern communication tools. This can be attributed to the fact that one channel would not be sufficient in reaching a diverse workforce. On the issue of the boundary systems, there is a perceived high level of clarity of rules but there is moderate disagreement. A multi-layered system of control is predominantly used in organizations, and it heavily depends on codes of conduct a finding that has a strong resonance with the fact, as mentioned by Knowles (2023), that such systems play a critical role in controlling industries. These systems have been significantly influenced by the Nigerian regulatory environment and specifically the NDPR (2019) which is leading to a complete change in the system to elevate monitoring and reporting to include more investment in technology to comply with the stringent standards of the regulatory environment.

However, the enforcement of these boundary systems is hampered by an interconnected web of challenges. The most common ones are poor monitoring, poor awareness by the employees, and inadequate resources, and most organizations have to contend with several challenges at the same time. This highlights the realities of this sector such as the infrastructural issues such as power outages and cyber-attacks as observed by Olusegun and Ndubisi (2020). These limitations prevent proper control, which leads to the creation of gaps in awareness and uneven enforcement. This is complicated by the fact that the same applies to measuring performance, with a balanced scorecard method being the common approach. Companies have a set of indicators of network activity and financial performance, and customer satisfaction levels, which means that they strive to keep a complete overview of the immediate operational results and long-term strategic goals, which, in turn, is proposed by diagnostic control systems (Simons, 1995).

The effectiveness of these diagnostic systems is viewed as only moderately positive, with a pronounced lack of consensus, pointing to highly unreliable performance across the organization. This discrepancy makes it difficult to take corrective action on time. The sector on the other hand exhibits a high adaptive response ability using interactive controls. The most common types of interactive control that most organizations use to address strategic uncertainties include workshops with regulators and cross-departmental meetings. This is not yet institutionalized as a regular practice but is very important to organizational learning and consistent with the finding by Remahl (2023) that interactive controls are crucial in a volatile industry to help create a collective sense-making and quick feedback loops. Multi-faceted systems that integrate external intelligence gathered by customers and regulators with internal integration and technological innovation are the most effective adaptations.

Furthermore, the perception of the LOC framework's balance is polarized, and practitioners tend to identify a single primary lever most frequently interactive control as the driver of strategic success, rather than a balanced use of all four. It means that organizations can acquire a dominant style of control, which underlines the findings on the importance of dynamic equilibrium. The perceived power of any lever lies in the fact that the lever must result in the accomplishment of more than one thing at a time resulting in structural accountability coupled with adaptive and social factors. In the end, a combination of technological, human capital, competitive and regulatory factors affect the control system design and proves that effective control is an activity that needs to be approached holistically and not concentrated on one path segment since it functions within a wealthy ecosystem of informal social forces capable of supporting or seriously weakening formal policies.

Conclusion

This study examined the application of Simons' Levers of Control (LOC) framework and strategic management in Nigeria's telecommunications sector, focusing on how organizations navigate strategic uncertainty, risk, and performance pressures within a highly dynamic and regulated environment.

The research adopted a quantitative approach whereby descriptive statistics were used to examine the responses of 50 purposively sampled participants who were sampled among senior executives, strategy managers, compliance officers, operations managers and technical staff. This design allowed the systematic evaluation of the functionality of belief, boundary and diagnostic and interactive systems in practice in telecom firms.

The research was based on the Levers of Control framework developed by Simons (1995) with the help of the complementary view on the socio-technical systems theory and formal/informal control mechanisms. These ideas offered a perspective on the way organizations combine structured control systems and the facts of human behavior, culture and regulatory requirements in turbulent environments.

The research was filling a conspicuous literature gap: on one hand, the LOC framework has been extensively reported in Western contexts, and little empirical research on its applicability in African emerging markets has been conducted so far,

especially in the telecommunications industry where strategic uncertainties are unique due to regulatory and infrastructural factors. This research therefore contributes by contextualizing LOC within Nigeria's evolving telecom landscape.

The findings are summarized below in line with the five research questions:

***RQ1: How are Simons' four levers of control currently applied within Nigerian telecommunications firms*?**

The findings indicate that the four levers are in operation albeit unequally. The belief systems are fair and not consistent among departments. Regulatory enforcement makes the boundary systems rather strong, but it is weakened by ineffective monitoring and scarcity of resources. Balance scorecards are also important in diagnostic systems but give uneven results as they do not always have reliable data. The most effective ones are interactive systems, workshops, engagement of regulator, and cross-departmental collaboration are frequently used.

RQ2: What are the key strategic uncertainties and risks faced by Nigerian telecom companies, and how do the LOC systems address these?

There are several uncertainties that the sector must deal with such as infrastructural shortages (e.g., unreliable power supply), cyber security, regulatory issues, and the intensity of rivalry. These risks have the most direct influence on boundary and diagnostic systems, and interactive systems offer adaptive capacity to the firms. Nevertheless, belief systems usually cannot match the staff's attitudes with strategic reaction to these uncertainties.

RQ3: How do formal and informal control mechanisms interact with LOC in these firms?

It was found out that formal mechanisms (codes of conduct, balanced scorecards, compliance structures) offer structural accountability, whilst informal mechanisms (organizational culture, peer pressure and leadership influence) are quite decisive. Informal controls in most instances support or erode formal LOC leverages, particularly belief systems and bring about an unbalanced cultural and strategic fit.

RQ4: What contextual factors in Nigeria's telecommunications sector influence the design and effectiveness of control systems?

Boundary and diagnostic systems are heavily influenced by regulatory frameworks, namely, the Nigeria Data Protection Regulation (NDPR, 2019). The design and implementation of LOC is also affected by technological development, human capital capacity, resource limitations and infrastructural issues. The presence of competitive market forces also encourages the use of interactive systems to keep up with the adaptive changes.

RQ5: How can the LOC framework be adapted or extended to better suit the strategic management needs of Nigerian telecommunications firms?

The results imply that, rather than adherence to a balanced application of the four levers, a hybrid application, which will focus on the interactive application of controls, but will incorporate both informal social processes and formal levers, might be helpful to firms. It is more appropriate to the unstable environment in Nigeria, where flexibility, involvement in regulations and harmony with culture are important in attaining strategic objectives.

This study concludes that while Simons' LOC framework provides a useful lens for analyzing strategic management in Nigeria's telecommunications sector, its application is uneven and context dependent. Interactive controls are taking a leading role in the sector as the industry shows partial compliance with the framework owing to environmental volatility. Nevertheless, poor integration of belief systems and gaps in enforcement of the boundary systems and inconsistency of the diagnostic measures restrict the full potential of the LOC framework. Notably, informal controls like organizational culture and peer processes are decisive and should be considered together with

formal mechanisms. Therefore, the strategic control within the telecommunications industry in Nigeria ought to be seen as the type of a hybrid regime in which formal levers are dynamically interdependent with informal social forces that are guided by regulatory and infrastructural realities.

The findings have significant implications for policy and regulation. The Nigerian Communications Commission (NCC) and other regulators ought to ensure that the various telecom firms use standardized classifications on control benchmarks to ensure consistency in diagnostic systems and boundary systems. Policy makers ought to invest in national digital infrastructure and cybersecurity systems to curb the loopholes in enforcement that weaken the control systems. The regulations ought to promote effective collaborative governance frameworks, which promote interactive controls among the firms, regulators, and consumers, which will increase flexibility in the turbulent environments.

Recommendations

Based on the findings, the following recommendations are proposed:

Enhance the belief systems by instilling values in day-to-day operations and aligning the CSR, training and leadership communications to minimize inconsistency. Improve monitoring technologies, awareness campaigns and allocation of resources, especially in compliance and cyber-security, to improve the enforcement of the boundary system.

Enhance the diagnostic systems through uniformity in the performance measures of the firms and incorporate real-time analytics to provide timely corrective measures. Make interactive controls institutionalized through regularizing workshops, joint strategy sessions, and regulator-industry partnerships instead of making them an occasional occurrence. Consider use of informal controls, which is by fostering positive organizational culture, fostering peer responsibility, and harmonizing social dynamics to its official strategic goals.

Reference

Al-Dhubaibi, A. A. (2025). Harnessing the synergy of control mechanisms: enhancing management control system effectiveness through Simons' Levers of Control framework. *International Journal of Productivity and Performance Management*, 3(4), 123-129. https://doi.org/10.1108/IJPPM-08-2024-0558

Arvidsson, N. (2014). Understanding ERP integration in banks: Towards cross-functional work. *Information Systems Journal*, *24*(2), 131–161. https://doi.org/10.1111/isj.12020

Barros, R. S., & Ferreira, A. M. D. S. D. C. (2022). Management control systems and innovation: A lever of control analysis in an innovative company. *Journal of Accounting & Organizational Change*, 18(4), 571-591. https://doi.org/10.1108/JAOC-09-2020-0137

Benslimane, I., & Benjelloun, S. (2025). Re-writing management control philosophy. *International Journal of Economic Studies and Management*, *4*(1). https://doi.org/10.5281/zenodo.14731669

Corduneanu, R.-I., & Lebec, L. (2020). People in suits: A case study of empowerment and control in a non-profit UK organization. *Journal of Public Budgeting, Accounting & Financial Management*, *32*(3), 511–528. https://doi.org/10.1108/JPBAFM-06-2019-0098

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). Sage.

Georgiou, V., & Favotto, A. (2022). New development: Management control for emergent risks in the public sector: a levers of control perspective. *Public Money & Management*, *42*(6), 417–419. https://doi.org/10.1080/09540962.2021.1986301

Georgiou, V. (2025). Management control for risk management in the public sector: A lever of control perspective. A Doctoral dissertation, University of Glasgow.

Hermawan, A. A., Bachtiar, E., Wicaksono, P. T., & Sari, N. P. (2021). Levers of control and managerial performance: The importance of belief systems. *Gadjah Mada International Journal of Business, 23*(3), 237–261. https://doi.org/10.22146/gamaijb.64049

Kaveski, I. D. S., & Beuren, I. M. (2020). Influence of management control systems and creativity on job performance. *Cadernos EBAPE.BR, 18*(3), 543–556. http://dx.doi.org/10.1590/1679-395120190024x

Klein, H. K., & Myers, M. D. (1999). A set of principles for conducting and evaluating interpretive field studies in information systems. *MIS Quarterly, 23*(1), 67–93. https://doi.org/10.2307/249410

Knowles, C. (2023). The complementarity of informal and formal controls: The enhancement of Simons' Levers of Control framework. *Accounting, Finance and Economics*. Oxford Brookes University.

Koekoek, W., & Corbey, M. (2019). Simons' levers? Een literatuurstudie naar kritiek op de Levers of Control. *Maandblad voor Accountancy en Bedrijfseconomie, 93*(3/4), 151–161.

Kruis, A.-M., Speklé, R. F., & Widener, S. K. (2020). Balancing control structures: An empirical analysis of the Levers of Control framework. [Working paper]. Nyenrode Business Universiteit & Clemson University. https://ssrn.com/abstract=2312084

Kurniawan, W., & Andono, F. A. (2023). Levers of control management control system and company competitiveness. In W. R. Murhadi et al. (Eds.), *Proceedings of INSYMA 2022* (pp. 90–98). Atlantis Press. https://doi.org/10.2991/978-94-6463-008-4_13

Lativa, L., & Arsjah, R. J. (2024). The moderating role of the lever of control (LoC) in the impact of culture, strategy, and environmental uncertainty on firm performance. *Society*, 12(2), 674-695. https://doi.org/10.33019/society.v12i2.727

National Information Technology Development Agency (NITDA). (2019). *Nigerian Data Protection Regulation (NDPR)*.

Nigerian Communications Commission (NCC). (2020). *Annual report*. https://www.ncc.gov.ng/

Nikzat, P., Pouryasori, T. H., Shah Hoseini, M. A., & Taban, M. (2019). A strategic control model by emphasis on the green approach. *Environmental Energy and Economic Research, 3*(2), 85–106. https://doi.org/10.22097/eeer.2019.169029.1067

Ojera, P. B., Ogutu, M., Siringi, E. M., & Othuon, L. A. (2020). Belief control practices and organizational performances: A survey of sugar industry in Kenya. *African Research Review*, 5(4), 1–17. https://doi.org/10.4314/afrrev.v5i4.69235

Olusegun, A., & Ndubisi, N. (2020). Cybersecurity challenges in Nigerian banking: Towards a resilient architecture. *Journal of Cybersecurity and Digital Trust, 5*(2), 99–112.

Oro, I. M., & Lavarda, C. E. F. (2019). Interface between management control systems and strategy and performance measures in a family business. *Revista Contabilidade & Finanças*, 30(79), 14-27. https://doi.org/10.1590/1808-057x201806490

Owolabi, F., Ajibolade, S., & Uwuigbe, U. (2021). The design and use of performance measurement innovations and organizational outcomes in Nigerian listed companies. *Problems and Perspectives in Management, 19*(2), 91–103. https://doi.org/10.21511/ppm.19(2).2021.08

Remahl, E. (2023). Strategy and MCS in start-ups. Case study: Using Simons' Levers of Control framework to better implement strategy for an early-stage start-up company working to innovate in the field of health technology (bachelor's thesis, Aalto University School of Business). https://www.aalto.fi

Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research methods for business students* (8th ed.). Pearson Education.

Simons, R. (1995). *Levers of control: How managers use innovative control systems to drive strategic renewal*. Harvard Business School Press.

Soltes, E. (2024). Interviewing Professor Robert Simons on strategy execution and levers of control. *Harvard Business School Online*. https://online.hbs.edu/blog/post/levers-of-control

APENDIX:

Exploring the Application of Simons' Levers of Control in Nigeria's Telecommunications Sector

Introduction

Dear Participant,

You are invited to participate in an academic research study Exploring the Application of Simons' Levers of Control in Nigeria's Telecommunications Sector.

Your responses will remain anonymous and confidential, and the survey will take approximately 15 minutes to complete. Participation is voluntary, and you may skip any question or withdraw at any time.

Thank you for your valuable input.

QUESTIONNAIRE

Section 1: Background Information:

Background Information	Classification
Position of Respondents	Senior Executive
	Strategic Manager
	Compliance officer
	Operations Manager
	Technical Staff
Years of Experiences	Less than 1 year
	1 – 3

	3 – 5
	More than 5 years
Type of Telecommunication Organization Worked for.	Mobile Network Operator
	Internet Service Provider
	Infrastructure Provider
	Regulator
	Others

Section 2: Belief Systems

Belief Systems	Rating
To what extent does your organization communicate and instill core values and mission statements that inspire strategic alignment?	Not at all
	Slight extent
	Moderate Extent
	Great Extent
	Very Great Extent
Best communication channels or activities used to promote organizational beliefs.	Training and development programs
	Corporate social responsibility (CSR)
	Employee recognition and award ceremonies
	Social media campaigns
	Digital communication platforms (e.g., intranet, internal WhatsApp/Slack groups)
	Corporate mission and vision statements
	Other (please specify): _____

Section 3: Boundary Systems:

Boundary Systems	Rating
How clearly are rules, risk boundaries, and ethical guidelines defined in your organization?	Not clear
	Slightly clear
	Moderately clear
	Clear

	Very clear
Which of the following boundary controls are actively used? (Select all that apply)	Regulatory compliance protocols
	Risk management policies
	Code of conduct
	Operational limits and "red lines"
	Other (please specify): _____
Challenges your organization faces in enforcing boundary systems.	Lack of awareness or understanding of organizational policies among employees
	Weak monitoring and enforcement mechanisms
	Limited resources (financial or human)
	Cultural diversity among staff
	Inconsistent enforcement of rules across different departments
	Pressure to meet performance targets
	Other (please specify): _____

Section 4: Diagnostic Control Systems

Diagnostic Control Systems	Rating
Which performance metrics are routinely monitored in your organization's strategy execution? (Select all that apply)	Financial performance (Revenue, profit margins)
	Network/service availability and quality
	Customer satisfaction and churn rates
	Compliance with regulatory standards
	Innovation / project milestones
	Other (please specify): _____
How effective are diagnostic systems in detecting deviations and triggering corrective actions? (Scale: 1-4)	Not effective
	Slightly effective
	Moderately effective

	Very effective

Section 5: Interactive Control Systems

Diagnostic Control Systems	Rating
How often does your organization engage in formal dialogue and learning forums to discuss strategic uncertainties? (Scale: 1-5)	Never
	Rarely
	Occasionally
	Frequently
	Very frequently
What forms do interactive controls take in your organization? (Select all that apply)	Cross-departmental strategy meetings
	Workshops with regulators and stakeholders
	Innovation or R&D project reviews
	Feedback sessions and collaborative problem-solving
	Other (please specify): _____
Example of where interactive controls have helped your organization adapt to change or uncertainty.	Regular management and strategy meetings
	Cross-departmental collaboration
	Use of customer feedback systems (surveys, call center data, social media)
	Introduction of new technologies (e.g., 5G, fintech services)
	Active engagement with regulators and government agencies
	Continuous monitoring of competitors' activities
	Other (please specify): _____

Section 6: Integration and Balance of Levers

Integration and Balance of Levers	Rating
How balanced is the use of the four levers of control (belief, boundary, diagnostic, interactive) in your organization?	Very unbalanced
	Somewhat unbalanced
	Moderately Balanced

	Balanced
	Very Balanced
In your view, which lever has the most significant impact on strategic success? (Scale: 1-4)	Belief Systems
	Boundary Systems
	Diagnostic Control Systems
	Interactive Control Systems
Why you believe this lever is most impactful	It aligns employees with the organization's vision and values
	It sets clear rules and limits
	It ensures accountability through performance monitoring
	It encourages collaboration and dialogue
	It motivates employees by linking actions to rewards or recognition
	It supports innovation and adaptability
	Other (please specify): _____

Section 7: Contextual and Sector-Specific Questions

Contextual and Sector-Specific Questions	Rating
How have Nigeria's regulatory frameworks influenced control systems in your organization?	They have strengthened compliance monitoring systems to ensure adherence to industry regulations.
	They have shaped boundary systems by defining ethical standards, data privacy, and acceptable business practices.
	They have increased reporting and documentation requirements, influencing diagnostic control processes.
	They have driven investment in new technologies (e.g., SIM registration databases, cybersecurity tools) to meet regulatory demands.

	They have encouraged greater interaction with regulators, influencing how management engages in strategic decision-making.
	They have introduced stricter penalties for non-compliance, making enforcement of control systems a priority.
	Other (please specify): _____
What infrastructural or market factors affect the design and effectiveness of control systems?	Level of network and technological infrastructure (e.g., 4G/5G coverage, fiber optics, base stations)
	Intensity of market competition
	Availability and quality of skilled workforce
	Customer demand patterns and service expectations
	Costs and availability of advanced technology platforms (e.g., CRM, billing, and monitoring software).
	Regulatory and policy environment
	Other (please specify): _____
What informal control mechanisms (e.g., organizational culture, peer pressure) support or conflict with formal levers of control?	Strong organizational culture
	Peer pressure & team norms
	Mentorship and informal guidance from senior employees
	Resistance to change due to entrenched habits or subcultures
	Informal communication channels (e.g., social networks, WhatsApp groups)
	Recognition and social approval from colleagues
	Other (please specify): _____

Section 8: Final Comments and Follow-Up Overall

Follow-Up Overall	Frequency
How effective do you find Simons' Levers of Control framework in explaining strategic management practices in your sector?	Not effective
	Slightly Effective
	Moderately effective
	Effective
	Very effective

Would you be willing to participate in a follow-up interview to discuss these findings in more detail?

Yes (please provide your email): _____

No

Thank you for participating in this research!