

# The Missing Middle: Algorithmic Control, Legitimacy, and Worker Resistance in the Nigerian Financial Sector

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## ABSTRACT

This research challenges techno-utopian discourses around automation by examining experiences, negotiations, and resistance to augmented algorithmic control in the highly regulated, underexamined Nigerian financial sector in the Global South.

Employing a qualitative, interpretivist methodology in Lagos, we conducted 49 semi-structured interviews with expert professionals and 8 managers across two distinct entities, namely a licensed commercial bank and a Bureau de Change (BDC), between February and May 2024. Data were analysed using Braun and Clarke's reflexive thematic analysis.

Contrary to assumptions of post-hierarchy, participants regarded dashboards and risk-scoring systems as manifestations of neo-hierarchy, serving as proxy management that is both Taylorist in operation and algorithmic in design, sanctioned by the Central Bank of Nigeria's regulatory intensity and fiduciary requirements. Control failures arose not from excessive monitoring but from insufficient elucidation, resulting in information disparity, a lack of feedback, and preemptive apprehension.

The resistance was infrapolitical, as it was neither obvious nor explicit, and took three forms: non-cooperation through analogue manipulation, gaming through data manipulation and use of clients, and negotiation through collaborative algorithmic interpretation. Notably, both frontline staff and managers rejected both full automation and full autonomy, converging on a preference for augmentable control.

The theory of this convergence is the missing middle: an explanation is necessary for the relationship contract, including human feedback and contestation learning. We extend the Ouchi (1979) taxonomy to demonstrate how bureaucratic and clan logic exist simultaneously in algorithmic workspaces.

**Keywords:** algorithmic control, augmentation, resistance, neo-hierarchy, financial sector, Nigeria, feedback vacuum, missing middle

## INTRODUCTION

The integration of automation and artificial intelligence in the work environment has generated strong attention to efficiency, productivity and technological competence. Human-machine systems that use algorithmic systems to support, manage, and control human work processes are viewed as augmented systems and have influenced decision-making in logistics, manufacturing, finance, and healthcare (Dégallier-Rochat et al., 2022). Such systems depend on integrative control design that aligns individual behaviour with organisational objectives through point-of-production digital technologies, workplace applications, and self-learning algorithms that monitor and control labour. Control has been conceptualised through market, bureaucratic and clan mechanisms operating under different information and societal assumptions (Ouchi, 1979; Håkansson & Lind, 2004; Monteiro & Adler, 2022).

Results of automated control have been inconsistent. Intelligent systems can enhance efficiency and precision and minimise manual work (Haight & Kecojevic, 2005), but effectiveness depends on implementation and employee attitude. Management research has overemphasised efficiency and implementation while neglecting organisational and human dimensions (Anwar & Graham, 2020; Barricelli et al., 2019). Over 95% of papers in

leading management journals offer no substantive discussion of technological impact on organisations (Orlikowski & Scott, 2008), and automation is often judged only by efficiency, effectiveness and safety. However, Rahimnia and Karimi Mazidi (2015) find organisational control reduces non-cyberloafing while human control reduces trust in pursuit of performance, whereas algorithmic control increases trust without improving performance. Automation can also fail or be rejected as workers reclaim discretion (Lammi, 2020). Haight (2007) argues optimal control lies between full automation and full human intervention because automation offers consistency without judgement.

Research on the disciplining role of automation comes mainly from labour studies and critical sociology, focused on gig employment in the Global North (Kellogg et al., 2020; Wood et al., 2019) or from historical and pre-AI theoretical perspectives (Lei & Kim, 2024; Schneider & Vipond, 2023). This leaves augmentation as both an efficiency tool and control mechanism underexamined, particularly for tightly controlled knowledge labour in the Global South. Recent work on African gig workers shows algorithmic oversight does not erase autonomy but produces concealed narratives of defiance (Anwar & Graham, 2020). Knowledge workers contest imposed algorithms through non-cooperation, gaming, and negotiation, described by Mumby et al. (2017) as collective infrapolitics ranging from collective interpretation of cryptic performance measures to sabotage (Kellogg et al., 2020). A related condition is feedback vacuum (Bronowicka & Ivanova, 2020), where performance instructions flow unidirectionally with no institutional mechanism for clarification or contestation. Unlike over-surveillance, which creates over-visibility, feedback vacuum creates under-explanation through unidirectional communication of alerts and risk scores, without opportunity to question them, and through opaque logic that prevents understanding of data aggregation or evaluation timing, producing frustration and anticipatory anxiety (Rahman, 2021).

Kellogg et al. (2020) argue that algorithms supply fine-grained, objective data capable of overcoming bureaucratic flaws, yet the drive for objectivity often reproduces the problems it intended to resolve. This raises the question of whether reintroducing human supervisors into algorithmic control architectures improves effectiveness and reflects a broader shift toward augmentation that blurs the human-machine distinction. Raisch and Krakowski (2021) describe collaborative implementation in which humans and algorithms compensate for each other's weaknesses: algorithms handle structured, data-heavy tasks while humans use heuristics, in a reciprocal dynamic in which managers define algorithm behaviour and algorithm output changes managerial practice.

This study applies that lens to Nigeria's financial sector, a critical context for three reasons. First, regulatory density, as financial institutions face simultaneous imperatives of efficiency, risk management and explainability (Arner et al., 2017). Second, information intensity and discretionary judgement, as core activities such as credit adjudication, fraud detection, and trading oversight require expert judgement under uncertainty, creating observable sites of human-machine negotiation and resistance (Kellogg et al., 2020). Third, sector-wide adoption has uneven outcomes: despite substantial investment, many financial organisations struggle to translate digital systems into control effectiveness because of formalism, legacy integration, and cultural inertia (Serebryakova & Fatkhullin, 2024). Survey evidence illustrates the gap. An OpenText-commissioned survey reported by Manjaly et al. (2021) found that 80% of respondents recognised the potential benefits of AI, indicating awareness rather than deployment maturity, while many institutions remain early-stage and struggle to translate AI capabilities into reliable, auditable workflows (Financial Stability Board, 2022). This research reevaluates augmented systems not as impartial technological devices but as entities embedded within and perpetuating organisational power dynamics, to provide an accurate perspective on workplace automation that respects human agency without disregarding technology.

This study's research question asks: How do frontline and management employees in the Nigerian financial sector experience, negotiate, and resist augmented forms of algorithmic control?

This study's results are organised according to Kellogg et al.'s (2020) taxonomy of algorithmic resistance, which includes noncooperation, gaming, and negotiation. It allows an exploration not only of what is controlled, but of how workers resist control and where these processes interact.

Consequently, the "missing middle" concept refers to the relational gap that exists between complete automation and full human autonomy. Based on the theories of Raisch & Krakowski (2021) and Ouchi (1979),

the "missing middle" concept refers to augmentable control. Augmentable control maintains algorithmic consistency for regulation and fiduciary responsibility while also being institutionally structured, so it is explainable and contestable. The missing middle refers to relational contracts with three key requirements:

- Explanation of decisions at the point of control: the system should provide rationales in addition to scoring the flags and blocks.
- Real-time feedback: escalation tickets are covered by a service-level agreement for human review, closing the gap.
- Contestation as learning: overrides and data disputes need to be seen not as deviant behaviour but as learning data that helps models evolve.

## METHODOLOGY

### Research Design and Philosophical Stance

This research employs a qualitative, interpretivist framework (Dharamsi & Charles, 2011; Myers, 2019). An interpretivist stance is appropriate because augmented systems are experienced not as neutral technical artefacts but as socially constructed control relations whose meaning is negotiated between workers, managers and algorithms in situ. The aim is to produce a thick, contextualised description of how control is enacted and contested, rather than to measure variance or test causal hypotheses.

### Research Context

The study focuses on the financial sector in Lagos, Nigeria. Financial institutions were selected as a critical case for three reasons: (1) regulatory density under the Central Bank of Nigeria (CBN) and the Banks and Other Financial Institutions Act (BOFIA); (2) information intensity and discretion in tasks such as credit review, fraud detection and trading oversight; and (3) sectoral variation in outcomes despite heavy investment in digital control infrastructure (Serebryakova & Fatkhullin, 2024).

Two organisations were selected for contrast and were anonymised:

Financial Institution A- a licensed commercial bank with a formalised, enterprise-grade digital control infrastructure (core banking system, automated risk scoring, performance dashboards).

Financial Institution B - a licensed Bureau de Change (BDC) in Lagos dealing in high-volume, compliance-sensitive foreign exchange transactions, characterised by semi-formal controls and high regulatory scrutiny.

Both organisations use algorithmic systems to track, evaluate and direct knowledge work, but differ in formalisation, scale and regulatory exposure.

### Sampling and Participants

Participants were recruited through convenience sampling based on three inclusion criteria: (1) current employment in financial services in Lagos between February and May 2024; (2) daily interaction with digital control systems in a knowledge-intensive or compliance-sensitive role; and (3) a minimum of two years' tenure in that role.

The study included 49 participants: 41 expert professionals and 8 managers. Expert professionals in this context are those in the financial sector with significant experience, skills, and knowledge, enabling them to provide professional guidance and advice. The research utilised a semi-structured interview format, with 31 interviews conducted face-to-face and 18 through video conferencing. Each interview lasted 40 to 60 minutes.

### Ethics and Data Collection

Ethical approval was obtained from the University of South Wales. The study adhered to Social Research Association (SRA, 2017) guidance and Nigerian workplace research norms. The researchers negotiated

organisational access separately with management and staff. Bank management was informed that the study focused on staff challenges with digital systems. The selected participants were personally approached through convenience sampling. No manager was informed about who participated in the research, when, or how many participants were from their unit. For the BDC participants, none were interviewed during trading hours; interviews were conducted off-site or via video.

All participants received information sheets, gave written informed consent, and were guaranteed that no individual data would be shared with management and that findings would not expose them to retaliation. Within the context of local organisational ethics in the selected organisations, the researcher-maintained respect for intellectual property, participants, confidentiality and privacy, and honesty and integrity throughout the study. Due to disclosures of evasion practices, data were anonymised at source; no photographs or screen captures were taken, and pseudonyms (e.g., Expert professional 1-41: EP1-EP41 and Manager 1-8: M1-M8) were used throughout. Organisational names are pseudonymised. Participants were informed of their right to withdraw at any time.

Data collection took place between February and May 2024. The researcher managed familiarity with the Nigerian financial sector through explicit voluntariness statements and reflexive memoing on power dynamics.

Interviews were conducted one person per day to allow for transcription and reflection. Audio recording was conducted with consent. Audio recordings were saved to an encrypted drive rather than cloud auto-sync. Transcripts were anonymised within 48 hours; however, only the anonymised data was shared with the supervisor to ensure the 20% check. Following the Nigeria Data Protection Act 2023, the audio recordings were retained for 12 months, while the anonymised transcriptions were saved for 3 years.

## Data Analysis

The research data were analysed using reflexive thematic analysis (Braun & Clarke, 2021). The researcher used a reflexive method that involves identifying themes as patterns of shared meaning, generated around an organising idea at the intersection of data, theory, and researcher subjectivity.

Unlike the linear approach, the method used a recursive process which entailed six stages of analysis. The process began with familiarisation, in which the researchers repeatedly read the transcripts and listened to the audio. The second stage involved systematic coding of the whole data set using NVivo 14 to capture both the semantic and latent meaning of the data. The next stage involved generating preliminary themes from clusters of the coded material. This was followed by theme definition and naming, and finally the writing up of the results.

We used an inductive coding process, guided by the sensitising concepts developed by Kellogg et al. (2020) and Ouchi (1979). Altogether, 147 initial codes were developed (e.g., "proxy management using dashboard", "afraid that flagging would ruin your month", "blocking dispensers"). The initial codes were then collapsed to four possible themes.

## Reflexivity and Positionality

In line with reflexive TA quality criteria, the researcher foregrounds researcher reflexivity rather than reliability.

The author is a Nigerian researcher with prior familiarity with the Lagos financial sector. This insider position facilitated access, rapport, and understanding of CBN/BOFIA compliance language, but also carried risks of assumed shared meaning and overlooking the familiar. To manage this, I maintained a reflexive journal from February to August 2024.

The journal entries were made after the interview and during the coding process, and revolved around various issues such as the emotions that the researcher felt while discussing anxiety and precarity. The difficulties that arose from power dynamics experienced by the male Nigerian researcher while interviewing junior staff members who feared possible backlash from the interview. Situations where the researcher's experience could

affect their interpretations, especially concerning neo-hierarchy, and the current discussion about how much context to include without compromising participants' anonymity. Earlier memo stated: "EP2's line 'you just hope for the best' stuck in my head. It was first coded as frustration, but upon listening again it is clearly anticipatory anxiety concerning career repercussions. Am I sanitising this?"

Because interviews were conducted one at a time per day, I could transcribe within 48 hours and then memo before the next interview. Transcription was done anonymously and coded (EP1-41, M1-8). No member checking was done to avoid further burden on participants.

In this method, the researcher's subjectivity becomes a resource. Inter-rater reliability and saturation are not claimed in a positivist manner. Meaning sufficiency was the researcher's objective: the themes were sufficiently rich and nuanced to answer the research question (Braun & Clarke, 2021).

## FINDINGS

The findings were organised around the research question, and four themes emerged:

### Algorithm as Neo-Hierarchy, Not Post-Hierarchy

Many frontline participants believed augmented systems had not dismantled hierarchy but had instead digitised it. Algorithms were described as proxy supervisors governing presence, pace, and compliance.

*"It feels like you are carrying your monitor around with you in a device" (EP 11)*

*"These algorithms are just managers in disguise" (Expert professional 15)*

Some of the managers also share the same view

*"...as you can see the algorithms are used to monitors the workers when they are working for us and make sure they do not misuse our resources and time" (M3)*

Crucially, this hierarchy felt incomplete as participants distinguished between the consistency of algorithmic control and the contextual judgement exercised by human actors. Although the system could capture logins, timestamps, and transaction blocks, it could not capture more tacit dimensions such as intent, affective states, and informal coordination.

*"They cannot read our moods or actions we take without touching the computer" (EP 4)*

In contrast to the gig-work contexts Kellogg et al. (2020) examined, control within banking was morally legitimised through appeals to regulatory necessity. Participants simultaneously recognised the presence of control while rationalising its legitimacy, thereby complicating outright resistance. This engenders a neo-hierarchical form in which Taylorist control is not dismantled but rather re-mediated through dashboards and risk flags.

### Experienced Information Asymmetry and Anticipatory Anxiety

The second dimension concerns the experience of control as information asymmetry. Two interrelated deficiencies emerged, namely the absence of bidirectional feedback and the opacity of underlying data logics.

First, frontline participants characterised communication as unidirectional, whereby system flags and prompts were issued without corresponding mechanisms for clarification.

*"You are just there and nothing coming as a way of clarification... you just hope for the best" (Expert professional 2)*

This differs from technical control, where rules are made visible. In this instance, rules are embedded within self-updating scoring models.

Second, such opacity engendered anticipatory anxiety rather than mere frustration. Participants reported limited understanding of how performance aggregates were computed or when evaluative assessments were undertaken.

*"The worst is that people are rewarded and punished every now and then based on statistics... you don't even know how the data is computed and when" (Expert Professional 3)*

*"Fearing that one thing has already ruined your week or month or even your career" (Expert Professional 2)*

Delayed managerial communication further compounded this anxiety. As one participant observed, system-flagged escalations would often remain unaddressed *"for hours and sometimes days before you get a reply"* (Expert Professional 3). The control failure, therefore, resides not in over-surveillance but in under-explanation, thereby producing what Bronowicka & Ivanova (2020) conceptualise as a feedback vacuum.

### Contested Terrain — Practices of Resistance

Participants' accounts show that control was not totalising. Many of them highlighted cases where algorithmic recording was disruptive, showing itself through noncooperation.

*"I will then block the cash dispenser manually... the machine will ... not dispense cash" (Expert professional 27)*

Further finding revealed that employees exploited weaknesses in situations involving embodied practices that could not be captured within the digital system. This was accomplished by leveraging system downtime to coordinate issues unrelated to work, and, at times, by halting automated processes when perceived danger signals were judged to be false positives. This tendency can be attributed to participants' characterisation of the system as:

*"ever-present but not all that covering what you do all time" (Expert Professional 17).*

This reflects a transition from eluding physical managers to bypassing digital blind spots.

The second practice involved challenging the legitimacy of the outputs produced by the algorithm. This practice was common in performance dashboard review.

*"Contestation of data is a normal thing here... we just do it as part of our own way of discrediting the system" (Expert Professional 2)*

*"we have to contest the data to make the organisation think twice about the particular section giving us unfavourable ratings...we just do it as part of our own way of discrediting the system..." (Expert professional 9)*

Participants additionally recounted synchronised, discreet strategies, including urging clients to submit official complaints regarding particular procedural metrics to compel management evaluation.

*"We can decide that everyone should ask their clients to complain... normally when there is a huge complaint like that, the management always acts" (Expert Professional 2)*

This corresponds with the concept of collective infrapolitics proposed by Mumby et al. (2017), in which resistance functions indirectly, facilitated by avenues that maintain a facade of legality.

The third practice was that of collective decision-making and negotiation. Without adequate transparency, workers created a common "algorithmic imaginary" (Möhlmann & Zalmanson, 2017) in which they compared flags and scores to understand the underlying algorithmic logic.

*"The person will share it with others so we can compare" (EP Expert Professional 1)*

Where shared perceptions pointed to systemic disadvantage, staff collectively submitted representations to management.

*"we had to come together and send a representation to the management" (Expert professional 1)*

In particular, management responded by strengthening the system, marked by greater opacity and more frequent updates, creating a vicious cycle of confrontation instead of resolving the dispute.

*"making sure the systems are updated ... vague to the workers" (Manager 4)*

*"...they are really without much choices than to conform to the rules of the new system of control..." (Manager 7)*

### **Convergence Toward Augmentation — The Missing Middle**

Despite divergent positions, some frontline and managerial participants converged on rejecting both full automation and full autonomy. Managers emphasised fiduciary and regulatory risk, noting that expert professionals:

*"can't be left to be so independent that they can just log in to our systems with sensitive information and do whatever"*

Workers emphasised the need of contextual judgment.

*"There are times people should be allowed to do their work how it suits them... but because of the importance and the risks around it, he may need another person with him" (Expert Professional 13)*

Notwithstanding, acceptance of supervision was dependent on it being clear, timely, and constructive rather than solely punitive:

*"There should be control and we should be made to work for the organisation that pays our wages but it is not supposed to be one-sided" (Expert Professional 11)*

Thus, participants described a preferred model of augmented control where algorithmic consistency remains open to human questioning and feedback. This intersection aligns with Raisch & Krakowski (2021) on complementarity in augmentation, where algorithms process and monitor data, while humans maintain heuristic reasoning and feedback. Participants preferred the augmented control model, where the consistency provided by the algorithms remains open to human feedback and questioning.

## **DISCUSSION**

The results of this research highlight the importance of merging human experience with algorithms in the finance industry. By analysing experts' views and opinions, this research highlights the opportunities and challenges of algorithms in the finance industry. The findings indicate that workers in the financial sector view such advanced algorithms not as a simple structure but rather as a hierarchy. This digital supervisor manages various aspects, including presence and compliance, without considering context. This system is considered to be opaque and generates anticipatory anxiety. In addition, workers subtly resist by exploiting system weaknesses and manual overrides to disrupt data collection and question dashboard information.

The results contradict the techno-utopian view that algorithmic enhancement will automatically flatten hierarchies within organisations. Indeed, many front-line participants viewed their engagement with algorithmic systems as an exercise in 'proxy management', where dashboarding, risk scoring, and time-stamped logging took over tasks previously done by human managers. This adds to the empirical case against the post-bureaucratic idealism criticised by Monteiro & Adler (2022), which assumes that digital technology inevitably destroys the hierarchy of control.

According to Ouchi (1979) classification of organisational control, the findings collected from the Nigerian commercial bank and BDC do not clearly fall within the scope of either market control or clan control. Instead, they suggest the emergence of digitally re-inscribed bureaucratic control. The four control processes identified by Flamholtz et al. (1985) remain relevant to this scenario but have shifted from human line managers to algorithm-based processes. The logic of bureaucracy remains the same, even as the tools used for it have evolved. This view aligns with Lorenz et al. (2021), who describe algocracy as an “ideal type” in which professional bureaucracy is computerised by eliminating uncertainty in the decision-making process. The same is proven by Lammi (2020), who demonstrates how the scope of discretion for workers becomes narrower due to algorithms, which are referred to as “technical self-control,” thus proving that the algorithms operate as tools of continuity rather than disruption.

However, what sets this context apart from many of those described in the algorithmic management literature is the issue of legitimacy. In contrast to the illegitimacy and exploitation commonly reported in relation to the use of algorithms on gig economy platforms (Kellogg et al., 2020), control within the financial industry was legitimized by the regulatory intensity of the CBN, BOFIA, and the fiduciary nature of the systems used. Individuals were expected to understand that one could not just act as they wished within a system of such consequence. The findings point to a dual consciousness in which awareness of surveillance was reconciled with its legitimation as necessary. This internal tension helps to account for the predominance of infrapolitical modes of resistance over overt opposition among participants.

Theoretically, the study demonstrates that in highly regulated knowledge work, algorithmic control is legitimated through a dual register of technical objectivity and regulatory discourse. This produces a configuration best theorised as neo-hierarchy that is Taylorist in function, algorithmic in form and regulatory in justification, constituting a rearticulation rather than a transcendence of bureaucratic control.

The study's second main finding is that algorithmic control problems arise from under-explanation, not over-surveillance. Two such problems emerged: unidirectional communication without clarification channels and opacity in scoring logic. The combination of both these issues caused not only frustration, but also something else the participants called anticipation anxiety: “fearing that one thing has already ruined your week or month or even your career.” Rahman's longitudinal research (2020, 2021) on freelancers on labour platforms is one such example, showing how an “invisible cage” of algorithms creates a situation where workers have no idea what the evaluation criteria are, making them paranoid and causing even high performers to withdraw. Rahman (2021) also finds that high levels of algorithmic opacity and rigidity correlate with heightened worker anxiety.

Furthermore, this research adds to Bronowicka & Ivanova (2020) idea of a feedback vacuum, as well as Barricelli et al. (2019) observation that automation is judged for efficiency rather than user-friendliness. It also challenges Kellogg et al. (2020) notion that algorithms make up for bureaucratic inefficiencies. In the current situation, however, objectivity has reproduced a common bureaucratic flaw: extreme formalisation that leads to inefficiency (Serebryakova & Fatkhullin, 2024). Workers cannot be consistent if they do not understand how data is generated and evaluated. The organisational example drawn from UBS is reflected in the everyday reality found within our micro ethnography. Indeed, escalation tickets have not been attended to for considerable stretches of time, often hours or days before any human intervention occurred, placing workers in a state of constant uncertainty, which they described as hoping for the best. This supports Haight (2007) that an effective form of control exists between automatic performance and complete human supervision. The results indicate that the problem does not stem from a lack of information availability but from a lack of two-way human interpretation that can provide context for automated warnings.

Indeed, the study advanced understanding of how control is negotiated in a setting where noncooperation poses significant risks to one's profession. Whereas Kellogg et al. (2020) define noncooperation, gaming, and resistance as distinct strategies workers use within the algorithmic imaginaries' framework, the study's findings show that the same strategies persist, albeit in a new form.

Noncooperation worked by analogue slippage. It was not a matter of refusing cooperation directly, but of exploiting constraints in digital data collection. These included blocking dispensers, exploiting downtime, and using authorised overrides when flags were considered false. That systems can always be seen and yet always

be partial in their coverage highlights one of the central paradoxes of augmentation: the attempt to close existing gaps will at the same time create new ones. In this way, Lammi (2020) longitudinal understanding of failure is reframed into practice.

Gaming emerged as a legitimate challenge. Unlike the falsification reported in lower-status service employment by Kinnie et al. (2000), the banking employees questioned the validity of data presented on the dashboard. They mobilised their clients to bring about a management review of the matter. This behaviour helps maintain compliance in form while undermining metric power, and it resembles Mumby et al.'s (2017) idea of collective infrapolitics.

The algorithmic imaginary in negotiation arose when formal explainability was lacking. Flags and performance scores were used collectively to form a shared understanding of how the algorithm worked, similar to what Möhlmann & Zalmanson (2017) describe in relation to collective sense-making. If systematic discrimination became evident, it was turned into formal representation.

The manager's reaction of making vagueness more intense and speeding up the rate of updates is an example of such an antagonistic cycle. Fortification not only failed to alleviate vagueness but instead reinforced it, lending credence to Lei & Kim (2024) claim that increasing something without actual participation produces disciplinary effects well documented in critical sociology.

Nevertheless, the most significant finding is convergence, not divergence. Despite their diverging concerns and motives, neither managers nor employees would accept full automation and full autonomy. The participants' view aligns with the automation-augmentation paradox described by Raisch & Krakowski (2021), but through the lens of relational contract theory. They insisted on transparency, timeliness, and reciprocity of the control, not its annulment.

The workers were not contesting the control itself: "We should be made to work for the organisation that pays our wages", but rather its lack of symmetry. The form of control they favoured was enhanced control, where algorithmic objectivity can be retained while being open to criticism through dialogue and learning. Thus, algorithms can be justified only to the extent that they can be critiqued.

This represents the missing middle in workplace design. Efficiency-related models generally swing toward the extremes of complete automation and pure discretion, neglecting the middle ground that addresses legitimacy, trust, and shared understanding. For this reason, sustainable augmentation relies not on technology but on critique through institutionalised channels.

## Implications

In theory, this paper reconceptualises augmented systems using Ouchi's (1979) approach as both bureaucratic and clan-like. This is because, while they are bureaucratic in their use of measures and rules for monitoring, they must be seen as legitimate; to do so, they require clan-like forms of socialisation and trust. This dual nature implies that Ouchi (1979) original typology, which clearly distinguishes bureaucracy and clan logics, must be revisited in algorithmic environments, where legitimacy seems to derive from simultaneity rather than difference between these two logics.

In practice, the findings point to three design principles particularly relevant for banks operating in regulatory-dense contexts such as Nigeria. First, embed explainability and contestation channels directly into dashboard architecture as core design features, rather than as afterthoughts appended once systems are already in use. Second, organisations need to ensure an in-the-loop feedback process through a service level agreement for risk escalations, which will help reduce the anticipatory anxiety caused by management's inability to provide clear responses to workers. Third, override logs need to be reframed from signs of deviant behaviour to learning data that will improve system accuracy through continued model improvement.

In terms of policy, regulatory agencies such as the Central Bank of Nigeria and similar agencies worldwide need to broaden their mandate beyond efficiency and auditability alone. The regulatory framework needs specific provisions on algorithmic due process in internal controls. Including such clauses will institutionalise

the relational aspect of algorithmic control that emerges from this research. This will ensure that the efficiency gains realised are not achieved at the cost of procedural justice and workers' legitimacy.

## LIMITATIONS AND FUTURE RESEARCH

This study has limitations that should be considered when interpreting the results. First, the research was conducted in only two organisations in the Nigerian finance industry: one commercial bank and one BDC. Although selecting two financial institutions in these case study firms allowed a valid comparison of the two control systems, it would be inappropriate to extend this finding to other financial firms, other regulatory regimes, or other knowledge-intensive industries where algorithms are used differently. Subsequent research should broaden the empirical scope to encompass diverse organisational settings operating under varying regulatory regimes, to ascertain whether the neo-hierarchical configuration and the missing middle observed here reflect a broader structural pattern or a context-specific outcome shaped by the particular regulatory density characteristic of the Central Bank of Nigeria.

Second, the use of a sole investigator in data gathering, transcription, and coding, despite the use of reflective approaches and the review by the supervisor, still implies that an interpretive perspective influences the interpretation of the results. The use of collaborative coding among several investigators or triangulation with quantitative indicators such as the frequency of overrides and resolution times of escalations will enhance the credibility of the theme structure above.

Finally, this study focused primarily on frontline professionals and first-line managers, with limited attention to senior executives and system designers who shape the architecture of algorithmic control from a more distal vantage point. Future research examining how these design and governance decisions are made, and whether frontline participants' awareness and middle management's articulated information inform them, could close the loop between worker experience and organisational design and further the practical viability of the augmented control model proposed here.

## CONCLUSION

This study examined how workers in Nigeria's financial sector experience and contest augmented algorithmic control, challenging the assumption that automation is either liberating or neutral. Instead, augmented systems function as a neo-hierarchy that is Taylorist in logic, algorithmic in form, and legitimised through regulatory necessity rather than dissolving oversight altogether.

Control failures stemmed not from over-surveillance but from under-explanation. Opaque, unidirectional systems generated anticipatory anxiety and pushed resistance into infrapolitical channels such as analogue workarounds, contested dashboard data, and collective sense-making. These behaviours transform Kellogg et al. (2020) framework of non-cooperation, gaming, and negotiation into one appropriate for a highly regulated environment where refusing cooperation has professional consequences.

Perhaps most significantly, front-line workers and management aligned in rejecting both total automation and total autonomy. In both cases, they expressed a desire for control that is understandable, timely, and interactive. This important middle ground reconceptualises augmentation as a relational contract.

From a theoretical perspective, the research expands the Ouchi (1979) typology by showing that bureaucratic and clan logic can exist side by side in an algorithmically mediated context, rather than functioning as two different forms. Bureaucratic measurement continues to function but is underpinned by the mechanism's clan-logic characteristics.

From an applied perspective, and in terms of public policy, the evidence suggests a need for a strategy centred on algorithmic due process. This would entail building mechanisms for explanation, review, and appeal into the design of the control systems used. It remains to be seen whether this pattern would emerge elsewhere, over time, and in remote system designers.

## REFERENCES

1. Arner, D. W., Zetsche, D. A., Buckley, R. P., & Barberis, J. N. (2017). Fintech and Regtech: enabling innovation while preserving financial stability. *Georgetown Journal of International Affairs*, 18, 47–58. <https://doi.org/10.1353/gia.2017.0036>
2. Anwar, M. A., & Graham, M. (2020). Between a rock and a hard place: Freedom, flexibility, precarity and vulnerability in the gig economy in Africa. *Competition & Change*, 25(2), 102452942091447. <https://doi.org/10.1177/1024529420914473>
3. Barricelli, B. R., Virpi Roto, Clemmensen, T., Campos, P., Lopes, A., Gonçalves, F., & Abdelnour-Nocera, J. (2019). *Human Work Interaction Design. Designing Engaging Automation*. Springer.
4. Braun, V., & Clarke, V. (2021). Braun, V. and Clarke, V. (2021) thematic analysis a practical guide. Sage, London. - References - scientific research publishing.
5. Bronowicka, J., & Ivanova, M. (2020). Resisting the algorithmic boss: Guessing, gaming, reframing and contesting rules in app-based management. *SSRN Electronic Journal*, 8(2). <https://doi.org/10.2139/ssrn.3624087>
6. Dharamsi, S., & Charles, G. (2011). Ethnography: Traditional and criticalist conceptions of a qualitative research method. *Canadian Family Physician Medecin de Famille*
7. Dégallier-Rochat, S., Kurpicz-Briki, M., Endrissat, N., & Yatsenko, O. (2022). Human augmentation, not replacement: A research agenda for AI and robotics in the industry. *Frontiers in Robotics and AI*, 9(5). <https://doi.org/10.3389/frobt.2022.997386>
8. Financial Services Authority. (2012). Final Notice: UBS AG. *Financial Services Authority*. <https://www.fca.org.uk/publication/final-notices/ubs-ag-2012.pdf>
9. Financial Stability Board. (2022). *Artificial intelligence and machine learning in financial services*.
10. Flamholtz, E. G., Das, T. K., & Tsui, A. S. (1985). Toward an integrative framework of organizational control. *Accounting, Organisations and Society*, 10(1), 35–50. [https://doi.org/10.1016/0361-3682\(85\)90030-3](https://doi.org/10.1016/0361-3682(85)90030-3)
11. Haight, J. M. (2007). Automated control systems do they reduce human error and incidents? *Professional Safety*, 52(5), 119–126.
12. Haight, J. M., & Kecojevic, V. (2005). Automation vs. human intervention: What is the best fit for the best performance? *Process Safety Progress*, 24(1), 45–51. <https://doi.org/10.1002/prs.10050>
13. Håkansson, H., & Lind, J. (2004). Accounting and network coordination. *Accounting Organisations and Society*, 29(1), 51–72. [https://doi.org/10.1016/s0361-3682\(02\)00058-2](https://doi.org/10.1016/s0361-3682(02)00058-2)
14. Kellogg, K. C., Valentine, M. A., & Christin, A. (2020). Algorithms at Work: The New Contested Terrain of Control. *Academy of Management Annals*, 14(1), 366–410.
15. Kinnie, N., Hutchinson, S., & Purcell, J. (2000). “Fun and surveillance”: The paradox of high commitment management in call centres. *The International Journal of Human Resource Management*, 11(5), 967–985. <https://doi.org/10.1080/095851900422375>
16. Lammi, I. J. (2020). Automating to control: The unexpected consequences of modern automated work delivery in practice. *Organisation*, 3(2), 135050842096817. <https://doi.org/10.1177/1350508420968179>
17. Lei, Y.-W., & Kim, R. (2024). Automation and Augmentation: Artificial Intelligence, Robots, and Work. *Annual Review of Sociology*, 50(8). <https://doi.org/10.1146/annurev-soc-090523-050708>
18. Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. *International Journal of Intercultural Relations*, 9(4), 289–331. [https://doi.org/http://dx.doi.org/10.1016/0147-1767\(85\)90062-8](https://doi.org/http://dx.doi.org/10.1016/0147-1767(85)90062-8)
19. Lorenz, L., Meijer, A., & Schuppan, T. (2021). The algocracy as a new ideal type for government organisations: Predictive policing in Berlin as an empirical case. *Information Polity*, 26(1), 71–86. <https://doi.org/10.3233/ip-200279>
20. Manjaly, J., Varghese, R. M., & Varughese, P. (2021). Artificial Intelligence in the Banking Sector – A Critical Analysis. *International Journal of Management*, 8(S1-Feb), 210–216. <https://doi.org/10.34293/management.v8is1-feb.3778>
21. Monteiro, P., & Adler, P. S. (2022). Bureaucracy for the 21st Century: Clarifying and Expanding Our View of Bureaucratic Organisation. *Academy of Management Annals*, 16(2), 427–475.
22. Mumby, D. K., Thomas, R., Martí, I., & Seidl, D. (2017). Resistance Redux. *Organisation Studies*, 38(9), 1157–1183. <https://doi.org/10.1177/0170840617717554>

23. Myers, M. D. (2019). *Qualitative Research in Business & Management* (3rd ed.). Sage Publications Ltd.
24. Möhlmann, M., & Zalmanson, L. (2017). Hands on the wheel navigating algorithmic management and Uber drivers' autonomy. In proceedings of the international conference on Information Systems (ICIS) (pp. 10-13). - references - scientific research publishing.
25. Nicolini, D. (2012). Practice theory, work, and organisation: An introduction. Oxford University Press.
26. Orlikowski, W. J., & Scott, S. V. (2008). Sociomateriality: Challenging the Separation of Technology, Work and Organisation. *The Academy of Management Annals*, 2(1), 433–474.  
<https://doi.org/10.1080/19416520802211644>
27. Ouchi, W. G. (1979). A Conceptual Framework for the Design of Organisational Control Mechanisms. *Management Science*, 25(9), 833–848. <https://doi.org/10.1287/mnsc.25.9.833>
28. Pink, S., & Morgan, J. (2013). Short-term ethnography: Intense routes to knowing. *Symbolic Interaction*, 36(3), 351–361.
29. Rahimnia, F., & Karimi Mazidi, A. R. (2015). Functions of control mechanisms in mitigating workplace loafing; evidence from an Islamic society. *Computers in Human Behaviour*, 48(7), 671–681.  
<https://doi.org/10.1016/j.chb.2015.02.035m>
30. Rahman, H. A. (2020). Invisible cages: how opaque control tactics influence worker behaviour. *Academy of Management Proceedings*, 2020(1), 20920.  
<https://doi.org/10.5465/ambpp.2020.20920abstract>
31. Rahman, H. A. (2021). The Invisible Cage: Workers' Reactivity to Opaque Algorithmic Evaluations. *Administrative Science Quarterly*, 66(4), 945–988. <https://doi.org/10.1177/00018392211010118>
32. Raisch, S., & Krakowski, S. (2021). Artificial Intelligence and Management: The Automation-Augmentation Paradox. *Academy of Management Review*, 46(1). <https://doi.org/10.5465/2018.0072>
33. Schneider, B., & Vipond, H. (2023). The Past and Future of Work: How History Can Inform the Age of Automation. *SSRN Electronic Journal*, 10(4). <https://doi.org/10.2139/ssrn.4643947>
34. Serebryakova, T. Y., & Fatkhullin, E. R. (2024). Problems of Development of Control Models and Mechanisms in Modern Ecosystems. *Accounting Analysis Auditing*, 5(2).  
<https://doi.org/10.26794/2408-9303-2024-11-3-32-46>
35. Thornberg, R., & Charmaz, K. (2014). Grounded theory and theoretical coding. *The SAGE Handbook of Qualitative Data Analysis*, 5(1), 153–169. <https://doi.org/10.4135/9781446282243.n11>