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CRACKING THE BLACK BOX: UNLOCKING THE POWER OF EXPLAINABLE AI IN INTERNAL AUDITING

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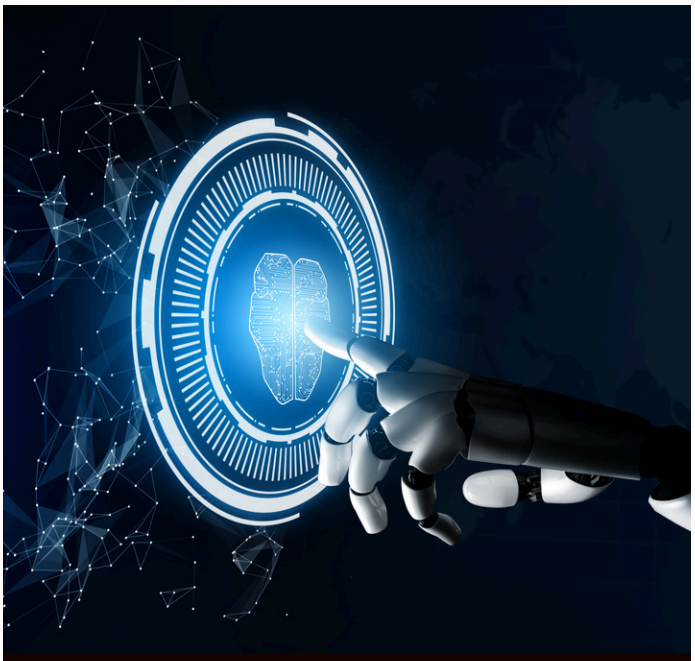
Artificial Intelligence (AI) is rapidly reshaping business practice across industries. However, one of the most heavily regulated professions, internal auditing, is still treading cautiously. In an era of digital disruption, the internal audit function is under pressure to evolve beyond the traditional checklists and sampling techniques. Explainable Artificial Intelligence (xAI) refers to a branch of AI developed to enhance transparency by making decision-making processes more understandable and interpretable. In contrast to opaque black-box models, xAI offers interpretable, traceable, and justifiable insights.

Furthermore, while xAI promises a revolution in how audits are conducted, its adoption in emerging economies remains slow. Why? A team of Malaysian researchers set out to explore this question, focusing on the local context in which national AI policies are forward-looking but internal audit readiness remains uneven (Barredo Arrieta et al., 2020).



AI MEETS AUDITING – IS MALAYSIA READY?

The research team interviewed 20 senior internal audit professionals from various Malaysian industries to uncover the key technological, organizational, and environmental factors influencing xAI adoption. Their insights form the basis of a timely call to action by audit leaders, policymakers, and educators.

The empirical insights from these in-depth interviews are organized according to the Technology–Organization–Environment (TOE) framework adopted in the study.

XAI IS CHANGING HOW AUDITS ARE DONE — FASTER, SMARTER, AND MORE TRANSPARENT

A TECHNOLOGICAL GAME-CHANGER (TECHNOLOGICAL FACTOR)

Internal auditors have long grappled with limitations in traditional methods such as sampling, manual reviews, and lagging controls. With xAI, the playing field changed dramatically.

Auditors can perform full-population testing, continuous auditing, and real-time risk detection. Some experts interviewed described how xAI helped accelerate audit cycles, from inspecting 120 branches in a year to completing them in a week. Others emphasized xAI's role in fraud detection, anomaly spotting, and lifestyle audits that catch red flags, such as disproportionate spending patterns among employees.

Beyond its speed and scale, xAI offers a level of interpretability that builds trust. Unlike traditional AI systems, xAI systems allow auditors to understand why a certain transaction is flagged, or how a control failure is identified. Transparency is crucial for maintaining auditor independence, accountability, and ethical standards.

Still, the jury is out on whether xAI enhances or undermines professional judgment. Some see it as a collaborative partner that frees auditors to focus on strategic decisions; others worry that it might dilute critical thinking or create overreliance, especially among younger tech-savvy staff.

CULTURE CAN DRIVE OR DERAIL XAI — BRIDGING GENERATIONS IS KEY.

ORGANIZATIONAL CULTURE: A DOUBLE-EDGED SWORD (ORGANIZATIONAL FACTOR)

The organizational setting has emerged as a pivotal enabler or barrier to xAI adoption. Top management support, digital strategy alignment, and resource allocation have been repeatedly cited as determining factors.

In well-resourced firms, particularly in banking, AI adoption is driven by a clear digital roadmap. CEOs who prioritize automation shape the culture in which innovation flourishes. In contrast, organizations focused solely on short-term profitability or led by cautious executives tend to resist such a transformation.

Workforce plays a critical role in this process. A generational divide is clearly evident: while younger auditors embrace xAI with enthusiasm, seasoned professionals often view it with skepticism. Concerns range from job displacement to diminished learning and erosion of professional skepticism. Some fear that blind trust in the xAI output could lead to poor audit outcomes or missed red flags.

This study underscores the need for balanced integration by pairing young auditors' digital fluency with senior auditors' experiential judgment. Mentorship, reskilling programs, and AI literacy initiatives are the key to bridging this gap.

UNCLEAR RULES AND DATA RISKS SLOW XAI ADOPTION.

NAVIGATING REGULATORY FOG (ENVIRONMENTAL FACTOR)

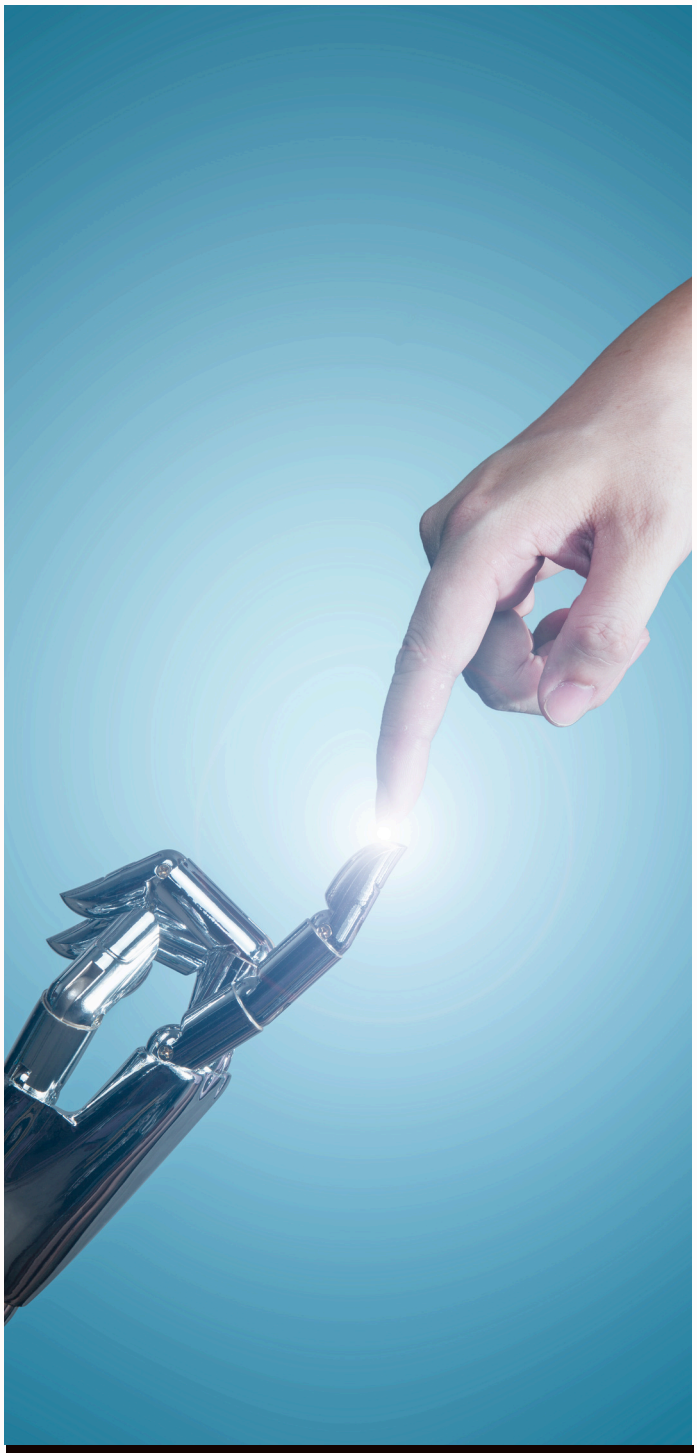
One of the biggest hurdles to the adoption of xAI in internal auditing is the lack of clear regulatory guidance. In highly regulated industries such as finance, auditors are unsure whether AI-generated findings meet audit standards. Without regulators' specific rules or assurances, internal audit teams can remain cautious.

Malaysia has made commendable strides with national policies, such as the National AI Roadmap and Malaysia Digital Economy Blueprint. These initiatives create a favorable macro-environment, but organizational-level adoption remains inconsistent.

Competitive pressure is a double-edged sword. On the one hand, companies are compelled to keep up with industry leaders, particularly the Big Four firms heavily investing in AI. On the other hand, smaller firms face financial constraints and struggle to obtain a clear return on investment.

Cybersecurity and data protection further complicates this equation. With internal audits relying on sensitive organizational data, AI adoption raises concerns regarding breaches and misuse. Auditors are particularly wary of fully relying on AI systems without adequate safeguards.

IMPLICATIONS FOR THE FUTURE



XAI DEMANDS SKILLS, RULES, AND READINESS

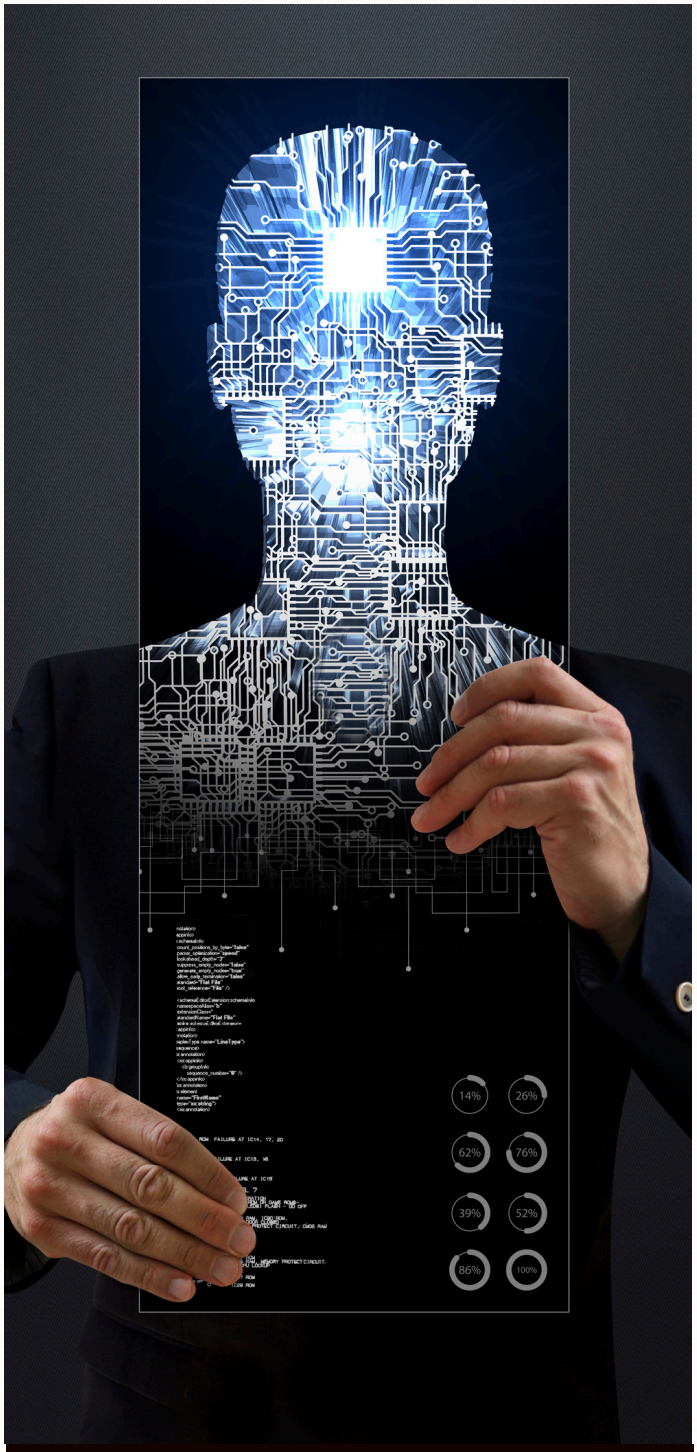
The findings of this Malaysian study are relevant globally. They revealed that, while the technological infrastructure for xAI is available, adoption depends heavily on internal capacity and external clarity. Government mandates can provide direction, but meaningful progress relies on effective change management within organizations and clearer guidance from regulators.

For internal auditors, this means stepping out of comfort zones and acquiring new competencies. AI literacy must become part of the profession's core skill set. However, xAI should not replace human judgment and should be enhanced. Best audits will combine machine-driven insights with human skepticism and ethical reasoning.

For policymakers, the message is clear: without AI-specific audit regulations, confusion and hesitation continue. There is a pressing need to develop standardized guidelines that clarify how xAI can be incorporated into audit documentation and decision-making (Feldstein, 2024).

Finally, this study emphasizes the importance of updating training programs for audit educators and professional bodies. The curriculum should incorporate AI ethics, digital governance, and practical skills to support xAI adoption.

TOWARD RESPONSIBLE AI IN AUDITING



AUDITORS MUST LEAD XAI, RESPONSIBLY

As artificial intelligence becomes more embedded in corporate governance, internal audit must not be left behind. The profession's role as an independent assurance provider hinges on its ability to evaluate risk objectively, ethically, and accountably.

Explainable AI offers a pathway to making audits faster, more reliable, and more insightful, but it must be implemented thoughtfully. This study showed that xAI is not a magic bullet. Instead, its successful adoption depends on technological fit, organizational will, and environmental support (Perlmutter et al., 2024).

In Malaysia and beyond, internal auditors must lead the charge, not just in adopting new tools but also in shaping how these tools are used. The future of the profession may depend very well on this.

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