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DEVELOPING A FRAMEWORK FOR QUESTIONNAIRE DESIGN TO ASSESS THE IMPACT OF AI ON TRUST AND MITIGATING CRIMINAL BREACH OF TRUST IN BANKING

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SUMMARY

The banking sector's reliance on trust is paramount, underpinning the entire financial system's stability. However, trust is increasingly threatened by unethical behaviors, such as Criminal Breach of Trust (CBT), which have significant repercussions for financial institutions and their stakeholders. This study develops a comprehensive framework for designing a questionnaire aimed at assessing the impact of Artificial Intelligence (AI) on enhancing trust and mitigating CBT in banking. By integrating concepts from established literature and adapting them to the specific context of AI in banking, this study explores the relationships between individual motivations, organizational culture, AI-driven transparency, and accountability mechanisms. The research model proposes trust enhancement through AI as a mediating variable and regulatory oversight as a moderating variable. Utilizing Partial Least Squares Structural Equation Modeling (PLS-SEM), the study will empirically test these relationships to provide insights into the effectiveness of AI in preventing unethical behaviors in the banking sector. This research contributes to the existing literature by filling a critical gap in understanding the role of AI in enhancing trust and preventing CBT, offering practical implications for banking institutions and regulators.

KEY WORDS: *Artificial Intelligence (AI), Trust Enhancement, Criminal Breach of Trust (CBT), Banking Sector, Ethical Behavior, Transparency Mechanisms, Accountability Mechanisms, Organizational Culture, Regulatory Oversight*

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RAZVOJ OKVIRA ZA DIZAJN UPITNIKA ZA PROCJENU UTJECAJA AI NA POVJERENJE I UBLAŽAVANJE KRIMINALNE KRŠE POVJERENJA U BANKARSTVU

SAŽETAK

Oslanjanje bankarskog sektora na povjerenje najvažnije je i podupire stabilnost cjelokupnog financijskog sustava. Međutim, povjerenje je sve više ugroženo neetičnim ponašanjem, kao što je kazneno djelo zlouporabe povjerenja (CBT), koje ima značajne posljedice za financijske institucije i njihove dionike. Ova studija razvija sveobuhvatan okvir za izradu upitnika usmjerenog na procjenu utjecaja umjetne inteligencije (AI) na jačanje povjerenja i ublažavanje CBT-a u bankarstvu. Integrirajući koncepte iz etablirane literature i prilagođavajući ih specifičnom kontekstu umjetne inteligencije u bankarstvu, ova studija istražuje odnose između individualnih motivacija, organizacijske kulture, transparentnosti vođene umjetnom inteligencijom i mehanizama odgovornosti. Istraživački model predlaže jačanje povjerenja putem umjetne inteligencije kao posredničku varijablu i regulatorni nadzor kao moderirajuću varijablu. Koristeći parcijalno modeliranje strukturnih jednadžbi najmanjih kvadrata (PLS-SEM), studija će empirijski testirati te odnose kako bi pružila uvid u efikasnost umjetne inteligencije u sprječavanju neetičkog ponašanja u bankarskom sektoru. Ovo istraživanje pridonosi postojećoj literaturi popunjavanjem kritične praznine u razumijevanju uloge umjetne inteligencije u jačanju povjerenja i sprječavanju KBT-a, nudeći praktične implikacije za bankarske institucije i regulatore.

KLJUČNE RIJEČI: *umjetna inteligencija (ai), povećanje povjerenja, kazneno zlouporaba povjerenja (cbt), bankarski sektor, etičko ponašanje, mehanizmi transparentnosti, mehanizmi odgovornosti, organizacijska kultura, regulatorni nadzor*

INTRODUCTION

Trust is a fundamental and essential element that forms the foundation of the banking industry and holds significant significance in the context of the contemporary financial system. Financial transactions rely on the trust established between financial institutions and their customers, which subsequently influences the functioning of the global economy. Trust is the fundamental basis for all financial transactions. According to Matthews, Thompson, and Zhang (2023), banking institutions play a crucial role in managing the assets of customers, investors, and other stakeholders. They are responsible for safeguarding financial data and ensuring the efficient functioning of financial systems. Banking institutions are tasked with the responsibility of overseeing the management of money. Given that the loss of trust can lead to severe consequences, such as bank runs and wider financial instability, it is crucial to prioritize the maintenance of trust. This is due to the erosion of this trust, which can lead to disastrous outcomes.

The escalating intricacy and interdependence of the worldwide financial system underscores the crucial role of trust in the banking sector, particularly in relation to its significance. According to Parate, ThammaReddi, Agarwal, and Suryadevara (2023), trust, which cannot be physically touched, has become increasingly crucial in a context where digital transactions are about to become the standard and the physical presence of banking is diminishing. Their research suggests that trust has become a progressively significant resource. Trust and customer loyalty are correlated, meaning that the level of trust customers have in a financial institution directly affects their likelihood of remaining loyal to

that institution. Additionally, the overall reputation of the institution also plays a role in customer loyalty. The absence of trust would lead to the complete breakdown of the fundamental principles on which the banking industry relies, resulting in significant negative consequences for the economy. This is a consequence of the foundation's collapse.

The banking sector's integrity, however, is often jeopardized by various types of misconduct. Criminal Breach of Trust (CBT) is a form of misconduct that is characterized by its covert nature, distinguishing it from other forms of misconduct. Boubaker and Elnahass (2024) define "criminal behavior" (CBT) as the illicit abuse of power by bank executives. These officers breach the trust bestowed upon them in order to pursue personal benefits or partake in deceitful actions. The continuous prevalence of criminal breach of trust (CBT) occurrences not only leads to immediate monetary damages, but also undermines the credibility and dependability of banking institutions, jeopardizing the essential trust required for the functioning of the financial system. criminal breach of trust (CBT) also leads to a direct monetary detriment.

Considering the potential harmful impact of criminal breach of trust (CBT), it is evident that there is a strong requirement for effective measures to prevent and minimize its negative effects. Regulatory oversight, internal controls, and ethical training have been shown to be necessary but not enough in preventing the rise of incidents related to criminal breach of trust (Kim et al., 2023). All of these examples demonstrate the essentiality of these approaches. This deficiency necessitates the development of innovative solutions that can improve the real-time detection, monitoring, and prevention of unethical behaviors. Artificial intelligence (AI) is an example of a solution that has a high potential for achieving significant results.

Artificial intelligence (AI) is a technology that has become transformative in various industries, including banking. AI is being increasingly employed in the banking sector to enhance customer experiences, optimize operations, and improve security (Banerjee, Agarwal, & Bar, 2024). Artificial intelligence technologies, including machine learning, natural language processing, and data analytics, hold immense potential when it comes to trust and ethical behavior. These technologies are exemplars of technologies with the potential for utilization. These technologies enable the analysis of a large volume of data, the detection of patterns that suggest unethical behavior, and the identification of potential risks related to criminal breach of trust before they materialize.

The integration of artificial intelligence (AI) in banking prompts significant inquiries regarding its efficacy in mitigating risks, such as criminal breach of trust (CBT), notwithstanding its potential usefulness. Despite the increasing amount of qualitative research investigating the ethical consequences and practical obstacles of artificial intelligence in financial services, there remains a dearth of quantitative studies that thoroughly evaluate the effect of artificial intelligence on decreasing occurrences of criminal breach of trust (CBT). However, there is an increasing amount of research that investigates the consequences of artificial intelligence in relation to criminal breach of trust (CBT). There is a lack of research in the current literature that emphasizes the need to conduct empirical studies that not only assess the abilities of artificial intelligence in safeguarding trust, but also examine the factors that impact the efficiency of AI. This research must be conducted to meet the requirement of conducting such research.

This study seeks to address this gap by creating an extensive questionnaire designed to assess the effectiveness of artificial intelligence in mitigating the risks associated with criminal breach of trust (CBT) for bank officers. The questionnaire will be utilized to assess the efficacy of different artificial intelligence technologies. The research aims to explore how artificial intelligence can improve the transparency, accountability, and reliability of banking operations, ultimately increasing the level of trust in the financial system. The study aims to examine how individual motivations, organizational culture, and regulatory oversight influence the effectiveness of artificial intelligence interventions. This objective is one of the aims of the study.

LITERATURE REVIEW

Trust in Banking

Trust is an essential component that must be present within the context of the relationship that exists between financial institutions and the customers that they serve. Matthews, Thompson, and Zhang (2023) state that it has an impact on customer loyalty, the willingness to engage in long-term financial relationships, and overall satisfaction with financial services. Moreover, it has an actionable impact on customer satisfaction. There are a number of factors that contribute to the development of trust over time. These include the provision of services that are consistent and reliable, the transparency of transactions, and the assurance that the interests of the customer are being protected. In contrast, trust can be completely obliterated in a short period of time, particularly in the aftermath of unethical behavior or scandals involving finances. This is especially true in situations where there is a lack of transparency.

According to Boubaker and Elnahass (2024), the research that has been conducted on trust in banking places an emphasis on the multidimensional nature of trust. As part of this nature, trust encompasses aspects such as competency, reliability, integrity, and benevolence. This is done in order to bring attention to the multifaceted elements that comprise trust. Competence can be defined as the capacity of a bank to carry out its functions in an efficient manner, whereas reliability refers to the bank's ability to fulfill its obligations in a consistent manner. Both of these characteristics are essential to the organization's success. It is associated with the bank's integrity that it adheres to ethical standards, and the institution's concern for the well-being of its customers is reflected in the benevolence that it displays.

The significance of technological advancements in maintaining and enhancing trust in the banking industry has been the subject of a great number of studies that have been carried out in recent times. A number of factors, such as the utilization of artificial intelligence (AI), online banking services, and digital platforms, have had an impact on the customers' perceptions of the credibility of the company. In the event that these technologies are not managed in an appropriate manner, however, they have the potential to be utilized in a manner that leads to unethical behavior or fraud (Wong et al., 2021). Taking into account the risk that this presents is something that needs to be done.

Despite the growing body of literature on trust in banking, there is a significant lack of research that specifically investigates the role that artificial intelligence plays in mitigating risks associated with criminal breach of trust (CBT). This is a significant gap in the research

that has been conducted. According to Banerjee, Agarwal, and Bar (2024), the potential of artificial intelligence to improve ethical standards and prevent misconduct has received less attention than its potential to improve operational efficiency, customer service, and risk management. Therefore, the former has received more attention than the latter. despite the fact that artificial intelligence has been the subject of a significant amount of research in these three areas. Additionally, previous research has a tendency to focus on qualitative evaluations or theoretical discussions, and there is a dearth of empirical evidence regarding the actual impact that AI has on reducing the number of instances of criminal breach of trust (CBT). This is a problem because AI has the potential to reduce the quantity of CBT sessions.

This void is especially significant in light of the fact that the financial industry is becoming more and more reliant on artificial intelligence. Being familiar with the ways in which these technologies can be utilized to not only improve efficiency but also to uphold the ethical standards that are the foundation of trust in the banking sector is of the utmost importance for those who are in the process of incorporating artificial intelligence into their operations. This is of the utmost importance. The purpose of this study is to develop a questionnaire that will provide quantitative evidence on the effectiveness of artificial intelligence in preventing criminal breach of trust (CBT). This will be done in order to fill the gap that has been identified. Consequently, this will contribute to a more comprehensive understanding of the role that artificial intelligence plays in the banking sector.

Dependent Variable: Criminal Breach of Trust (CBT) Incidents

A Criminal Breach of Trust (CBT) incident is considered to have been committed by individuals who are in positions of trust and who engage in fraudulent activities, misuse their authority for personal gain, or betray the trust that has been placed in them by clients, colleagues, or superiors (Kim et al., 2023). Incidents of criminal breach of trust (CBT) are defined as actions of individuals who are in positions of trust. Embezzlement, fraudulent loan approvals, and the manipulation of financial records are all examples of the many forms that fraudulent business practices (CBT) can take in the banking industry. These are merely some of the ways in which it may cause itself to become apparent.

The literature on criminal breach of trust (CBT) in banking draws attention to the severe repercussions that such incidents can have. Not only do these repercussions affect the institutions that were involved, but they also have an effect on the larger financial system as a whole. CBT not only results in monetary losses, but it also causes damage to the reputation of financial institutions, undermines the trust of customers, and has the potential to bring about regulatory scrutiny (Boubaker & Elnahass, 2024). CBT is a form of financial fraud. In spite of the fact that there are safeguards in place, the fact that incidents involving criminal breach of trust (CBT) continue to take place despite these safeguards highlights the necessity of further effective measures to prevent misconduct of this kind.

According to Barr et al. (2018) on the subject of criminal breach of trust (CBT), a number of studies have been carried out to investigate the factors that contribute to its effectiveness. Individual motivations, organizational culture, and the efficiency of internal controls are some of the key drivers that have been identified as a result of these studies. In spite of this, there is a paucity of research on the ways in which emerging technologies, in particular artificial intelligence, can be utilized to identify and prevent criminal breach of trust (CBT) before it is administered. The purpose of this study is to fill this gap by de-

veloping a framework for questionnaire items that will evaluate the potential of artificial intelligence to serve as a deterrent to criminal breach of trust (CBT) through enhanced monitoring, detection, and accountability mechanisms. This framework will be developed as part of this study.

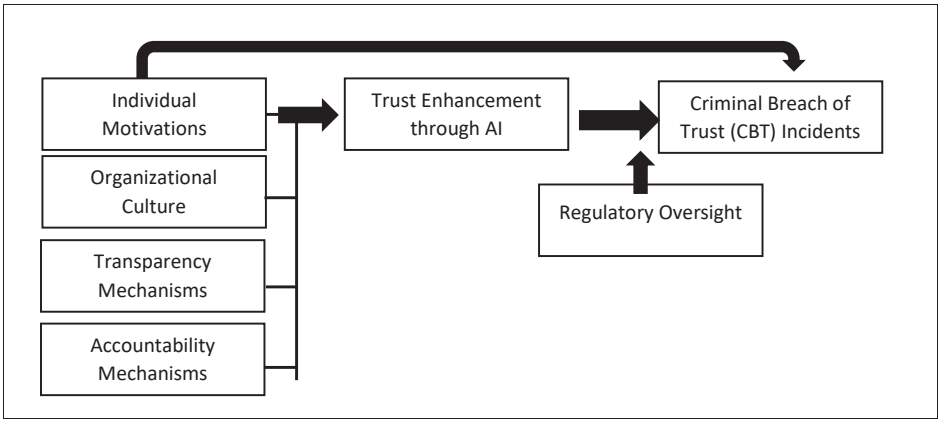

Figure 1. Research Model: Model Conceptualization and Hypotheses Development

Independent variable(s) influencing dependent variable

Individual motivations encompass the internal psychological factors that propel bank officers towards specific behaviors, including unethical actions like Criminal Breach of Trust (CBT). Financial pressures, job dissatisfaction, and moral disengagement have a substantial impact on the probability of participating in CBT. Previous studies indicate that individuals experiencing significant personal or financial pressures are more likely to justify unethical actions in order to attain personal benefits or reduce stress (Jones, 2018; Stojkovic et al., 2020).

Organizational culture refers to the shared values, beliefs, and practices that exist within a company and influence how employees behave and make decisions. An ethical and compliant culture plays a vital role in preventing unethical behaviors, including CBT. Organizations that possess robust ethical leadership and a dedication to compliance are more capable of cultivating an atmosphere where ethical conduct is the standard, consequently diminishing the prevalence of counterproductive work behavior (Bennett & Robinson, 2021; Treviño et al., 2016). Transparency mechanisms in AI systems pertain to the lucidity and candor with which these systems function, enabling users and stakeholders to comprehend the decision-making procedures involved. Transparency is crucial for establishing trust in AI systems, especially in the banking sector, where ethical conduct is of utmost importance. Transparent artificial intelligence (AI) systems can guarantee that decisions are made in a just manner and are not susceptible to being used improperly, thus promoting trust among all parties involved (Ananny & Crawford, 2018; Doshi-Velez & Kim, 2017).

Accountability mechanisms in AI systems are essential for ensuring that these systems can be held accountable for their actions, thereby preventing misuse and ensuring ethical

operation. Within the banking industry, accountability mechanisms play a crucial role in establishing trust by clearly identifying the individuals responsible for decisions made through artificial intelligence and by offering a means of redress in the event of errors or unethical consequences. Precise understanding is essential in building trust in AI systems used to deter unethical actions such as CBT (Diakopoulos, 2016).

Independent variable(s) influence mediating variable

The phrase "trust enhancement through AI" is used in the context of banking operations to refer to the manner in which AI systems improve transparency, accountability, and fairness, thereby increasing the level of trust that stakeholders have in the institution. According to Madhavan and Wiegmann (2007), the way in which bank officers perceive and trust artificial intelligence systems may be influenced by individual motivations such as the required level of security and integrity. This assertion is supported by the fact that bank officers are more likely to trust these systems. A robust organizational culture that places an emphasis on ethics and compliance is likely to result in increased trust in artificial intelligence systems. This is because such a culture places a strong emphasis on ethics and compliance. The belief that artificial intelligence systems are in accordance with the ethical standards of the organization is supported by this culture, as stated by Treviño et al. (2016). This culture contributes to the belief that these systems are more trustworthy.

The enhancement of trust in artificial intelligence systems requires transparency. Researchers Doshi-Velez and Kim (2017) found that when artificial intelligence (AI) systems are transparent, users and stakeholders are more likely to trust them. This is because they are aware that the decision-making processes are open to scrutiny and free from any hidden biases. It is essential for artificial intelligence systems to incorporate accountability mechanisms in order to guarantee that decisions can be traced back and held accountable. According to Diakopoulos (2016), this feature is crucial for establishing trust because it provides users with the assurance that AI systems are trustworthy and have ethical standards.

Trust Enhancement through AI and CBT Incidents:

It is possible for the level of trust that bank officers place in AI systems to have an effect on their ethical behaviors, including the likelihood that they will engage in criminal breach of trust (CBT). Increasing the perceived risks and decreasing the opportunities for misconduct are two ways that artificial intelligence systems that improve trust are likely to discourage unethical behavior (Chen et al., 2019).

Mediation by Trust Enhancement through AI: Independent variable(s) and CBT:

This hypothesis investigates the role of artificial intelligence (AI) in improving trust and how it affects the connection between individual motivations and CBT incidents. By leveraging artificial intelligence, it is feasible to alleviate the adverse effects of personal motivations on ethical conduct by fostering trust (Madhavan & Wiegmann, 2007).

This study investigates the potential of artificial intelligence (AI) to improve trust and its role in mediating the connection between organizational culture and the frequency of computer-based training (CBT) incidents. An organization with a robust organizational culture and a high level of trust in AI has the potential to decrease the probability of unethical behaviors (Treviño et al., 2016). The purpose of this study is to investigate the

ways in which the implementation of artificial intelligence (AI) methods to enhance trust influences the relationship between transparency mechanisms and the reduction in incidents involving computer-based training (CBT). Based on Doshi-Velez and Kim's (2017) research, transparency has the potential to discourage unethical actions by fostering trust. The purpose of this hypothesis is to investigate how the enhancement of trust through the utilization of artificial intelligence (AI) can have an impact on the relationship between accountability mechanisms and the reduction in criminal breach of trust (CBT) incidents. According to Diakopoulos (2016), establishing accountability helps to cultivate trust, which in turn acts as a hindrance to unethical behavior from occurring.

Regulatory Oversight as Moderator:

Regulatory oversight is an absolute requirement in order to ensure that artificial intelligence systems are applied in a manner that is consistent with ethical standards in the banking industry. 2017 research by Fichtner and Heemskerk The findings of this study suggest that the presence of regulatory oversight has an effect on the connection between the utilization of artificial intelligence to improve trust and the frequency of criminal breach of trust (CBT) incidents, eventually leading to an increase in the efficiency of AI interventions.

METHODOLOGY

Research Design

This study employs a quantitative research design to investigate the efficacy of artificial intelligence (AI) in reducing the occurrence of criminal breach of trust (CBT) in the banking industry. It is essential to examine the proposed hypotheses and measure the relationships between the variables included in the research framework. This is the main reason for choosing a quantitative methodology. Quantitative research is the most suitable approach for this study because it allows for the collection and analysis of numerical data. The reason for this is that it establishes a strong basis for identifying patterns, subjecting relationships to examination, and formulating conclusions that can be extrapolated to a broader population (Creswell & Creswell, 2017).

The research model presented in this study consists of four components: individual motivations, organizational culture, transparency mechanisms, and accountability mechanisms. Other independent variables also encompass accountability mechanisms. The dependent variable in this study is the occurrence of criminal breach of trust (CBT), while the mediating variable is the improvement of trust through artificial intelligence (AI), and the moderating variable is regulatory oversight. The Partial Least Squares Structural Equation Modeling (PLS-SEM) technique was chosen as the primary analytical method. PLS-SEM is the preferred method due to its ability to efficiently handle intricate models with multiple components and its suitability for exploratory research where theoretical development is still ongoing (Hair, Risher, Sarstedt, & Ringle, 2019).

Population and Sampling

The study focuses on bank officers, regulatory authorities, and stakeholders in the banking sector, including compliance officers, risk managers, and technology specialists. The selection of these participants is based on their direct engagement in the processes and decisions pertaining to trust, ethics, and the utilization of AI in banking operations.

The study will utilize a stratified random sampling method to guarantee that the sample encompasses diverse levels of experience, roles, and geographical regions within the banking sector. Stratification is essential for comprehensively encompassing the various viewpoints on the involvement of artificial intelligence (AI) in reducing criminal breach of trust (CBT) in different organizational settings and regulatory landscapes (Etikan, Musa, & Alkassim, 2016).

The determination of the sample size is based on the guidelines for PLS-SEM, which propose a minimum sample size of 10 times the number of structural paths directed at the most intricate construct in the model (Hair et al., 2019). To ensure adequate statistical power and reliable results, a minimum sample size of 300 respondents is targeted due to the intricate nature of the model.

Data Collection

The data collection will be conducted through a well-organized online survey designed to gather the opinions, attitudes, and experiences of participants regarding the variables under investigation in this study. The survey will include a variety of Likert scale items, with response options ranging from 1 (strongly disagree) to 5 (strongly agree). These items will be used to collect data on the constructs that are part of the research framework.

To ensure the reliability and accuracy of the data, the survey will undergo a pre-test with a small sample of participants who are representative of the target population of the questionnaire. Prior to commencing the comprehensive data collection, this initial test will help identify any uncertainties or issues that may be present with the survey items, thus enabling revisions to be implemented. To maximize the response rate, the survey will be distributed via email invitations, and follow-up reminders will be sent to non-respondents (Dillman, Smyth, & Christian, 2014).

Questionnaire Development

The questionnaire utilized in this investigation was created by adapting existing measurement scales derived from prior research. To operationalize each element of the research model, various validated items from previous studies are employed. The process of adapting these items entails modifying the language to correspond with the particular context of artificial intelligence in banking and ensuring that the items are pertinent to the study's objectives (DeVellis, 2016).

PLEASE REFER TO APPENDIX

Concepts from previously published literature were modified and incorporated into the development process to customize the items for the specific research context of Criminal Breach of Trust (CBT) in banking institutions. During the adaptation process, the language and emphasis of each item were changed to make sure they were relevant and applicable

to the study's objectives. At the same time, the original research findings were maintained in their entirety.

The study utilized an adaptation method that involved a meticulous selection of items from prior research that had already established validated measures for the relevant constructs being investigated. The categories encompassed individual motivations, organizational culture, and artificial intelligence transparency. The items were not utilized in the identical manner as originally written; instead, they were carefully modified to suit the specific context of this study, which centers on Criminal Breach of Trust (CBT) in the banking sector. This process ensured that each item was tailored to precisely depict the manner in which these concepts function in the particular banking context. Consequently, this process led to an enhancement in the questionnaire's pertinence and efficacy in achieving the research objectives.

Additionally, to guarantee the questionnaire's integrity, all modified items were supplemented with the relevant references. This action was undertaken to uphold academic integrity. This practice acknowledges the primary research that served as the basis for these items, providing a clear reference to the source material. By following this practice, the research not only safeguards the intellectual property of the original authors, but it also enables readers to identify the sources of the materials used, thereby upholding the precision and credibility of the research process. This methodology guarantees that the items in the questionnaire are based on established theories and empirical evidence, and are directly relevant to the specific research inquiries being investigated in the study.

Data Analysis

Once the data has been collected, a sequence of statistical analyses will be conducted. The objective of these analyses is to assess the hypotheses and explore the relationships between the variables. The primary analytical method that will be used is PLS-SEM, an acronym for partial least squares structural equation modeling. This approach is especially suitable for intricate models that encompass multiple constructs and for situations where the research aims to explore novel domains (Hair et al., 2019).

The Partial Least Squares Structural Equation Modeling (PLS-SEM) technique enables the concurrent estimation of two models: the measurement model, which evaluates the reliability and validity of the constructs, and the structural model, which examines the proposed relationships between the constructs. The investigation will comprise several stages, encompassing the following:

At this point, it is crucial to assess the reliability and validity of the constructs to ensure that the survey items accurately capture the underlying theoretical concepts. Cronbach's alpha and composite reliability (CR) are commonly employed techniques for evaluating the reliability of a measurement. Values exceeding 0.70 are generally deemed satisfactory. Fornell and Larcker (1981) and Chin (1998) assert that the aim of the validity assessment is to confirm that the items possess the ability to precisely measure the constructs they are intended to measure. This assessment encompasses both convergent and discriminant validity. The assessment of the structural model will occur once the reliability and validity of the measurement model have been confirmed. This assessment will occur subsequent to the evaluation of the structural model. The reference citation is from the publication by Hair et al. in 2019. An analysis of the significance of path coefficients, R-squared values, and effect

sizes is essential for evaluating the effectiveness of the hypothesized relationships between the constructs and determining the direction of these relationships.

Mediation and Moderation Analysis: Mediation and moderation analysis will be conducted to examine the indirect effects of variables through the mediator (trust enhancement through AI) and to determine whether the moderator (regulatory oversight) influences the strength or direction of relationships. The significance of these effects will be examined using bootstrapping techniques (Preacher & Hayes, 2008; Baron & Kenny, 1986).

Ethical Considerations

The study will comply with ethical protocols for conducting research involving human participants. Prior to commencing data collection, the appropriate institutional review board (IRB) will be sought to obtain ethical approval. Participants will receive information regarding the study's objective, be guaranteed that their responses will be kept confidential, and have the opportunity to withdraw from the study without facing any negative consequences. Prior to participation, all individuals will be required to provide informed consent, and to safeguard their privacy, the collected data will be anonymized.

CONCLUSION

This study highlights the essential importance of trust in the banking industry and the increasing danger presented by unethical actions such as Criminal Breach of Trust (CBT). To address these challenges, the study proposes a systematic framework for evaluating the influence of Artificial Intelligence (AI) on increasing trust and reducing cognitive biases in the banking sector. This research offers a strong methodology for studying the intricate connections between individual motivations, organizational culture, AI-driven transparency, accountability mechanisms, and trust enhancement by using well-established measurement scales. The study's proposed model, which will be tested using Partial Least Squares Structural Equation Modeling (PLS-SEM), aims to provide valuable insights into the effectiveness of AI in promoting trust and mitigating unethical behaviors within the banking industry. The results are anticipated to make a substantial contribution to both scholarly literature and practical implementations, aiding banking institutions and regulators in utilizing AI to protect trust and ensure ethical behavior.

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CONTRIBUTION

Table 1. Variable Measurement and Justification

Variable	Adapted Item	Source	Justification/Explanation
Individual Motivations			
Personal financial pressures	1. "Personal financial pressures significantly influence bank officers to engage in CBT activities."	Gino & Pierce (2009)	Adapted to reflect the specific context of financial pressures as a motivator for unethical behavior, aligning with Gino & Pierce's findings.
Job dissatisfaction	2. "Job dissatisfaction is a key factor contributing to CBT incidents among bank officers."	Dalal (2005)	Adapted to focus on job dissatisfaction's role in deviant workplace behavior, which has been shown to predict unethical acts.
Moral disengagement	3."Moral disengagement plays a significant role in motivating individuals to commit CBT within financial institutions."	Bandura (1999)	Adapted from Bandura's theory, emphasizing how moral disengagement facilitates unethical decisions, relevant to CBT in banking.
	4. "Individuals who face personal financial pressures are more likely to engage in unethical behavior such as CBT."	Gino & Pierce (2009)	Adapted to highlight the link between financial pressures and unethical behavior, specifically in the context of banking.
	5. "Bank officers experiencing job dissatisfaction are prone to engaging in CBT activities."	Dalal (2005)	Adapted to emphasize the connection between job dissatisfaction and deviant behavior, applicable to CBT.
Organizational Culture			
Ethical leadership	1. "Ethical leadership within banks effectively deters bank officers from committing CBT."	Brown & Treviño (2006)	Adapted to reflect the influence of ethical leadership on reducing unethical behaviors, particularly in the context of CBT.
Compliance culture	2. A strong compliance culture within banks reduces the occurrence of CBT incidents among bank officers."	Treviño, Weaver, & Reynolds (2006)	Highlights the role of compliance culture in deterring unethical practices, adapted to focus on CBT within banks.
	3. "Reward structures in banks influence bank officers' decisions regarding engaging in CBT activities."	Treviño et al. (2006)	Inspired by Treviño et al.'s discussion on how organizational incentives impact ethical behavior, adapted to the context of CBT.

	4. "Organizational cultures that prioritize ethics and compliance discourage bank officers from engaging in CBT."	Treviño, Weaver, & Reynolds (2006)	Adapted to emphasize the role of a strong ethical culture in preventing unethical behavior like CBT.
	5. "Banks with a strong ethical culture experience fewer instances of CBT among their employees."	Brown & Treviño (2006)	Adapted to reflect how a robust ethical culture can reduce the incidence of unethical behaviors, specifically CBT.
Transparency Mechanisms			
Transparency in AI	1. "Transparency in AI algorithms enhances trust in AI systems used to detect and prevent CBT incidents."	Ananny & Crawford (2018)	Adapted to emphasize the importance of transparency in AI systems for fostering trust, crucial for preventing CBT in financial institutions.
Interpretability	2. "Interpretability of AI systems contributes to increased trust in their ability to identify CBT-related behaviors."	Doshi-Velez & Kim (2017)	Adapted to highlight how interpretability of AI models builds trust in their decision-making, crucial for identifying CBT activities.
	3. "Explainable AI systems are more trustworthy in detecting and preventing CBT compared to opaque systems."	Doshi-Velez & Kim (2017)	Inspired by Doshi-Velez & Kim's work on the importance of AI explainability, adapted to the context of preventing CBT.
	4. "Transparency in the decision-making process of AI systems builds confidence in their effectiveness in preventing CBT."	Ananny & Crawford (2018)	Adapted to stress how transparent AI decision-making processes enhance confidence in preventing unethical acts like CBT.
	5. "AI systems that are transparent in their operations are more reliable in detecting CBT incidents."	Ananny & Crawford (2018)	Adapted to emphasize the connection between transparency and reliability of AI in the context of detecting CBT incidents.
Accountability Mechanisms			
Algorithmic accountability	1. "Algorithmic accountability mechanisms improve trust in AI systems employed to prevent CBT within banks."	Diakopoulos (2016)	Adapted to focus on the role of accountability mechanisms in AI systems for preventing unethical acts like CBT in banks.

Responsibility attribution	2. "Clearly defined responsibility attribution in AI systems enhances confidence in their ability to mitigate CBT risks."	Diakopoulos (2016)	Adapted to address the importance of responsibility attribution in AI, crucial for ensuring trust in systems designed to prevent CBT.
	3. "Recourse mechanisms for addressing AI system errors or biases increase trust in their effectiveness in preventing CBT."	Diakopoulos (2016)	Inspired by Diakopoulos's work on accountability in AI, adapted to emphasize its importance in preventing CBT.
	4. "Accountability mechanisms in AI systems ensure that they are held responsible for their actions in preventing CBT."	Diakopoulos (2016)	Adapted to emphasize the role of accountability in AI systems for ethical outcomes, specifically in preventing CBT.
	5. "AI systems with built-in recourse mechanisms for addressing errors are more reliable in preventing CBT."	Diakopoulos (2016)	Inspired by Diakopoulos's discussion on recourse in AI, adapted to focus on its role in ensuring reliability in preventing CBT.
Dependent Variable: CBT Incidents			
Individual motivations	1. "Individual motivations significantly contribute to the occurrence of CBT incidents among bank officers."	Murnighan & Wang (2016)	Adapted to focus on how individual motivations can directly lead to unethical behavior, specifically CBT incidents, in financial settings.
Organizational culture	2. "The organizational culture within banks influences the likelihood of CBT incidents among bank officers."	Schein (2004)	Adapted to emphasize the critical role of organizational culture in shaping behavior, particularly related to CBT in banking.
	3. "Transparency and accountability mechanisms in AI systems reduce the occurrence of CBT incidents within banks."	Ananny & Crawford (2018)	Inspired by Ananny & Crawford's work on AI transparency and accountability, adapted to focus on their role in reducing CBT incidents.
	4. "CBT incidents within banks are often influenced by both individual motivations and organizational culture."	Schein (2004)	Adapted to reflect the combined influence of individual and organizational factors on unethical behavior, specifically CBT.
	5. "Effective implementation of transparency and accountability mechanisms in AI systems can help mitigate CBT incidents."	Diakopoulos (2016)	Inspired by Diakopoulos's work, adapted to focus on how AI transparency and accountability can prevent unethical acts like CBT.

Moderator Variable: Regulatory Oversight			
Regulatory oversight	1. "Effective regulatory oversight plays a crucial role in deterring CBT incidents within banks."	Ashby (2011)	Adapted to focus on the role of regulatory oversight in preventing unethical practices like CBT, relevant to the banking industry.
Stringent frameworks	2. "Countries with stringent regulatory frameworks experience fewer instances of CBT among bank officers."	Ashby (2011)	Adapted to emphasize the impact of strict regulatory environments on reducing unethical behavior, particularly CBT.
	3. "Regulatory oversight enhances the effectiveness of organizational culture in preventing CBT incidents within banks."	Ashby (2011)	Inspired by Ashby's discussion on regulatory impacts, adapted to focus on how oversight enhances organizational culture in preventing CBT.
	4. "Strong regulatory oversight contributes to a culture of compliance, reducing the occurrence of CBT incidents."	Ashby (2011)	Adapted to emphasize how regulatory oversight fosters a culture of compliance, essential for preventing CBT.
	5. "Regulatory oversight is essential for holding banks accountable and deterring unethical behavior such as CBT."	Ashby (2011)	Adapted to highlight the role of oversight in enforcing accountability and preventing unethical behavior, specifically CBT.
Mediating Variable: Trust Enhancement Through AI			
Trust in AI	1. "Trust enhancement through AI positively influences the effectiveness of AI systems in preventing CBT incidents."	Madhavan & Wiegmann (2007)	Adapted to reflect the importance of trust in AI systems for their effectiveness, specifically in preventing CBT incidents in financial institutions.
	2. "AI-driven transparency mechanisms increase trust in banks' ability to detect and prevent CBT."	Ananny & Crawford (2018)	Inspired by Ananny & Crawford's work, adapted to focus on how transparency in AI increases trust, crucial for detecting and preventing CBT.

	3. "Leveraging AI technologies to enhance transparency and accountability improves overall trust in banking institutions."	Madhavan & Wiegmann (2007)	Adapted to emphasize the role of AI in enhancing trust through transparency and accountability, relevant to banking institutions.
	4. "Trust in banking institutions can be significantly improved through the implementation of AI-driven transparency and accountability mechanisms."	Ananny & Crawford (2018)	Inspired by Ananny & Crawford's work, adapted to focus on trust-building through AI in the context of banking.
	5. "AI systems that prioritize transparency and accountability contribute to building trust in the banking sector."	Madhavan & Wiegmann (2007)	Adapted to highlight how AI transparency and accountability can build trust in financial institutions, essential for preventing CBT.