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Article

Effects of Internal Audit Function Maturity on Employee Motivation

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Abstract

This study examines the effects of internal audit function maturity criteria on employees' multidimensional work motivation. A quantitative correlational survey design was employed. The study population comprised managers and employees working in 500 companies listed on Borsa Istanbul. All members of the population were invited to participate, and the final sample consisted of 396 respondents. Data were collected through an online questionnaire, and the research hypotheses were tested using structural equation modeling (SEM). The findings indicate that the strategic and operational maturity dimensions of internal audit functions have significant effects on employees' multidimensional work motivation. Specifically, the strategic maturity dimension is negatively associated with motivation, whereas the operational maturity dimension is positively associated with motivation. Although the literature includes various studies on internal audit function maturity and corporate risk management, no prior study was found that investigates the effects of internal audit functions on employee motivation. This study contributes to a better understanding of internal audit function maturity processes and the factors influencing employee motivation. It also provides a roadmap for improving internal audit functions and human resource management practices in organizations.

Keywords: organization; management; internal audit; motivation; maturity
JEL: D11, F12, M14

1. Introduction

The rapid development of advanced technologies and communications, the growing importance of intellectual capital, and the increasing frequency of global crises have substantially increased the value attributed to the human element in organizations. Management, defined as directing organizations composed of individuals gathered around a common purpose toward specified goals and objectives, comprises five core functions: planning, organizing, leading, coordinating, and auditing (Robbins and Coulter, 2021). Among these functions, auditing is critically important for the effective and efficient management of organizations. Auditing activities are carried out to enhance the effectiveness and efficiency of organizational operations (Abdelrahim and Al-Malkawi, 2024; Bahtiar et al., 2021).

Auditing is regarded as a fundamental mechanism that contributes to the achievement of organizational objectives by evaluating the effectiveness of risk management processes and strengthening governance practices (IIA, 2024). Internal auditing is defined as the process of identifying and reporting deficiencies in activities conducted within the organization and presenting recommendations to management—independently yet from within the organization—regarding corrective actions needed to achieve organizational objectives (Manea and Teiuşanu, 2015). Internal auditing is not merely an activity that provides assurance and supports sound decision-making; it is also a managerial tool that enhances operational efficiency, effectiveness, and organizational performance (Alodat et al., 2023; Lois et al., 2021; Sabuncu, 2017; Tarigan and Viorentine, 2021). Realizing the expected benefits of auditing depends on audit activities reaching a certain level of quality and maturity. The concept of maturity is used to determine the extent to which an organization implements a specific program or strategic quality; it denotes evolutionary progress in acquiring a particular capability or advancing from a baseline to a desired level (Lahrmann et al., 2011). In this context, identifying the maturity dimensions of internal audit functions within organizations is important for understanding the factors that shape the relationship between internal audit and its stakeholders and for demonstrating the extent to which internal audit activities create added value for businesses (D'Onza et al., 2020).

1.1 Research Question

The maturity of internal audit functions is conceptualized as a multidimensional construct shaped by strategic factors—such as audit independence, alignment with organizational strategies, transparency, and the incorporation of stakeholder perspectives into audit processes—as well as operational factors, including auditors' competencies and skills, access to appropriate training opportunities, career prospects, and the effective use of information technologies (D'Onza et al., 2020).

As the maturity level of internal audit functions increases, errors, deficiencies, and irregularities are expected to be detected more effectively within organizations (An-

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war, 2022; Tarigan and Viorentine, 2021). In turn, improvements in organizational productivity, growth, development, profitability, and sales volume may follow (Saud, 2015).

Individuals often display unfavorable attitudes toward control mechanisms and auditors (Funnell and Wade, 2012). Findings reported at the conclusion of an audit—such as poor performance, errors, inefficiency, lack of control, inadequacy, or non-compliance with plans, policies, or procedures, and in some cases irregularities—may generate intense anxiety and stress among audited employees (Dittenhofer, 2001; Funnell and Wade, 2012). These characteristics of auditing may therefore adversely affect employee motivation. Moreover, compelling individuals to act under pressure, even when outcomes are positive, has been shown to undermine motivation (Ryan and Deci, 2020).

Accordingly, this study seeks to answer the following research question:

To what extent does the maturity of the internal audit function, considered in its strategic and operational dimensions, affect employees' multidimensional work motivation grounded in Self-Determination Theory (SDT), and what are the direction and relative strength of these effects?

To operationalize this overarching question, the study addresses three sub-questions:

(1) How does strategic internal audit maturity affect the sub-dimensions of employee motivation (intrinsic motivation, personal regulation, introjected regulation, external regulation–social, external regulation–material, and lack of motivation)?

(2) How does operational internal audit maturity affect these same motivation sub-dimensions?

(3) Do the effects of strategic and operational maturity on motivation diverge in terms of direction and magnitude?

1.2 Research Gap and Contribution

Academic interest in internal auditing is increasing; however, the field remains underdeveloped and continues to exhibit important gaps (Lenz et al., 2018; Prasad et al., 2021). In the literature, internal audit function maturity has been examined primarily in relation to organizational-level outcomes such as audit effectiveness, risk management, governance, efficiency, and performance, whereas the psychological consequences for audited employees—particularly work motivation—have received limited systematic attention. This gap is consequential because internal auditing is not merely a technical control mechanism; it is also an organizational process that can shape employees' perceptions of autonomy, competence, and relatedness, thereby influencing the quality of motivation as conceptualized by Self-Determination Theory (SDT).

Review studies emphasize the need for more empirical evidence, greater cross-cultural and contextual diversity, and practice-oriented models that explain within-organization mechanisms (Hazaea et al., 2021, 2023, 2025; Lenz et al., 2018; Prasad et al., 2021). Yet a key blind spot persists: how internal audit maturity is experienced by employees and how it translates into micro-level outcomes. Conceptually, internal audit processes may produce a dual employee experience—supporting competence through learning, feedback, and process improvement while also eliciting anxiety and threat through perceived monitoring and the identification of errors and non-compliance—potentially in different ways across the strategic versus operational dimensions of internal audit maturity.

Accordingly, this study addresses two gaps. First, it distinguishes internal audit function maturity into strategic (e.g., independence, transparency, alignment with strategy, and inclusion of stakeholder views) and operational (e.g., auditor competence, training, career opportunities, effective use of technology, and the translation of audit results into advisory activities) dimensions and tests whether these dimensions exert differential effects on SDT-based sub-dimensions of work motivation (D'Onza et al., 2020). Second, it responds to calls for cross-cultural empirical evidence by examining these relationships using data from large firms listed on Borsa Istanbul in Türkiye, a context that differs meaningfully from the Anglo-American settings dominant in the internal audit literature (Hazaea et al., 2023; Lenz et al., 2018) and from the Western European contexts in which SDT-based work motivation has been most extensively tested (Gagné et al., 2014). By situating the study in an emerging market with a distinct institutional and cultural environment, the present research responds directly to calls for greater contextual diversity in both internal auditing and motivation research (Hazaea et al., 2021, 2023, 2025; Prasad et al., 2021).

The study contributes theoretically, by integrating SDT's basic psychological needs and internalization logic into the internal audit maturity context; empirically, by testing the proposed relationships via structural equation modeling and examining whether strategic and operational maturity differ in the direction and magnitude of their effects; and practically, by suggesting that strategic institutionalization and operational capacity-building initiatives may have different potentially even opposing implications for employee motivation, offering actionable insights for audit committees, top management, and human resource functions.

2. Literature Review

2.1 Internal Auditing Research Trends and the Micro-Level Blind Spot

Recent review and mapping studies document a growing but still fragmented internal auditing literature, with strong emphasis on organizational-level outcomes (e.g., governance, risk management, audit effectiveness, and performance) and comparatively limited attention to employee-level psychological consequences across differ-

ent contexts (Hazaea et al., 2021, 2023, 2025; Lenz et al., 2018; Prasad et al., 2021). This gap is consequential because internal auditing is enacted through interactions with auditees and may shape perceived fairness, psychological safety, and the satisfaction or frustration of basic psychological needs that underlie motivational quality (Ryan and Deci, 2020). Accordingly, integrating Self-Determination Theory (SDT) into the internal audit maturity domain offers a theoretically grounded approach for explaining when and why internal auditing may enhance learning-oriented motivation versus trigger controlled compliance and anxiety.

Cross-cultural evidence further supports the theoretical relevance of this gap. The Multidimensional Work Motivation Scale (MWMS), validated across seven languages and nine countries by Gagné et al. (2014), demonstrates that SDT-based motivation sub-dimensions are meaningfully replicated across diverse cultural and institutional contexts, including both individualist and collectivist settings. As demonstrated by large-scale meta-analytic evidence (Gagné et al., 2014; Howard et al., 2017). This cross-cultural robustness suggests that the regulatory continuum from amotivation to intrinsic motivation reflects universal psychological need dynamics rather than culturally specific patterns. Importantly, however, the antecedents that shape these motivational sub-dimensions, such as perceived control, autonomy support, and procedural fairness, may vary in their salience and interpretation depending on institutional and cultural context (Ryan and Deci, 2020). Internal audit practices, similarly, have been shown to operate differently across cultural settings: Hazaea et al. (2021, 2023) document significant variation in internal audit effectiveness, governance integration, and employee perceptions across Chinese, Arab, and European contexts, while Al-Akra et al. (2016) highlight how cultural and regulatory environments shape auditor–auditee dynamics in ways that differ substantially across institutional settings. Taken together, these findings underscore the need for context-specific empirical tests of how audit maturity shapes employee motivation, and position the present study as a meaningful contribution to the cross-cultural evidence base.

In recent years, internal auditing has been emphasized not only as a mechanism for compliance and error detection, but also as a function of consulting, learning, and value creation. At the same time, when auditing is perceived within the organization primarily as "surveillance and control", it may shape employee attitudes by influencing psychological safety, procedural justice, and perceived autonomy. Therefore, debates on internal audit maturity should be addressed not only in terms of technical/institutional outcomes, but also together with employee-level psychological mechanisms.

Self-Determination Theory (SDT) conceptualizes motivation not only in terms of quantity (high/low) but also in terms of quality, positioning work motivation on a regulatory continuum ranging from amotivation to intrinsic motivation. According to SDT, the quality of employees' motivation is shaped by the extent to which the organizational context supports or frustrates three basic psychological needs: autonomy, competence, and relatedness.

In this study, internal audit function maturity is treated as an element of the organizational context that may affect employees' need satisfaction through two distinct pathways. Strategic maturity (e.g., independence, strong linkage to governance, alignment of audit plans with strategy, follow-up and reporting of results, and consideration of stakeholder expectations) may strengthen perceptions of monitoring, accountability pressure, and external control. Especially in organizations where auditing is associated with punishment or criticism, such perceptions may undermine the need for autonomy and, in turn, reduce motivational quality. By contrast, operational maturity (e.g., skills/competence, training, use of technology, maturity of internal control processes, routine risk assessment, and a stronger consulting role) may foster perceptions of more predictable processes, developmental support, and fair and effective functioning, thereby strengthening competence and contributing to higher-quality forms of motivation.

Accordingly, strategic and operational practices grouped under the same "maturity" umbrella may engage employees' basic psychological needs in different directions and produce differentiated effects across motivation sub-dimensions (D'Onza et al., 2020; Sarens and Abdolmohammadi, 2011).

2.2 Work Motivation

For organizations to achieve their goals and improve performance and productivity, meeting employees' needs and expectations and enhancing job satisfaction and motivation are considered priorities. Given the complexity of human behavior and the diversity of organizational conditions, the literature has generated numerous motivation theories and definitions (Riggio, 2017; Van den Broeck et al., 2016). A widely accepted definition describes work motivation as a set of energetic forces that arise both within the individual and within the work environment, initiating work-related behaviors and determining their form, direction, intensity, and persistence (Pinder, 2014). Intrinsic motivation, in its foundational sense, refers to engaging in an activity for its inherent satisfaction rather than for separable consequences—a state in which individuals persist without the presence of external rewards (Ryan and Deci, 2020). Motivation can also be viewed as a process that encourages productive work by developing individuals' potential, guiding them, and enabling them to fulfill responsibilities and obligations in pursuit of goals (Pinder, 2014). One motivation theory whose cross-cultural validity has been supported in many recent studies is Self-Determination Theory (SDT) (Deci and Ryan, 1985). SDT suggests that individuals are naturally inclined toward psychological growth and integra-

tion and therefore strive to learn, develop competence, and build relationships with others. According to the theory, the quality of motivation determines the extent to which individuals initiate and sustain behaviors (Deci and Ryan, 2000). SDT conceptualizes motivation in two broad forms: intrinsic and extrinsic motivation.

Intrinsic motivation refers to engaging in an activity voluntarily because it is interesting and enjoyable; it reflects an inner drive to pursue an activity for pleasure and satisfaction (Gagné and Deci, 2005; Ryan and Deci, 2020). The level of intrinsic motivation depends on the extent to which an individual's basic psychological needs are satisfied in the social environment. Within this context, individuals seek to satisfy three needs: autonomy, competence, and relatedness. When these needs are satisfied, psychological well-being is positively affected; when they are frustrated, well-being is negatively affected (Ryan and Deci, 2000, 2020). Autonomy is the capacity to make one's own choices and regulate behavior independently of external pressures (Deci and Ryan, 1985; Ryan and Deci, 2000). Competence refers to the ability to use and develop one's capabilities at work and to feel effective in interacting with the environment (Deci and Ryan, 1985; Ryan and Deci, 2000). Relatedness refers to the need to communicate, build close relationships, and experience belonging through interactions with valued others (Ryan and Deci, 2000, 2020). Individuals tend to internalize relatedness through close relationships with those who share similar values and experiences (Deci and Ryan, 1985;Ryan and Deci, 2020; Van den Broeck et al., 2016). Extrinsic motivation, by contrast, involves engaging in an activity for external reasons such as gaining rewards or approval, avoiding punishment or criticism, fulfilling obligations, enhancing self-esteem, or attaining personally valued goals (Gagné et al., 2014). These instrumental reasons vary according to the degree of internalization. Internalization refers to the gradual acceptance of externally regulated motives (e.g., rewards or punishments) and their transformation into more internal forms of regulation (Gagné et al., 2010). Thus, extrinsic motivation is driven not by the pleasure of the activity itself, but by the expected rewards or benefits associated with its outcomes (Gagné and Deci, 2005; Ryan and Deci, 2020). SDT argues that supporting basic needs enhances intrinsic motivation and internalization, whereas attempts to regulate behavior directly through external rewards, rules, and evaluations may paradoxically reduce motivation and performance quality (Ryan and Deci, 2020).

Finally, SDT is a comprehensive meta-theory of human motivation and personality development, composed of several closely related mini-theories (Ryan and Deci, 2000). It rests on the assumption that individuals naturally and actively seek to develop and organize the self. Accordingly, people strive for self-improvement and self-understanding by integrating new experiences, cultivating needs and interests, and forming connections with others and the broader environment (Ryan and Deci, 2020; Van den Broeck et al., 2016).

In SDT terms, workplace practices operate as need-supportive or need-thwarting signals. Practices that heighten perceived surveillance, external evaluation, and pressure tend to frustrate autonomy and may shift motivation toward more controlled forms of regulation. Conversely, practices that provide clarity, constructive feedback, opportunities for learning, and respectful interpersonal treatment tend to support competence and relatedness and facilitate internalization and higher-quality motivation (Ryan and Deci, 2000, 2020). Because internal auditing is implemented through direct auditor–auditee interactions and formal reporting and follow-up routines, it can function as a salient contextual signal—experienced as controlling oversight or as developmental support—depending on how audits are designed and enacted within organizations.

2.3 Maturities of the Internal Audit Function

The value added by the internal audit function is closely related to its level of maturity. Maturity is a multidimensional concept that reflects the internal audit function's position within the corporate structure, its capabilities, processes, and capacity to contribute strategically (D'Onza et al., 2020). Accordingly, internal audit maturity is not limited to technical competence and procedural compliance; it also encompasses alignment with organizational strategy, integration into governance processes, and the quality of relationships with stakeholders. Prior research on internal audit maturity has predominantly focused on organizational-level outcomes such as audit effectiveness, governance quality, risk management, and performance, while the employee-level experience of auditing and its psychological consequences have received comparatively limited systematic attention (Hazaea et al., 2021, 2023, 2025; Lenz et al., 2018; Prasad et al., 2021). This limitation matters because maturity may reflect not only technical capability but also shape how auditing is communicated, experienced, and interpreted by auditees, thereby influencing motivation through perceived autonomy support versus perceived control.

The Institute of Internal Auditors (IIA) defines internal auditing as an independent and objective assurance and consulting activity designed to evaluate and improve the effectiveness of risk management, control, and governance processes (IIA, 2024). In line with this definition, the maturity of the internal audit function can be understood as the extent to which audit activities evolve from a compliance and error-detection-oriented approach toward a proactive consulting role that creates value for organizational strategy (Lenz and Hahn, 2015). To explain internal audit maturity, the literature has proposed various models that describe internal audit development over time through stages or levels. In these models, lower levels typically emphasize transactional and compliance auditing, whereas higher lev-

els highlight risk-based auditing, strategic consulting, and contributions to corporate governance (Arena and Azzone, 2009; D'Onza et al., 2020). Internal audit maturity is commonly examined through two dimensions: strategic maturity and operational maturity. Strategic maturity refers to the extent to which the internal audit function aligns with organizational strategy, the nature of its relationship with senior management and the audit committee, its degree of independence and objectivity, its approach to transparency, and its capability to meet stakeholder expectations. This dimension captures the function's organizational standing and perceived institutional influence (D'Onza et al., 2020; Sarens and Abdolmohammadi, 2011). Operational maturity focuses on the day-to-day conduct of audit activities and processes. Key determinants include auditors' professional knowledge and skills, continuous training opportunities, career development prospects, the standardization of audit methodologies, effective use of information technologies, and the overall systematic nature of audit processes (Lenz and Hahn, 2015; Lois et al., 2021). An operationally mature internal audit function is better positioned to conduct audit work in a planned, consistent, and value-oriented manner. As internal audit maturity increases, audit effectiveness tends to improve, and organizational risk awareness may be strengthened. However, greater visibility of the internal audit function and an expanded audit scope may also be perceived by employees as heightened control and pressure. This suggests that the relationship between internal audit maturity and employee perceptions and motivation may not be linear. Therefore, the effects of strategic and operational maturity on employee motivation should be examined separately.

2.4 Development of Hypotheses

Building on the SDT-based mechanism outlined above and the strategic–operational distinction in internal audit maturity, the following hypotheses specify how each maturity dimension is expected to relate to overall motivation and to SDT-based motivation sub-dimensions.

2.4.1 Internal Audit Maturity as a Work Context Signal in Self-Determination Theory

Building on Self-Determination Theory (SDT), this study treats internal audit function maturity as a salient feature of the work context that can either support or frustrate employees' basic psychological needs—autonomy, competence, and relatedness—thereby shaping the quality of motivation (Deci and Ryan, 1985; Ryan and Deci, 2000, 2020). Importantly, the same "maturity" label may reflect different psychological cues depending on its dimension. Strategic maturity (e.g., independence, visibility, alignment with governance, monitoring, and follow-up) can function primarily as a control and accountability cue, potentially increasing perceived surveillance and evaluative pressure. Operational maturity (e.g., auditor competence, consistent methodologies, constructive communication, technology-enabled clarity, and advisory translation of findings) can function primarily as a capability and learning cue, potentially enhancing predictability, feedback quality, and developmental support. Accordingly, we derive hypotheses by mapping each maturity dimension to SDT's need-satisfaction mechanisms and to the regulatory continuum (from lack of motivation to intrinsic motivation), expecting that strategic and operational maturity may exert differential—and in some cases opposing—effects across motivation sub-dimensions (D'Onza et al., 2020; Ryan and Deci, 2020; Sarens and Abdolmohammadi, 2011).

2.4.2 Hypotheses

Within this logic, internal audit maturity is expected to produce meaningful effects on overall motivation as well as on specific motivation sub-dimensions. Accordingly, the following hypotheses are developed.

H1: The strategic and operational dimensions of internal audit function maturity affect employees' general motivation.

Strategic maturity may reduce general motivation because stronger visibility, follow-up, and governance linkage can heighten perceived monitoring and reduce perceived autonomy, which SDT associates with lower motivational quality and weaker willingness to invest effort (Funnell and Wade, 2012; Ryan and Deci, 2020). In contrast, operational maturity may enhance general motivation by improving process clarity, feedback, and developmental support, thereby strengthening perceived competence and relatedness (Lenz and Hahn, 2015; Lois et al., 2021).

H2: The strategic and operational dimensions of internal audit function maturity affect employees' lack of motivation.

Lack of motivation reflects purposelessness and a weakened perceived link between effort and outcomes. When auditing is experienced primarily as threat, blame, or uncertainty—particularly under highly visible strategic auditing and follow-up—employees may feel reduced agency and greater helplessness, increasing lack of motivation (Dittenhofer, 2001; Ryan and Deci, 2020). Conversely, operational maturity may reduce lack of motivation by clarifying expectations, improving feedback quality, and translating findings into actionable improvements that restore the effort–outcome connection (Ma'ayan and Carmeli, 2016; Penini and Carmeli, 2010).

H3: The strategic and operational dimensions of internal audit function maturity affect employees' intrinsic motivation.

Intrinsic motivation is most strongly supported when autonomy and competence are satisfied. Strategic maturity may undermine intrinsic motivation if it is interpreted as intensified control and evaluation, which can frustrate autonomy (Funnell and Wade, 2012; Ryan and Deci, 2020). Operational maturity may support intrinsic motivation by

framing audits as learning opportunities, providing constructive feedback, and strengthening competence through clearer processes and advisory support (Lenz and Hahn, 2015; Penini and Carmeli, 2010).

H4: The strategic and operational dimensions of internal audit function maturity affect employees' personal regulation.

More internalized forms of regulations are expected when individuals perceive activities as aligned with personal or organizational values and when the context supports meaningfulness and fairness. Strategic maturity—through transparency, alignment with strategy, and formal follow-up—may strengthen perceived purpose and value congruence, thereby influencing personal regulation (Ryan and Deci, 2020). Operational maturity may also contribute by translating audit findings into improvements that employees perceive as useful and just, reinforcing internalization (Ma'ayan and Carmeli, 2016).

H5: The strategic and operational dimensions of internal audit function maturity affect employees' introjected regulation.

Introjected regulation is driven by internal pressures such as avoiding guilt or shame or seeking ego enhancement. Strategic maturity can intensify evaluative visibility and accountability expectations, potentially increasing such self-imposed pressures (Funnell and Wade, 2012). Operational maturity may attenuate or reshape these pressures depending on whether audit feedback is experienced as supportive (competence-building) or controlling.

H6: The strategic and operational dimensions of internal audit function maturity affect employees' external regulation-social.

External regulation-social reflects motivation driven by the desire to gain approval or avoid criticism from others in the work environment. Strategic maturity, through its emphasis on formal monitoring, increased organizational visibility, and structured follow-up of audit findings, heightens employees' awareness of being evaluated by peers, supervisors, and governance bodies. Under SDT, such conditions intensify the salience of social contingencies; employees may become more attentive to how their compliance with audit expectations is perceived by others, thereby increasing socially driven external regulation (Dittenhofer, 2001; Ryan and Deci, 2020). Operational maturity, by contrast, may reshape the social meaning of audit interactions. When audits are experienced as consistent, competent, and improvement-oriented, employees may perceive audit-related feedback as fair and constructive rather than threatening, which can either sustain or modestly reduce socially driven compliance depending on the broader relational climate (Funnell and Wade, 2012; Ma'ayan and Carmeli, 2016).

H7: The strategic and operational dimensions of internal audit function maturity affect employees' external regulation-material.

External regulation-material reflects motivation driven by tangible outcomes such as financial rewards, performance bonuses, or the avoidance of material sanctions. Strategic maturity may amplify the perceived link between audit outcomes and material consequences: as internal audit functions become more formally integrated into governance and performance reporting systems, employees may increasingly associate audit findings with promotion decisions, performance appraisals, and compensation outcomes, thereby strengthening materially driven compliance (Bahtiar et al., 2021; Ma'ayan and Carmeli, 2016; Ryan and Deci, 2020). Operational maturity may moderate this dynamic by increasing the perceived fairness and predictability of audit processes. When audit methodologies are standardized, technology-enabled, and consistently applied, employees may perceive material evaluations tied to audit outcomes as more just and transparent, potentially reducing anxiety-driven material regulation while sustaining effort-based compliance (Bahtiar et al., 2021; Ma'ayan and Carmeli, 2016).

Model note: Because the model specifies that the two maturity dimensions (strategic and operational) predict each motivation dimension, two structural paths are estimated for each motivation outcome (strategic maturity → outcome; operational maturity → outcome). These paths are tested under the corresponding hypotheses (H1–H7) rather than being numbered as separate hypotheses.

3. Method

The research was conducted using quantitative methods and a correlational survey design. The study hypotheses were tested using structural equation modeling.

3.1 Sampling

The population of the research consists of managers and employees in 500 companies registered with Borsa Istanbul. Companies listed on Borsa Istanbul were preferred because they exhibit relatively high compliance with corporate governance principles in Türkiye and are more likely to have established internal audit functions. All individuals in the population were contacted via e-mail and invited to participate in the study. A reminder invitation was sent 15 days after the initial e-mail. The questionnaire, prepared using Google Forms, was included as a link in the invitation e-mails. Following the two invitations, 407 managers or employees completed the questionnaire. The data obtained from these participants were screened for outliers, and responses from 11 participants were removed. The final dataset consisted of 396 participants; Mahalanobis distance was used to examine multivariate outliers, and no additional outliers were detected. This study is a quantitative research project that aims to examine the effects of internal audit function maturity levels on employees' multidimensional work motivation. Because the research seeks to reveal relationships among variables, it was designed as a correla-

tional survey model. In line with the theoretical framework, the proposed model conceptualizes the strategic and operational maturity dimensions of the internal audit function as independent variables, and employees' work motivation as the dependent variable.

The relationships specified in the research model were analyzed using Structural Equation Modeling (SEM), which enables the simultaneous testing of causal linkages among multiple variables. SEM was preferred because it allows for the joint assessment of both measurement and structural models (Hair et al., 2019).

3.2 Measurements

The questionnaire consists of three parts. The first part includes a business information form containing general information and participants' demographic characteristics. The second part measures internal audit maturity levels, and the third part includes the Multidimensional Work Motivation Scale to assess employee motivation.

To measure internal audit maturity, the survey items included under the fifth heading of the 2015 CBOK survey (Common Body of Knowledge in Internal Auditing, conducted by the Internal Auditors Research Foundation (IIARF) and affiliated with the Institute of Internal Auditors) were used. Necessary permissions were obtained from the Institute of Internal Auditors for use of the scale. This scale has also been used in prior empirical studies. For example, D'Onza et al. (2020) employed it to test their proposed model of internal audit maturity. In that model, internal audit maturity is examined in two sub-dimensions: strategic maturity and operational maturity. The strategic maturity sub-dimension originally consisted of eight items (1, 2, 3, 4, 5, 6, 7, 9), and the operational maturity sub-dimension consisted of 11 items (8, 10, 11, 12, 14, 13, 15, 16, 17, 18, 19). For this study, the 19 original items were translated into Turkish by two linguists, taking cultural differences into account. An exploratory factor analysis was conducted to test structural validity. Items 13 and 19 were found to overlap with items and were therefore removed. The remaining 17 items loaded onto two factors with factor loadings of 0.50 and above. These factors were labeled strategic maturity and operational maturity, in line with D'Onza et al. (2020).

The first factor contains eight items, and the second contains nine items. Example strategic maturity items include: "When developing internal audit plans in your company, company strategies are taken into account, and audit plans are developed in consultation with senior managers", and "The annual internal audit plan in your company is flexible; the internal audit plan is kept up to date according to developments and changing risks throughout the year". Examples of operational maturity sub-dimension questions include: "The internal audit function makes extensive use of advanced technology tools in its audit work. Technology use is high in the internal audit function", and "The internal audit function assesses whether adequate internal control elements have been established within the company". Items were rated on a 5-point Likert-type scale ranging from "completely incompatible" to "completely compatible".

The Multidimensional Work Motivation Scale, developed by Gagné et al. (2010) based on Self-Determination Theory (Deci and Ryan, 1985), was used to measure employee motivation. The scale was adapted to Turkish culture by Çivilidağ and Şekercioğlu (2017). It is a 7-point Likert-type scale consisting of 18 items and six subdimensions, each with three items. The subscales are amotivation (1, 3, 5), intrinsic motivation (2, 4, 6), personal regulation (8, 10, 12), introjected regulation (14, 16, 18), external regulation-social (7, 9, 11), and external regulation-material (13, 15, 17). Example items include: "I don't put effort into my work because I think I'm wasting my time", "I put effort into my work because it's interesting", "Putting effort into my work has a special meaning for me", and "I put effort into my work because it aligns with my personal values." Responses range from "not at all appropriate" to "completely appropriate". In the Turkish adaptation study, Cronbach's alpha values for the six subscales ranged between 0.72 and 0.80.

3.3 Analyses

The data were examined for missing values, outliers, and normality assumptions (Field, 2024). Eleven cases were removed due to missing data and outliers. Skewness and kurtosis values were used to assess normality, following the criteria outlined by Kline (2023). Tabachnick and Fidell (2019) note that with sample sizes exceeding 200, moderate deviations from normality in skewness and kurtosis will not pose serious problems. However, Hair et al. (2010) and Byrne (2016) suggest that skewness values greater than ±2 and kurtosis values greater than ±7 may indicate potential issues. In this study, all skewness and kurtosis values fell within recommended thresholds, indicating that the normality assumption was adequately met.

Reliability and validity analyses were also conducted prior to hypothesis testing. Cronbach's alpha values were calculated for reliability analysis; values above 0.70 indicate acceptable reliability (Hair et al., 2019; Nunnally, 1978). All scales exceeded this criterion. Confirmatory Factor Analysis (CFA) was conducted for all scales to assess validity, and all standardized factor loadings exceeded 0.50. The data for the variables in this study were collected using self-report measures, which may introduce common method bias due to social desirability. To reduce potential bias, participants were provided with necessary explanations before completing the survey, the instructions for filling out the form were clarified, and they were informed that there were no right or wrong answers. Anonymity was ensured, and items across all scales were kept short and clear to minimize confusion and ambiguity (Podsakoff et al., 2012). In addition, we tested for common method bias

using single-factor confirmatory factor analysis (Podsakoff et al., 2003). IBM SPSS Statistics 26 (IBM Corp., Armonk, NY, USA), IBM SPSS AMOS 24 (IBM Corp., Armonk, NY, USA) and Google Forms (Google LLC, Mountain View, CA, USA) were used to analyze the data. Model fit was evaluated using Chi-Square to Degrees of Freedom Ratio (CMIN/DF), Root Mean Square Residual (RMR), Normed Fit Index (NFI), Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI), and Root Mean Square Error of Approximation (RMSEA) indices recommended by Hu and Bentler (1999). The structural equation modeling (SEM) results, including the assessment of measurement and structural models, were evaluated and reported in accordance with the contemporary guidelines suggested by Hair et al. (2019).

4. Findings

4.1 Descriptive Findings of Participants and Companies

It was found that approximately half of the participants (49.0%) were aged 36–49, 29.8% were aged 22–35, and 21.0% were aged 50–65 (Table 1). Nearly half of the participants (48.7%) held a bachelor's degree, 39.4% had a master's degree, and 11.9% had a high school or associate degree. In terms of tenure, 19.9% had worked in their companies for 1–3 years, 28.8% for 4–7 years, 30.8% for 8–15 years, and 20.5% for 16 years or more. Most participants were employees (27.5%) or managers (26.0%).

Table 1. Demographic findings of participants.

Variables	Groups	f	%
Age	22–35	118	29.8
	36–49	194	49.0
	50–65	83	21.0
Education	High School – Some College	47	11.9
	College	193	48.7
	Masters'	156	39.4
Working year in the Company	1–3 years	79	19.9
	4–7 years	114	28.8
	8–15 years	122	30.8
	16 years and above	81	20.5
Position in the company	Company Partner	41	10.4
	Board member	28	7.1
	General Manager/Asst. General Manager	39	9.8
	Manager	103	26.0
	Company Employee	109	27.5
	Internal Audit Function Manager	37	9.3
	Internal Audit Function Employee	39	9.8

Findings regarding the participants' companies are presented in Table 2. Most companies (92.5%) were privately owned, while 7.5% were publicly owned. Nearly half (43.7%) operated in manufacturing, 26.0% in technology, 10.1% in finance, and 20.2% in other sectors. The majority of firms (72.2%) had been active for 16 years or more. In 42.9% of cases, companies employed 501 or more workers; 15.7% had 101–500 employees, 21.7% had 51–100 employees, and 19.7% had 1–50 employees. The internal audit function typically included 1–4 people (55.8%), while 22.7% of companies had 9 or more employees. The internal audit function was most often carried out under the board of directors or audit committee (55.8%) or the general manager (24.7%). Most senior managers responsible for the internal audit function held a bachelor's degree (57.8%), followed by a master's degree (36.6%) and a doctorate degree (5.6%). The majority of companies (77.0%) held an internal audit function quality certificate. Audit committees most commonly reviewed internal audit outputs in 2–3 meetings (33.1%) or 4–5 meetings (26.3%) per year.

4.2 Validity and Reliability

Confirmatory factor analysis (CFA) was conducted for the scales and subscales used in this study (Table 3). The original CFA model included 35 items across eight subscales and two scales. Prior to CFA, normality was assessed using skewness and kurtosis values. Skewness fell within ±2 and kurtosis within ±7, which are acceptable criteria in the social sciences (Byrne, 2016; Hair et al., 2010). In the initial CFA model, standardized regression weights for items IA5, IA8, IA11, MWMS2, MWMS5, MWMS8, MWMS11, MWMS14, and MWMS17 were below 0.50 (IA (Internal Audit), MWMS (Multidimensional Work Motivation Scale)). These items were removed, and the CFA was repeated. In the modified model with 26 items, all standardized regression weights exceeded 0.50, and all probability (p) values were below 0.05. To improve model fit, covariance paths suggested by the AMOS modification index were added between specified items. The modified model is shown in Fig. 1. As presented in Table 4, CMIN/DF, RMR, CFI, GFI, AGFI, and RMSEA met recommended criteria, and the NFI value of 0.89 was close to the 0.90 threshold. The modified CFA model was therefore considered to have acceptable fit.

Reliability analyses were conducted by calculating Cronbach's alpha coefficients in line with the factor structures identified through CFA. All Cronbach's alpha values were 0.70 or higher (Table 5), indicating acceptable reliability (Nunnally, 1978).

4.3 Hypothesis Tests

Table 6 presents the means, standard deviations, and correlations among the study variables. A negative correlation was found between the strategic maturity dimension of internal audit functions and the amotivation and external regulation-social sub-dimensions of employee motivation (r = –0.33 and $p < 0.05$; r = –0.28 and $p < 0.05$,

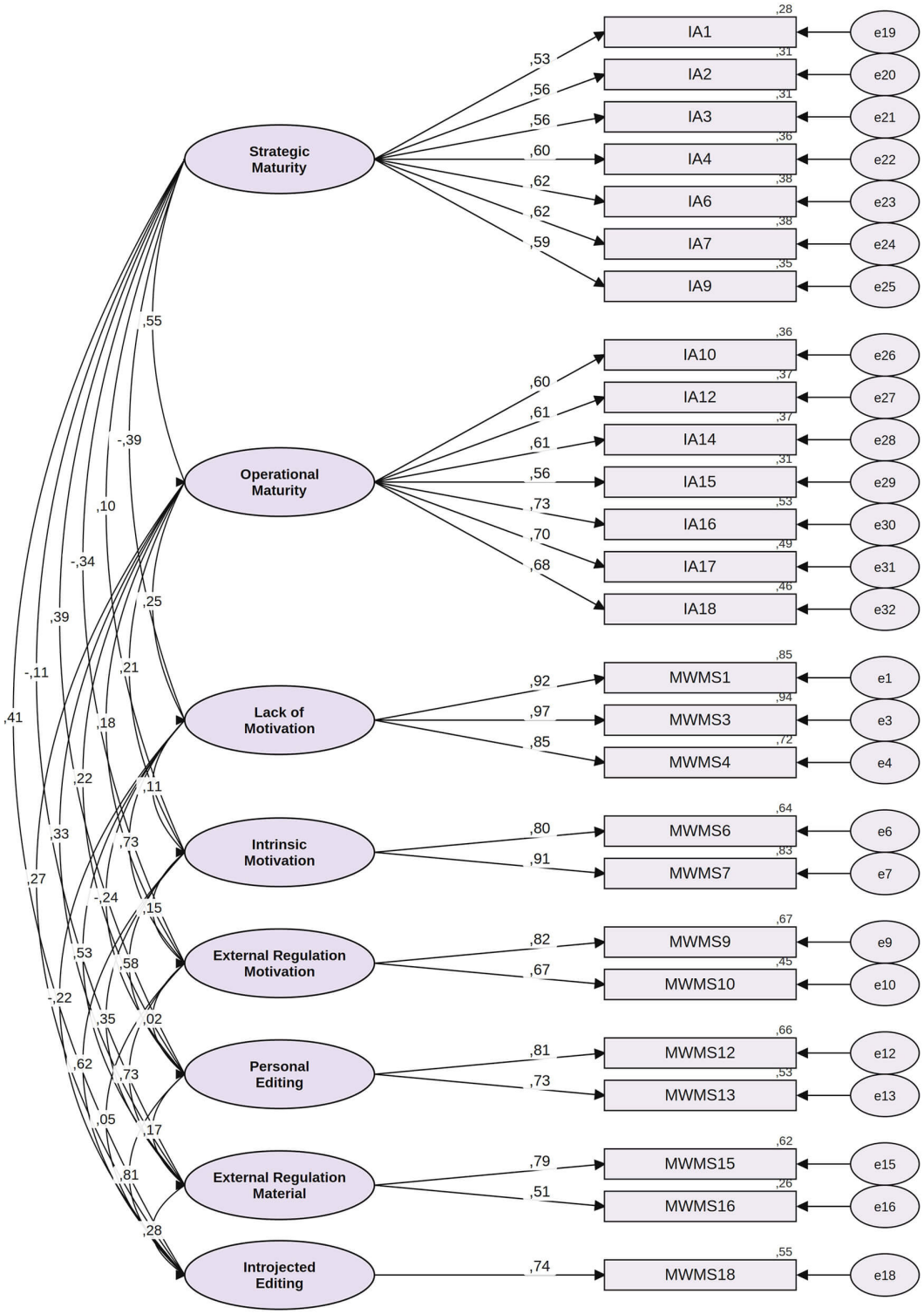


Fig. 1. Modified CFA model. CFA, Confirmatory Factor Analysis.

respectively). Positive significant relationships were detected between the personal and introjected regulation subdimensions ($r = 0.29$ and $p < 0.05$; $r = 0.26$ and $p < 0.05$, respectively). No significant relationships were found between strategic maturity and intrinsic motivation or external regulation-material ($p > 0.05$).

A positive correlation was observed between the operational maturity dimension and all sub-dimensions of employee motivation: amotivation, intrinsic motivation, personal regulation, introjected regulation, external regulation-social, and external regulation-material ($r = 0.22$ and $p < 0.05$; $r = 0.18$ and $p < 0.05$; $r = 0.18$ and $p < 0.05$; $r = 0.19$

Table 2. Findings regarding the companies the participants work for.

Variables	Groups	f	%
Company ownership	Private	358	92.5
	Public	29	7.5
Sector	Manufacturing	173	43.7
	Financial Institutions	40	10.1
	Technology	103	26.0
	Others	80	20.2
Company age	3 years and below	27	6.8
	4–15 years	83	21.0
	16 years and above	286	72.2
Number of employees in the company	1–50	78	19.7
	51–100	86	21.7
	101–500	62	15.7
	501 and above	170	42.9
Number of employees in the internal audit function	1–2 Person	130	32.8
	3–4	91	23.0
	5–6	58	14.6
	7–8	27	6.8
	9 and above	90	22.7
Under whom are internal audit functions carried out?	Board of Directors/ Audit Committee	221	55.8
	General manager	98	24.7
	Deputy general manager	55	13.9
	Others	22	5.6
Educational Status of the top manager of internal audit functions	College	229	57.8
	Masters'	145	36.6
	Doctorate	22	5.6
Possession of quality certificate for internal audit functions	Has quality certificate	305	77.0
	Does not have quality certificate	91	23.0
Frequency of monitoring of internal audit outputs by the audit committee	Once a year	49	12.4
	2–3 meetings per year	131	33.1
	4–5 meetings per year	104	26.3
	6–7 meetings per year	49	12.4
	8 or more meetings per year	63	15.9

and $p < 0.05$; $r = 0.15$ and $p < 0.05$; $r = 0.26$ and $p < 0.05$, respectively).

To test the research hypotheses, two structural models were developed (Figs. 2,3). As shown in Table 7, the strategic and operational maturity dimensions explained 51% of the variance in total employee motivation, and both effects were significant. Strategic maturity had a negative effect, whereas operational maturity had a positive effect ($\beta = -0.79$ and $p < 0.05$; $\beta = 0.71$ and $p < 0.05$, respectively). Accordingly, H_1 was accepted.

The two dimensions explained 72% of the variance in amotivation. Strategic maturity had a negative effect, and operational maturity had a positive effect ($\beta = -1.09$ and $p < 0.05$; $\beta = 0.97$ and $p < 0.05$, respectively). H_2 was accepted.

They explained 11% of the variance in intrinsic motivation. Operational maturity had a significant positive effect, while strategic maturity did not ($\beta = 0.41$ and $p < 0.05$; $\beta = -0.13$ and $p > 0.05$, respectively). H_3 was accepted.

They explained 19% of the variance in personal regulation, with only strategic maturity showing a significant positive effect ($\beta = 0.37$ and $p < 0.05$). H_4 was accepted.

They explained 20% of the variance in introjected regulation, again with only strategic maturity showing a significant positive effect ($\beta = 0.30$ and $p < 0.05$). H_5 was accepted.

They explained 69% of the variance in external regulation-social motivation. Both effects were significant, with strategic maturity negative and operational maturity positive ($\beta = -1.07$ and $p < 0.05$; $\beta = 0.96$ and $p < 0.05$, respectively). H_6 was accepted.

Finally, they explained 52% of the variance in external regulation-material. Both dimensions had significant effects, with strategic maturity negative and operational maturity positive ($\beta = -0.79$ and $p < 0.05$; $\beta = 0.94$ and $p < 0.05$, respectively). H_7 was accepted.

5. Discussion and Conclusion

5.1 Summary of Key Findings

This study examined how the maturity of the internal audit function relates to employees' work motivation by distinguishing between strategic and operational maturity and interpreting these links through Self-Determination Theory (SDT). The results indicate that internal audit maturity is not psychologically uniform from the employee perspective. Strategic and operational maturity are both significantly associated with employees' overall motivation, but their directions differ: strategic maturity shows a negative association, whereas operational maturity shows a positive association. This opposite-signed pattern suggests that what organizations label as "maturity" may convey qualitatively different work-context signals to employees, shaping motivational quality in different ways.

Beyond overall motivation, the findings also indicate that maturity dimensions relate to SDT-based motivation sub-dimensions, although the magnitude of these relationships varies. The explained variance for intrinsic motivation and more internalized forms of regulation is comparatively modest, implying that internal audit maturity is only one of several drivers of autonomous motivation. By contrast, relationships with more controlled forms of motivation (external regulation) are more pronounced, highlighting that audit-related practices may be especially relevant for how employees interpret social and material contingencies surrounding their work.

Table 3. Confirmatory factor analysis findings regarding the scales used.

Items		Factors	β_0	β_1	SE	C.R.	p
IA1	←		0.53	1.00			
IA2	←		0.56	1.05	0.11	9.78	0.00
IA3	←		0.56	1.17	0.15	7.83	0.00
IA4	←	Internal Audit Strategic Maturity	0.60	1.23	0.15	8.22	0.00
IA6	←		0.62	1.37	0.17	8.29	0.00
IA7	←		0.62	1.28	0.15	8.33	0.00
IA9	←		0.59	1.15	0.14	8.13	0.00
IA12	←		0.61	0.90	0.09	9.65	0.00
IA14	←		0.60	0.91	0.10	9.49	0.00
IA15	←		0.56	0.80	0.09	9.02	0.00
IA16	←	Internal Audit Operational Maturity	0.73	1.01	0.09	10.87	0.00
IA17	←		0.70	1.06	0.10	10.46	0.00
IA18	←		0.68	1.11	0.11	10.28	0.00
IA10	←		0.60	1.00			
MWMS1	←	Lack of Motivation	0.92	1.00			
MWMS3	←		0.97	1.05	0.03	31.99	0.00
MWMS4	←	Intrinsic Motivation	0.85	1.00			
MWMS6	←		0.80	0.97	0.07	13.95	0.00
MWMS7	←	External Regulation-Social	0.91	1.00			
MWMS9	←		0.82	0.80	0.04	19.27	0.00
MWMS10	←	Personal Regulation	0.67	1.00			
MWMS12	←		0.81	1.14	0.10	11.89	0.00
MWMS13	←	External Regulation-Material	0.73	1.00			
MWMS15	←		0.79	1.10	0.09	12.32	0.00
MWMS16	←	Introjected Regulation	0.51	1.00			
MWMS18	←		0.74	1.44	0.18	8.20	0.00

MWMS, Multidimensional Work Motivation Scale; IA, Internal Audit; C.R., Critical Ratio.

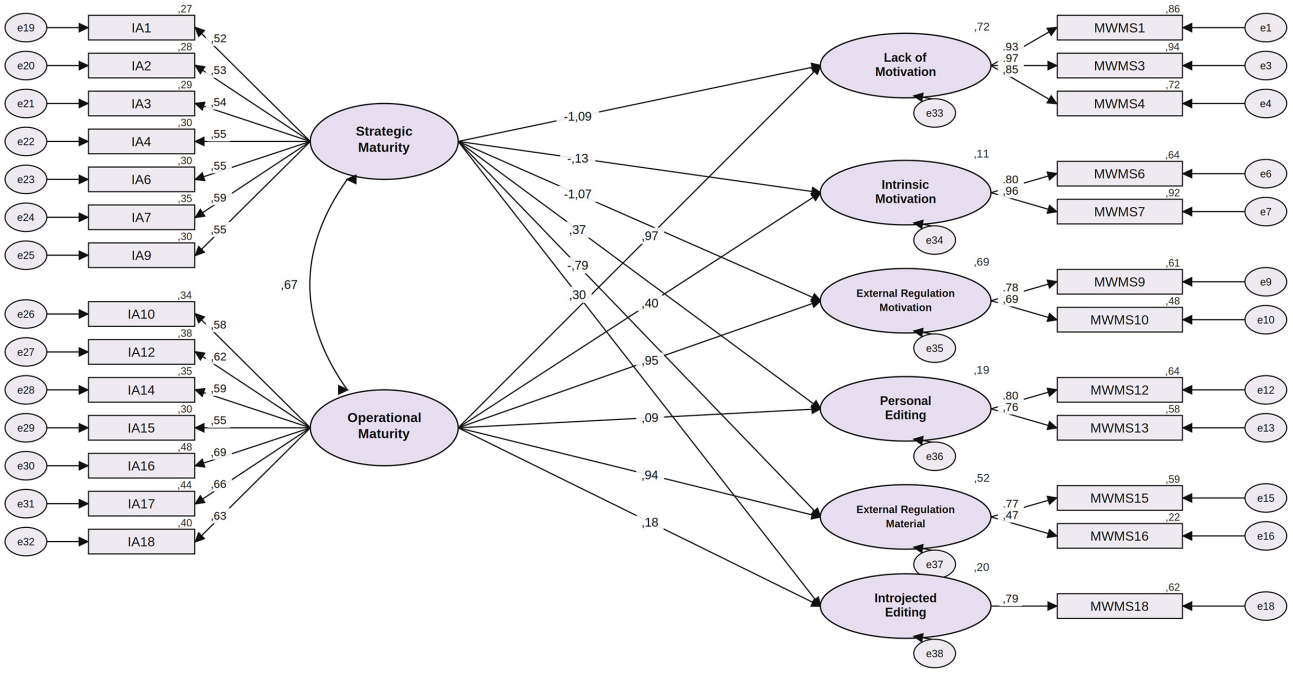


Fig. 2. The effect of the maturity of internal audit functions on motivation sub-dimensions.

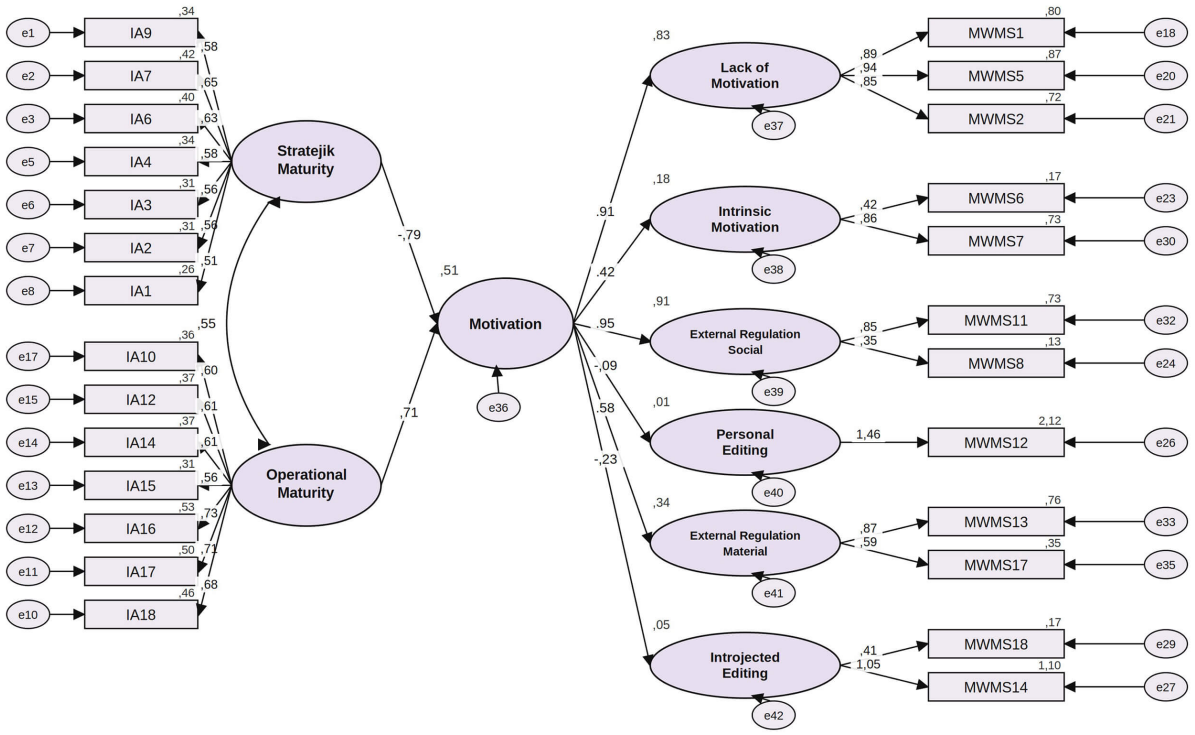


Fig. 3. The effect of the maturity of internal audit functions on general motivation.

Table 4. Confirmatory factor analysis model fit index findings.

Fit index	Acceptable fit	Original model	Modified model
CMIN/DF	<3.00	2.71	2.02
RMR	<0.10	0.15	0.096
NFI	>0.90	0.81	0.89
CFI	>0.90	0.87	0.94
GFI	>0.90	0.83	0.91
AGFI	>0.85	0.80	0.89
RMSEA	<0.10	0.07	0.05

Note: CMIN/DF, Chi-Square to Degrees of Freedom Ratio; RMR, Root Mean Square Residual; NFI, Normed Fit Index; CFI, Comparative Fit Index; GFI, Goodness of Fit Index; AGFI, Adjusted Goodness of Fit Index; RMSEA, Root Mean Square Error of Approximation.

Table 5. Reliability analysis of the scales used in the research.

Scales	Number of items	Cronbach's alpha
Internal audit strategic maturity	7	0.81
Internal audit operational maturity	7	0.84
Lack of motivation	2	0.95
Intrinsic motivation	2	0.81
External regulation-material	2	0.85
Personal regulation	2	0.71
External regulation-social	2	0.74
Introjected regulation	2	0.75

5.2 Interpreting the Opposite Signs: Strategic vs. Operational Maturity

A noteworthy finding concerns the positive association between operational maturity and amotivation (β = 0.97, $p < 0.05$), which runs counter to the theoretical expectation that operationally mature audit functions would reduce employees' sense of purposelessness by improving feedback clarity and process predictability. Several interpretations merit consideration. First, a suppression effect cannot be ruled out. Given the substantial negative path from strategic maturity to amotivation ($\beta = -1.09$) and the likely intercorrelation between the two maturity dimensions, the positive operational maturity coefficient may partly reflect a statistical artifact of their joint inclusion in the structural model rather than a purely substantive effect. Second, a plausible substantive interpretation is that operationally mature audit functions—characterized by systematic risk assessment, standardized methodologies, and comprehensive internal control evaluations—may paradoxically increase the perceived scope and visibility of auditing in employees' daily routines. Rather than experiencing operational maturity as developmental support, some employees may interpret more thorough and consistent audit coverage as expanded surveillance, which, under SDT conditions associated with need frustration, could contribute to feelings of helplessness and disconnection from work outcomes (Ryan and Deci, 2020). Future research should examine this unexpected pattern using longitudinal designs and by distinguishing between the technical scope of operational auditing and its interpersonal and communicative

Table 6. Analysis of the relationships between the scales used in the research.

Variables	$\bar{X}$	Ss	1	2	3	4	5	6	7
1. Internal Audit Strategic Maturity	4.19	0.57	1						
2. Internal Audit Operational Maturity	4.00	0.67	0.42**	1					
3. Lack of Motivation	3.40	2.24	–0.33**	0.22**	1				
4. Intrinsic Motivation	5.51	1.24	0.07	0.18**	0.11*	1			
5. Personal Regulation	5.81	1.01	0.29**	0.18**	–0.17**	0.52**	1		
6. Introjected regulation	5.85	0.91	0.26**	0.19**	–0.16**	0.40**	0.51**	1	
7. External Regulation-Social	4.42	1.83	–0.28**	0.15**	0.65**	0.22**	–0.01	0.07	1
8. External Regulation-Material	4.80	1.56	–0.10	0.26**	0.45**	0.26**	0.03	0.20**	0.60**

*. The relationship between variables is significant at the 0.05 level.

**. The relationship between variables is significant at the 0.01 level.

Table 7. Results of structural models.

Dependent variables		Factors	β	SE	R^2	p
Lack of motivation	←	Internal Audit Strategic Maturity	–1.09	0.64	0.72	0.00
	←	Internal Audit Operational Maturity	0.97	0.38		0.00
Intrinsic motivation	←	Internal Audit Strategic Maturity	–0.13	0.22	0.11	0.10
	←	Internal Audit Operational Maturity	0.41	0.17		0.00
Personal regulation	←	Internal Audit Strategic Maturity	0.37	0.19	0.19	0.00
	←	Internal Audit Operational Maturity	0.09	0.11		0.15
Introjected regulation	←	Internal Audit Strategic Maturity	0.30	0.14	0.20	0.05
	←	Internal Audit Operational Maturity	0.18	0.08		0.28
External regulation-social	←	Internal Audit Strategic Maturity	–1.07	0.37	0.69	0.00
	←	Internal Audit Operational Maturity	0.96	0.26		0.00
External regulation-material	←	Internal Audit Strategic Maturity	–0.79	0.58	0.52	0.00
	←	Internal Audit Operational Maturity	0.94	0.35		0.00
General motivation	←	Internal Audit Strategic Maturity	–0.79	0.49	0.51	0.00
	←	Internal Audit Operational Maturity	0.71	0.28		0.00

dimensions, as these may carry different motivational implications for auditees.

A central contribution of the study is the observation that strategic and operational maturity can plausibly produce opposite motivational effects because they carry different psychological meanings for auditees. Strategic maturity typically involves greater organizational visibility of internal audit, stronger links to governance and assurance, and more formal monitoring and follow-up of audit findings. Although these features are intended to strengthen accountability and governance, employees may experience them primarily as an intensified "accountability architecture". In SDT terms, this can elevate perceived surveillance and evaluative pressure, reduce perceived discretion, and frustrate autonomy conditions associated with lower motivational quality (Ryan and Deci, 2020). The observed negative association between strategic maturity and motivation is consistent with this interpretation and aligns with arguments that intensive audit and control practices can increase anxiety and threat perceptions, thereby weakening motivation (Dittenhofer, 2001; Funnell and Wade, 2012).

Operational maturity, in contrast, is more likely to be experienced through concrete routines and interactions that employees directly encounter: clearer methodologies, higher auditor competence, constructive communication, technology-enabled predictability, and improvement-oriented advisory translation of findings. Such features can function as capability and learning-support cues. In SDT terms, they may support competence (feeling effective through clarity and feedback) and, in many contexts, relatedness (feeling respected, listened to, and treated fairly), thereby strengthening motivation (Lenz and Hahn, 2015; Ma'ayan and Carmeli, 2016). The positive association observed for operational maturity is therefore consistent with SDT's expectation that developmental support and predictable processes facilitate higher-quality motivation.

Importantly, the divergence between the two maturity dimensions suggests that the employee experience of internal auditing may contain two coexisting "faces": a control and monitoring face (more salient under strategic maturity) and a learning and development face (more salient under operational maturity). The findings imply that organizations may strengthen governance through strategic maturity while inadvertently creating motivational costs unless autonomy-supportive design features and communication practices are deliberately embedded.

5.3 Comparison With Prior Evidence and Alternative Explanations

5.3.1 Perceived Control and Surveillance as a Mechanism (Strategic Maturity → Autonomy Frustration)

The negative strategic-maturity association may appear unexpected when compared with studies emphasizing the value-creating potential of strategically mature internal auditing—such as stakeholder involvement in the audit process, improved audit planning, and the implementation of audit results (e.g., Aydemir and Kıpçak, 2025; Bahtiar et al., 2021; Penini and Carmeli, 2010). However, these benefits do not preclude a simultaneous control signal at the employee level. A plausible reconciliation is that strategic maturity can enhance organizational-level governance outcomes while still being experienced by employees as heightened monitoring and reduced discretion. In other words, the same strategic features that improve accountability may also increase perceived evaluative consequences, making autonomy frustration a credible mechanism (Ryan and Deci, 2020).

An alternative explanation is that strategic maturity may covary with broader organizational characteristics—formalization, performance pressure, or a compliance-oriented climate—such that the negative motivational association partly reflects a high-control environment rather than auditing alone. Future research could separate these effects by including organizational climate measures and by using multilevel designs that distinguish audit-function maturity from general control intensity.

5.3.2 Justice, Trust, and Psychological Safety (Operational Maturity → Fairness and Developmental Feedback)

The positive association of operational maturity aligns with evidence that fair and transparent practices strengthen employee trust and commitment, which in turn support motivation (Bahtiar et al., 2021; Ma'ayan and Carmeli, 2016). Operational maturity may operate as a "justice and learning infrastructure": it can make audit procedures more consistent, improve the quality and timeliness of feedback, and increase the perceived usefulness of recommendations. When employees perceive audit interactions as respectful and improvement-oriented, they may be more willing to invest effort and more likely to interpret audits as supportive rather than punitive.

At the same time, alternative interpretations should be considered. Reverse causality is possible: more motivated units may cooperate more effectively with internal auditors, thereby enabling smoother audit processes and higher perceived operational maturity. In addition, single-source perceptual measures may inflate associations. Longitudinal designs, supervisor or auditor-rated measures, and objective indicators of audit practices could help clarify directionality and reduce common method concerns.

5.3.3 Context Moderators: When and for Whom Do the Effects Differ?

The opposite-signed effects may depend on context. For example, the strategic-maturity effect may differ by organizational role (manager vs. non-manager), because managers may perceive strategic auditing as legitimacy and governance support, whereas non-managers may experience it as surveillance and blame risk. Effects may also vary across sectors and institutional settings. In organizations where audits have historically been associated with punishment, strategic maturity may be more autonomy-thwarting; in organizations that frame audits as continuous improvement and coaching, the same strategic features may be less threatening.

Governance features could further moderate these effects. The strength of the audit committee, the consistency of top management messaging, and whether audit outcomes are used developmentally (learning, training, process improvement) rather than punitively (sanctions, blame) may shape the motivational meaning of strategic maturity. Quality certifications and mature HR systems may also matter, as they can channel audit findings into capability-building rather than punishment. Future studies should test moderated mediation models using perceived autonomy support, procedural justice, trust, and psychological safety as mediators and role, sector, and governance features as moderators.

5.4 Implications for SDT Mechanisms (Autonomy–Competence–Relatedness)

The findings have clear implications for SDT-based mechanisms. First, the negative strategic-maturity association is consistent with an autonomy-relevant pathway: increased visibility, monitoring, and follow-up can signal external control, elevate evaluation anxiety, and reduce perceived discretion. Under SDT, such conditions undermine autonomy satisfaction and tend to shift motivation toward more controlled regulation or amotivation in some contexts (Ryan and Deci, 2020).

Second, operational maturity is consistent with competence and relatedness-relevant pathways. Audits often create uncertainty and interdependence during and after the audit process, which can challenge employees' sense of competence if criteria are unclear, feedback is not actionable, or evaluation systems are perceived as opaque. When employees cannot understand how internal audit assessments work or do not receive meaningful feedback, they may feel their competence needs are thwarted, which can reduce motivational quality (Humphrey et al., 2009; Parker et al., 2001). Operational maturity can mitigate these dynamics by clarifying expectations, improving feedback loops, and translating findings into concrete improvements and learning opportunities—thereby supporting competence and, in many cases, relatedness through more constructive interactions.

Third, the comparatively modest explained variance in intrinsic motivation and personal regulation indicates that internal audit maturity is not a dominant driver of autonomous motivation. Intrinsic motivation is strongly influenced by broader job-design and work-environment conditions—such as discretion, workload, physical conditions, social support, and stress levels—which may dilute the incremental effect of auditing (Nuryasin et al., 2016). Nonetheless, the observed pattern suggests that audit maturity can meaningfully shape the motivational climate by influencing autonomy and competence-relevant experiences during audit encounters and by affecting how employees interpret the social and material contingencies attached to performance and evaluation.

5.5 Theoretical Contributions

This study makes three theoretical contributions. First, it identifies internal audit function maturity as a determinant of employee motivation, addressing a micro-level gap in internal auditing research that has predominantly focused on organizational-level outcomes. Second, it extends SDT to the internal audit maturity domain by conceptualizing audit maturity as a work-context signal that can either frustrate autonomy (via heightened surveillance and accountability cues) or support competence and relatedness (via clearer processes, constructive feedback, and improvement-oriented advisory translation). Third, it demonstrates that strategic and operational maturity are not interchangeable manifestations of the same capability; they may operate through different SDT mechanisms and therefore yield opposing motivational consequences.

The results also suggest that internal audit maturity is a comparatively lower-level determinant of intrinsic motivation and more internalized regulation, while it appears more consequential for controlled forms of motivation. This pattern invites future SDT-informed research that examines how internal auditing interacts with broader work-design and HR practices in shaping autonomy support, internalization, and motivational quality over time.

5.6 Practical Implications

The findings imply that organizations should actively manage the psychological meaning of audit maturity, not only its technical content. To preserve governance benefits while mitigating potential motivational costs of strategic maturity, organizations may communicate audit purposes, criteria, and follow-up procedures transparently and in a developmental tone; provide opportunities for voice and explanation during audits and closing meetings; separate learning-oriented feedback from punitive accountability where feasible; and ensure procedural justice in how audit outputs are translated into performance evaluations.

To leverage the motivational benefits of operational maturity, firms can standardize feedback protocols focused on process improvement, link recurring findings to training and capability-building plans developed jointly with HR, invest in auditors' interpersonal and coaching skills to strengthen auditee–auditor relationships, and use technology to increase predictability and reduce uncertainty during audits. Given that operational maturity appears to support motivation through clarity and developmental support, designing audits as learning mechanisms rather than solely compliance mechanisms may be especially effective in sustaining motivation.

5.7 Limitations and Future Research

Several limitations warrant caution. First, the cross-sectional design restricts causal inference and raises the possibility of reverse causality (e.g., more motivated employees may perceive audit practices more positively). Second, although procedural and statistical remedies were applied, reliance on self-reported single-source data may still involve common method bias.

Third, the sample was drawn from large publicly listed firms in Türkiye, which may limit generalizability to smaller firms or other institutional settings. Although Türkiye represents a distinct and underrepresented context in both the internal audit maturity and work motivation literatures, cross-cultural replication remains necessary. Future studies should test whether the opposite-signed effects of strategic and operational maturity on employee motivation are replicated in other emerging markets, in more collectivist cultural contexts where audit authority and hierarchical control may carry different psychological meanings, or in institutional settings characterized by stronger or weaker traditions of internal audit independence. Such comparative evidence would help establish the boundary conditions of the present findings and contribute to a more contextually diverse evidence base.

Fourth, the internal audit maturity instrument was translated and adapted; although reliability and validity were supported, future research should further examine measurement equivalence and invariance across contexts and subgroups.

Future studies should test mediators and moderators that clarify why strategic and operational maturity show opposite-signed effects—particularly perceived autonomy support, procedural justice, trust, and psychological safety—and should examine heterogeneity by role, sector, and governance strength (e.g., audit committee effectiveness). Longitudinal and mixed-method designs combining surveys with interviews or audit-process observations would also help capture how employees interpret audit encounters and how motivational consequences unfold over time.

5.8 Conclusion

This study shows that internal audit function maturity has meaningful associations with employee motivation, but these associations depend on the dimension of matu-

rity. Strategic maturity is associated with lower motivation, consistent with a control and accountability cue that may frustrate autonomy, whereas operational maturity is associated with higher motivation, consistent with a capability and learning-support cue that can strengthen competence and relatedness. These findings suggest that organizations should treat internal audit maturity not only as a governance capability but also as a work-context signal with motivational consequences. Designing audit practices that maintain accountability while supporting employees' basic psychological needs may help organizations realize the benefits of internal auditing without incurring unintended motivational costs.

Availability of Data and Materials

The datasets generated and/or analyzed during the current study are not publicly available due to privacy and confidentiality guarantees provided to the participating companies and employees, but are available from the corresponding author on reasonable request.

Author Contributions

Conceptualization, MHÖ and OE; methodology, MHÖ and OE; formal analysis, MHÖ; data collection, MHÖ; writing original draft preparation, MHÖ; writing review and editing, OE. Both authors have read and agreed to the published version of the manuscript. Both authors have participated sufficiently in the work and agreed to be accountable for all aspects of the work.

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Conflicts of Interest

The authors declare no conflicts of interest.

Declaration of AI and AI-Assisted Technologies in the Writing Process

During the preparation of this work, the authors used AI-assisted writing tools (ChatGPT by OpenAI and Claude by Anthropic) solely for the purposes of grammar checking, language editing, and improving the clarity of expression. These tools were not used for data collection, data analysis, interpretation of findings, or the generation of substantive content. After using these tools, the authors carefully reviewed and edited all AI-assisted content and take full responsibility for the accuracy, originality, and integrity of the published work. This declaration is made in accordance with the Committee on Publication Ethics (COPE) guidelines on the use of AI-assisted technologies in academic publishing.

Supplementary Material

Supplementary material associated with this article can be found, in the online version, at https://doi.org/10.31083/JEEMS42729.

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