FLORIDA INTERNATIONAL UNIVERSITY

Miami, Florida

WHAT TEAM-LEVEL FACTORS DRIVE INNOVATION IN THE INTERNAL AUDIT FUNCTION?

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DEDICATION

I dedicate this work to my mother, whose unwavering love and endless support have been my constant source of strength and inspiration.

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ABSTRACT OF THE DISSERTATION

WHAT TEAM-LEVEL FACTORS DRIVE INNOVATION IN THE INTERNAL AUDIT FUNCTION?

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Digital transformation compels businesses to innovate. While it offers benefits, firms risk losing value without effective risk management. Internal audit plays a critical role in assisting the firm to identify these risks and ensure strong internal controls. However, traditional auditing methods are insufficient. Internal auditors must develop new competencies to provide assurance and consulting services to digitally transformed organizations. To adapt, internal audit teams must embrace innovation. Notably, research on innovation factors in business or support units is limited despite the abundant literature on innovation. This study addresses this gap by focusing on team-level factors driving innovation in internal audit. It contributes to the literature by designing, testing and proposing a theoretical model that practitioners can use to prescribe actions and activities that promote innovation in the internal audit function. The results indicate that transformational leadership, support for innovation initiatives, and external communication are the most significant determinants of team innovation in internal audit.

Practically, the study highlights three critical areas for implementing effective change and innovation initiatives: transformational leadership development, fostering a supportive environment, and encouraging external knowledge capture to enhance internal audit practices.

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INTRODUCTION

Problem Statement

The digital transformation drives change and innovation across global industries, fundamentally altering how companies operate. Faced with technological disruption from new digital-only competitors, firms are rapidly shifting their business models towards digital channels (internet, smartphones) to deliver customer-centric products, enhance personalization, and reduce operational costs. This transformation is essential for firms to remain competitive and meet evolving customer expectations. By integrating technology and analytics, companies can automate repetitive tasks, freeing up valuable resources to focus on higher-value activities (Schlegel & Kraus, 2023).

However, digital transformation only creates value if firms can effectively manage inherent risks. These risks encompass strategic and execution aspects, technology-related and operational concerns, and emerging threats. A significant revenue increase from a digital process is negated if accompanied by losses due to unaddressed risks. In simple terms, organizations risk losing the value created by digital transformation unless they proactively manage risks in the digital landscape. New capabilities are necessary to identify, evaluate, mitigate, transfer, or reject these risks (Boehm et al., 2021).

In this context of technological advancements reshaping businesses, processes, and updated internal control systems, internal audit, as a third line of defense, plays a critical role. The function must assist firms in identifying emerging risks and evaluating the effectiveness of internal controls under the new circumstances. Board members and

senior management recognize this heightened need and demand changes: updating internal audit capabilities and implementing a forward-looking approach are essential. This proactive strategy replaces the obsolete reactive model that identified issues only after they occurred (Shivram, 2024). Traditional auditing techniques are insufficient in this new reality. Internal auditors must develop new competencies to provide assurance and consulting services to digitally transformed organizations (McCafferty, 2020). The new role necessitates implementing innovative ideas, methodologies, and technology to transform the auditing process. Internal audit leaders must foster a culture of innovation and change, drawing on past experiences and relevant research.

Innovation is not a novel concept in business literature with references dating back to the 19th century. The concept gained significant traction in the early 20th century with Schumpeter's innovation theory. Scholars from diverse backgrounds (psychology, social sciences, business) have extensively researched the term. Innovation refers to creating something entirely new or significantly modifying something existing. This "something new" can be a product, service, process, organizational structure, or a novel way of working (Rogers, 1998). Regardless of the definition, innovation inherently involves two aspects: invention (creation) and adoption (implementation). Analyses solely focused on invention represent creativity rather than true innovation (Dewangan & Godse, 2014). The existing literature explores various dimensions of innovation, including its antecedents, consequences, mediating factors, and moderating factors. Notably, only a few studies examine innovation within specific support functions, particularly in internal audit.

Significance of the Problem

Internal auditing is a collective endeavor, a team-driven service where teams form the core structure and foster the function's culture (Barac et al., 2021). Composed of diverse backgrounds, skills, and experience levels, these teams rely on collaboration to generate and adopt new ideas. This emphasis on teamwork underscores the importance of analyzing audit team behavior regarding innovation.

In this digital era, internal audit teams must embrace change and disruption through innovation. New approaches and technologies are crucial for internal auditors to effectively assess and evaluate business functions already leveraging digital advancements (Nair, 2022). A 2019 Protiviti survey suggests internal audit leaders are actively reforming practices, with 60% of groups implementing innovative or transformative initiatives. Guidance with empirical support is needed on how innovation works within internal audit teams.

Research Gap

Traditionally viewed as conservative, the internal audit profession is actively transforming to embrace innovation and seek alignment with the broader organization (Tysiac, 2018). Innovation is a prominent theme in internal audit publications and conferences, where practitioners discuss challenges and propose solutions. However, a critical gap exists in academic research on internal audit. While a limited number of studies address the profession, they often neglect practitioner-relevant issues like innovation (Behrend & Eulerich, 2019). Calls for

more research aligned with the needs of internal audit practitioners have already been made (Christ et al., 2021).

Research Questions

Understanding the essence of innovation within internal audit is crucial before fostering an innovative culture. Thus, this study poses the following research question:

What team-level factors drive innovation in the internal audit function?

The focus on team-level analysis aligns with the team-oriented nature of internal auditing, where collaboration is essential for success (Fornelli, 2018).

Research Contributions

This study addresses a critical gap in internal audit literature. Existing research often overlooks practitioner-relevant issues, particularly those concerning generating and implementing new ideas and changes within the internal audit function. This study contributes to the internal audit literature by designing, testing, and proposing a novel theoretical model that equips practitioners with actionable insights for fostering innovation within the internal audit function. The findings highlight leadership style, a supportive environment, and the capture of external knowledge as the most significant determinants of team innovation. This research expands the managerial innovation field by providing robust empirical evidence for the impact of transformational leadership, support for innovation initiatives, and external communication on team innovation, specifically within internal audit teams. Further research is necessary to explore the generalizability of these findings and build upon this study's contribution to existing

theory. From a practitioner's perspective, the study offers practical implications by identifying three key areas with significant influence on internal audit team innovation. Implementing effective change and innovation initiatives within these areas – leadership development, fostering a supportive environment, and encouraging external knowledge capture – holds substantial potential to enhance internal audit practices.

LITERATURE REVIEW

What is innovation?

A review of the existing literature highlights some common elements in the definition of innovation. The concept relates to the creation of something new or modified. Gault (2018) defines innovation as, "the implementation of a new or significantly changed product or process where product could be a good or service" (p. 619). The second element is that innovation is not limited to products, but includes changes in processes, services, markets, and organizations. Edison et al. (2013) define four types of innovation: "product, a new or significantly improved product; process, the implementation of a new development method; market, new or significantly modified marketing methods; organization, new organizational methods; or business practices" (p.1394). The third element equates innovation with implementation. Defining a theoretical product or process is insufficient; it should be placed in the market or within a firm. The last element is that the new product, service, or organizational form must create or add value to the organization, and the change must be appropriate and valuable to the firm (Amabile, 1988).

Dewangan and Godse (2014) provide a concise and general definition that summarizes many of the concepts previously discussed: "innovation is the concept of invention plus exploitation" (p.536) where invention presumes the existence of a mechanism to generate new ideas. The expansion of the definition in the two concepts is not trivial; research projects that attempt to evaluate the determinants of this phenomenon must consider the impact of both concepts: the generation and implementation of ideas (Magadley & Birdi, 2012).

How do we measure innovation?

Dewangan and Godse (2014) confirm the existence of a strong consensus in the literature about having a multidimensional system to measure innovation but the lack of consensus about what these dimensions should be. The authors summarized the different approaches used to measure innovation: R&D productivity, new product impact, profitability, balance scorecard dimensions, and technological innovation efficiency (input vs. output).

Edison et al. (2013) state that the lack of consensus regarding how to measure innovation is caused, at least in part, by the different definitions of innovation that cover different aspects of the concept. The authors concur that a single metric cannot capture all the aspects of innovation. Through a literature review, this study identified the most used indicators to measure innovation in previous studies, with a total of 232 metrics. The project selected a subset of these metrics and included them in a questionnaire administered to a group of companies measuring innovation. The responses showed that the most popular metrics for

practitioners were improvements in existing products (63%), number of ideas converted successfully into products (59%), percentage of sales spent on new projects (56%), and improvement in product quality due to innovation (56%). The least-used metrics included creative environment (19%), presence of innovation champions, and time taken to convert an idea to a product or process (33%).

Dewangan and Godse. (2014) proposed a set of guiding principles to define innovation performance indicators: a metric must have a multidimensional view of performance, measure performance at various stages of the (innovation) process and be easy to implement.

Innovation in Business Functions

Schumpeter delineated five categories of innovation: novel products, production methodologies, marketplaces, supply sources, and industrial organization strategies (Schumpeter, 1934). Contemporary discourse on innovation categorizes it into technological and non-technological advancements (Damanpour & Aravind, 2012). Technological innovation is related to product development and can be codified and patented (Yam et al., 2011). It differs from non-technological innovation vis-à-vis what it produces; in technological innovation, the outcome is a product (Mol & Birkinshaw, 2009). Most literature on innovation has focused on exploring the development and implementation of technological innovation (Crossan & Apaydin, 2010).

Non-technological innovation is a term that groups several types of innovative processes, such as organizational, administrative, and managerial innovation (Khosravi et al., 2019). This form of innovation is based on the organization's social system, including

firm members and their relationships, which transforms it into a complex activity that is difficult to code (Birkinshaw & Mol, 2006). Despite this limitation, non-technological innovation could be patented; however, such claims would be difficult to enforce because any imitation with slight variations would make the process different from the original patent (Williamson, 1975). Some of the concepts related to non-technological innovation are subsequently described.

Organizational Innovation: The term is rooted in Schumpeter's fifth type of innovation: new organizing methods in the industry (Schumpeter, 1934). This includes changes in procedures and organizational structures.

Administrative Innovation: The concept relates to the adoption of innovative ideas in processes and administrative systems. In this case, changes are not implemented to satisfy customer needs through the development of new products or technology but to improve efficiency and effectiveness in the firm's internal processes (Damanpour & Evan, 1984).

Managerial Innovation: The notion of managerial innovation has recently overshadowed analogous concepts within organizational management literature. This term encompasses organizational, administrative, and managerial processes, distinguishing itself from product and technological innovations (Damanpour & Aravind, 2012). In a broader sense, managerial innovations are "new approaches in knowledge for performing the work of management and new processes that produce changes in the organization's strategy, structure, administrative procedures, and systems" (Damanpour & Aravind, 2012; p. 429).

Considering that internal audit is a business function, this study intends to evaluate the process of generating and adopting new ways of working, methods, and tools in internal audit; managerial innovation is an appropriate definition for the subject of this study.

As mentioned earlier, despite an increase in recent studies, empirical studies evaluating management innovation outcomes are scarce (Khosravi et al., 2019). Most recently published studies have attempted to explain these relationships from a theoretical rather than an empirical perspective (Damanpour & Aravind, 2012; Volberda et al., 2013).

Furthermore, the available literature offers contradictory findings regarding the direction and strength of the relationship between innovation and the proposed antecedents. Considering the variance in previous studies, it is impossible to draw definitive conclusions about innovation predictors. Further studies must clarify the elements that have a real impact on innovation (Hulsheger et al., 2009).

Most existing studies favor examining management innovation drivers in isolation, but drivers may affect each other, generating complex interactions. Future research could evaluate the impact of different drivers acting simultaneously, and how antecedents complement one another in adopting and implementing management innovation (Khosravi et al., 2019).

There is also a lack of research on the internal processes that enable the introduction of innovation across business units and over time (Damanpour & Aravind, 2012)

Finally, cultural differences in creativity and innovation exist (Morris & Leung, 2010). Most studies examined by Khosravi et al. (2019) evaluated data collected in the USA or Spain. Further studies from different geographical regions are required before the findings can be generalized. There is also a need for comparative studies on different regions.

Academic Research on Internal Audit

The scholarly consensus regarding the nascent state of research on internal audit practices is well-documented. Behrend and Eulerich (2019) articulate a "notable scarcity of studies" (p.126) on the practice of internal audits. They further highlight that the extant literature fails to address critical aspects of significance to practitioners, thereby widening the fissure between the domains explored by academia and the subjects deemed valuable by practitioners. This perspective echoes the earlier viewpoint of DeFond and Zhang (2014), who posited that the knowledge generation process through research on the internal audit function is still in its early stages. Collectively, these assertions confirm the imperative for more comprehensive academic inquiry into internal audit practices.

Roussy and Perron (2018) conducted a structured review of articles on internal audit topics published in prestigious academic journals between 2005 and 2017. The articles were grouped into three categories: multiple roles of internal audit, internal-audit quality, and the practice of internal audit. Of the 91 articles reviewed, only 13 pertained to internal audit practices. This limited number of articles explored topics such as methodology and resources, management of stages

in the audit process, and use of technology. For this reason, Roussy and Perron concluded that academics know too little about the practice of internal audits and that there is insufficient understanding and scientific evidence in this area. They invited other researchers to explore this avenue in future studies.

Christ et al. (2021) agreed that the practice of internal audit has not attracted much attention from academic researchers and conducted a study to identify the main areas of interest. This study attempts to guide researchers on topics that are important for advancing theoretical knowledge and have a significant impact on the practice and profession of internal audit. To achieve this, the study interviewed 56 internal audit practitioners (with a majority of 32% in the financial services industry) about their areas of interest. The study found that the internal audit profession is evolving in response to the impact of technological innovations on firms 'operations and strategies. Internal audit is restructuring its practice to assess emerging risks arising from changes in the business environment.

Christ et al. conclude that research on the use of technological tools in internal audit is minimal. The authors suggested exploring research initiatives on data analytics, robotic process automation (RPA), and agile methodologies.

THEORIES OF INNOVATION

Componential Theory of Creativity

The componential theory of creativity details the social and psychological elements required for a person to produce creative work. Initially proposed in 1983

as "the componential model of creativity" by Teresa Amabile, it has undergone significant change since then. One of the most important extensions of the theory, published in 1988 by the same author to incorporate creativity and innovation in organizations, is described below.

This theory makes the following two critical assumptions. First, levels of creative work exist in a continuous range that goes from low in everyday life to high, as represented by scientific discoveries, significant inventions, and art pieces. Second, every individual's creativity moves on the continuum range; the specific level of creativity at a point in time depends on the internal and external components operating within and around the individual.

Creativity is an imaginative response to a problem that is suitable, valuable, and correct. The theory proposes four components required for creative responses, three within individual domains and one in the surrounding environment:

Domain-relevant Skills: The concept describes the competencies in an individual’s domain, such as knowledge and expertise. These skills form the basis for experts to sketch possible responses during the creative process.

Creativity-relevant Processes: This component, also referred to as creativity-relevant skills, encompasses a cognitive style and personality traits that foster autonomy, encourage risk-taking, and facilitate the origination of novel perspectives on problems. Cognitive style includes the ability to synthesize information, whereas personality processes include the concepts of self-discipline and tolerance for ambiguity.

Task Motivation: The impulse or passion that drives an individual's desire to resolve a problem, regardless of its complexity. The solution to the problem is attractive because it is exciting and challenging and not because of extrinsic motivations, such as contracts, rewards, surveillance, or evaluations that pressure individuals to act. A key element of this theory is that creativity is higher when individuals feel motivated by work satisfaction, enjoyment, and challenges and not by extrinsic motivators.

Social Environment: This component is outside the individual domain and contains all the extrinsic motivators and environmental elements that may bolster or impede intrinsic motivation. Factors with a negative impact on intrinsic motivation include norms that criticize new ideas, conservative cultures, and extreme time pressures. External factors with a positive impact are collaborative teams, supervisors, and senior management that encourage new ideas, freedom, and flexibility during task execution.

The creative process comprises four stages: problem identification (analysis and identification of the characteristics of the problem), preparation for problem resolution (information and skill gathering), response generation (proposals of ideas for possible solutions), and validation and testing (verification that the solution resolved the problem).

The addition of innovation to the individual creativity model implies that creativity in individuals can be transferred to work groups through the interaction of team members. The basic model remained the same but replaced the original four

components with three analogous dimensions that represent the work environment and have a direct impact on both individuals and teams: (a) resources in the task domain (domain-relevant skills), (b) skills in innovation management (creativity-relevant processes), and (c) motivation to innovate (task motivation).

Four-Factor Team Climate for Innovation

Innovation in teams and organizations differs from innovation in individuals, and research in the field must investigate how interactions between individuals influence creativity and innovation activities at the team level (Kurtzberg & Amabile, 2001).

Guzzo and Shea (1992) proposed an input-process-output team performance model to identify the antecedents of team innovation. Inputs are the resources provided by team members, such as knowledge, personality traits, competencies, and abilities, as well as elements of the organizational environment, such as objectives, rewards, and information systems. Interactions among team members, communication, information exchange, and participation in the decision-making sub-process are actions or steps conducted to produce specific outcomes. The model's final output is the team's performance. When used to evaluate innovation, the framework's output is the adoption of new processes, products, or procedures pertaining to the team and organization (West, 1990).

On the input side, studies (Hackman, 1992) have pointed out the role of organizational context in determining group effectiveness. West and Anderson (1996) argued that group structural factors are vital inputs that influence innovation

in teams, highlighting the heterogeneity of group composition, size, and tenure as the most critical factors in the organizational context.

West (1990) and West and Anderson (1996) recognized the prominent role of the four team climate factors in predicting innovation in a group context. Based on previous group performance and innovation studies, the following factors are expected to have a strong relationship with team innovation (Guzzo & Shea, 1992; King, 1990): objectives, participation, task orientation, and support for innovation.

Group goals and objectives have consistently been identified as the most crucial factors in determining team effectiveness (Guzzo & Shea, 1992). The process of combining team member efforts may produce new and innovative products if members have a clear vision of what they are trying to accomplish and if they are involved in defining those goals (Latham & Yukl, 1975; Locke, 1968; Vroom & Yetton, 1973). In group innovation, vision facilitates the creation and implementation process by helping the team focus on the development of new ideas aligned with team and firm objectives.

Team member participation develops commitment and improves team effectiveness (Lawler & Hackman, 1969; Wall & Lischeron, 1978). When information is shared within groups and members can freely exchange their opinions, group interaction multiplies and causes cross-pollination of ideas, analysis of situations from different angles, and the generation of creativity and innovation (Pearce & Ravlin, 1987). In addition, if participation includes the decision-making

stage, there will be less resistance to change and innovative ideas are more likely to be implemented (Bowers & Seashore, 1966; Lawler & Hackman, 1969).

Divergent thinking is a central topic in the literature on team innovation (West & Anderson, 1996). Different viewpoints generate competitive perspectives associated with the creative process (Mumford & Gustafson, 1988). Conflicting perceptions arise from team concerns regarding job quality. This stimulating debate among team members regarding the best possible solution to a problem is called task orientation (West, 1990). Constructive controversy allows for a deep exploration of teams with antagonistic opinions, refining the decision-making process, and generating innovation (Tjosvold, 1991).

Finally, the literature suggests that rewards and support, rather than penalties or retaliation, stimulate the adoption and implementation of innovative ideas (Amabile, 1983). This element of team climate is known as support for innovation and is defined as the expectation and approval of any effort to introduce new or improved products and processes. Innovation will flourish in a context where risk-taking is rewarded and ignored.

Transformational Leadership and Innovation

Multiple studies have emphasized the role of leadership style as an essential determinant of innovation (Dess & Picken, 2000). Leaders are accountable for eliciting the best performance from followers to accomplish group objectives and facilitate motivational processes (Bass & Avolio, 1990; Katz & Kahn, 1978). By establishing objectives and goals, allocating the necessary resources, and evaluating

performance and behavior, leaders create conditions that foster or stifle inventiveness. Hennessey and Amabile (1998) state that the top managers of an organization can influence employee creativity and innovative behavior in different ways.

1. Leaders define and shape the work context, including the importance of a long-term vision for the organization. Thus, leaders guide employees' efforts to assign time and energy and create products and processes to help firms in the long run.
2. Leaders define and promote an organizational climate and culture. Senior management nourishes organizational creativity by sustaining a culture of learning and experimentation.
3. Leaders develop and maintain the compensation and reward system.

A compensation model that provides extrinsic and intrinsic rewards for creative initiatives encourages organizational innovation.

In addition, previous studies have identified intrinsic motivation as the main factor fostering individual creativity and innovation (Amabile et al., 1994; Deci & Ryan, 1985). Developing an environment that fosters innovation and improves intrinsic motivation is more cost-effective from an organizational standpoint than investing in upskilling or reskilling employees for the same purpose, given the evidence that environmental changes can increase intrinsic motivation (Amabile, 1988). Leaders can encourage creativity by fostering an environment in which

followers feel safe to test out novel approaches and act without fear of failure (Amabile, 1988).

Burns introduced the idea of transformational leadership in 1978; thereafter, numerous authors have expanded and refined the original concept. This definition includes the proposition of an ambitious goal or idea that persuades team members and challenges them to transcend their personal interests (Kirkpatrick & Locke, 1996), setting the organization's objectives above their interests (Bass et al., 1996). Transformational leaders do not limit their relationships with employees to contractual agreemen ts that specify the expected outcomes and rewards. They build relationships at the personal-value system level (Gardner & Avolio, 1998; Shamir et al., 1993). Transformational leaders appeal to intrinsic motivation to link employee identities with the organization's identity. They want employees to understand the values behind the desired outcomes and convince them of their importance; the individual search for transcendence becomes a search to transcend the organization (Conger & Kanungo, 1998).

Transformational leaders reshape the environment to foster innovation through intellectual stimulation, a defining characteristic of this leadership style (Bass, 1985; Howell & Avolio, 1993); inspire followers to think creatively; promote exploratory thoughts (Sosik et al., 1998); encourage team members to frame problems from alternative and novel viewpoints (Bass, 1985; Hater & Bass, 1988); and motivate behaviors to generate alternative solutions (Diehl & Stroebe, 1991).

Furthermore, transformational leaders develop an emotional connection with their followers (Bass, 1985; Howell & Avolio, 1993), a vital link that can transform team members' values and personal beliefs and raise followers' aspirations and potential (Bennis & Nanus, 1985; Shamir et al., 1993).

Other Innovation Antecedents

Internal Communication

Communication is the process of transferring ideas from one source to another. Internal communication is the vehicle through which knowledge flows within an organization. It facilitates the dissemination and sharing of information and management guidelines across the firm, as well as the transmission of personal values, attitudes, feelings, and reactions (Welch & Jackson, 2007). Most of the time, the information flow is intended to modify conduct or performance (Bahtijarević-Šiber & Sikavica, 2001, as cited by Tkalac Verčič et al., 2021).

Interest in organizational communication has significantly increased owing to the advancement of technological instruments that support communication and the growing complexity of organizations (Bélanger & Watson-Manheim, 2006).

In the context of business organizations, internal communication implies the use of formal (meetings and presentations) or informal (conversations) activities by all firm members. It is essential to develop proper channels and support to promote these communication activities; the management's obligation is to implement and maintain an adequate, effective, and efficient internal communication system (Carrière & Bourque, 2009).

Organizational communication may occur through three sources of knowledge: peers, other areas or units, and board and senior committees (Lhuillery et al., 2021). Communication flow with peers facilitates knowledge transmission and implementation of routines and procedures (Tsai, 2001). Managers' communication with other units facilitates innovation and dissemination of knowledge, sharing problem-solving techniques and proven solutions with different business units facing similar problems (Lai et al., 2015). Meetings with senior committees are an opportunity to expose ideas and plans and receive feedback from seasoned and experienced professionals who will most likely challenge many of the proposals presented in the forum. For this reason, in top organizations, the board is considered a driver of innovation (Wu & Wu, 2014).

Communication can resolve conflicts that may arise in the day-to-day operation; conflict resolution is also a way to generate new knowledge (Gruning, 2022).

External Communication

External sources of information supplement and diversify the internal knowledge base; external sources include customers, suppliers, and consultants (Rodriguez et al., 2017). According to the absorptive capacity theory, a firm has the capacity to search for external knowledge, merge it with existing information, and apply it to promote and facilitate innovation (Cohen & Levinthal, 1990).

The lack of information within the organization's limits drives firm members to search outside its boundaries to capture and import the necessary knowledge. The

more sources in the search process, the more likely new practices are to be identified (Mol & Birkinshaw, 2009).

Innovation occurs, at least in part, as a need to face a changing environment. Organizations must exchange information with external entities, such as professional associations, to understand changes and adapt to them. In this process, external communication may help the management learn about new environmental conditions and support the decision-making process through information and ideas that are not available internally (Damanpour & Schneider, 2006).

Some studies have proven the positive impact of external communication on all phases of innovation, proposing that allocating resources to extra-organizational professional activities could promote innovation (Damanpour & Schneider, 2006). Engaging prospective suppliers, early adopters, and consultants can enhance the decision-making process in innovation and prevent the implementation of procedures that have previously failed in other areas. Thus, the extensive involvement of external sources broadens the idea spectrum and occupational diversity, and expands the experience pool, which is instrumental in embracing innovative concepts (Damanpour et al., 2018).

The involvement of potential suppliers, early adopters, and industry consultants can enrich the quality of innovation decisions and help avoid selecting programs that have been deemed to be unsuccessful in other jurisdictions. Therefore, the breadth of involvement of external sources further increases the range

of ideas and occupational diversity and enlarges the pool of experience to assist in adopting innovative ideas.

Internal Audit and Innovation

As previously mentioned, only a handful of studies have evaluated internal audit practices. From this group, we identify two projects related to innovation in internal audits.

Smit (2020) explores the factors that generate new ideas and develop the innovative potential in the auditing practice. Based on a recent literature review, the author postulates that 18 variables influence innovation development in internal audit. Of these variables, seven relate to team characteristics, eight to individual characteristics, and three to the internal audit Function. To validate his hypothesis, the author surveyed 52 internal audit practitioners in the Netherlands and identified that three variables show a significant correlation with the generation of new ideas: "creative self-efficacy," "support for innovation," and "innovativeness as a job requirement." In addition to these three predictor variables, "external communication," best explains the implementation of new ideas in internal audit.

Lhuillery et al. (2021) concluded that developing search capabilities to identify and capture knowledge both internally and externally is crucial to build innovation capabilities in internal audit. Management reviews and insights from other departments are considered essential sources of knowledge. Research also indicates that innovation benefits from the quality assurance and improvement programs implemented in internal audit departments. Regarding external knowledge

sources, this study demonstrates the prominent influence of professional associations on internal audit innovation. Finally, interactions with practitioners are key driver of innovation because they reinforce the interests of professional literature.

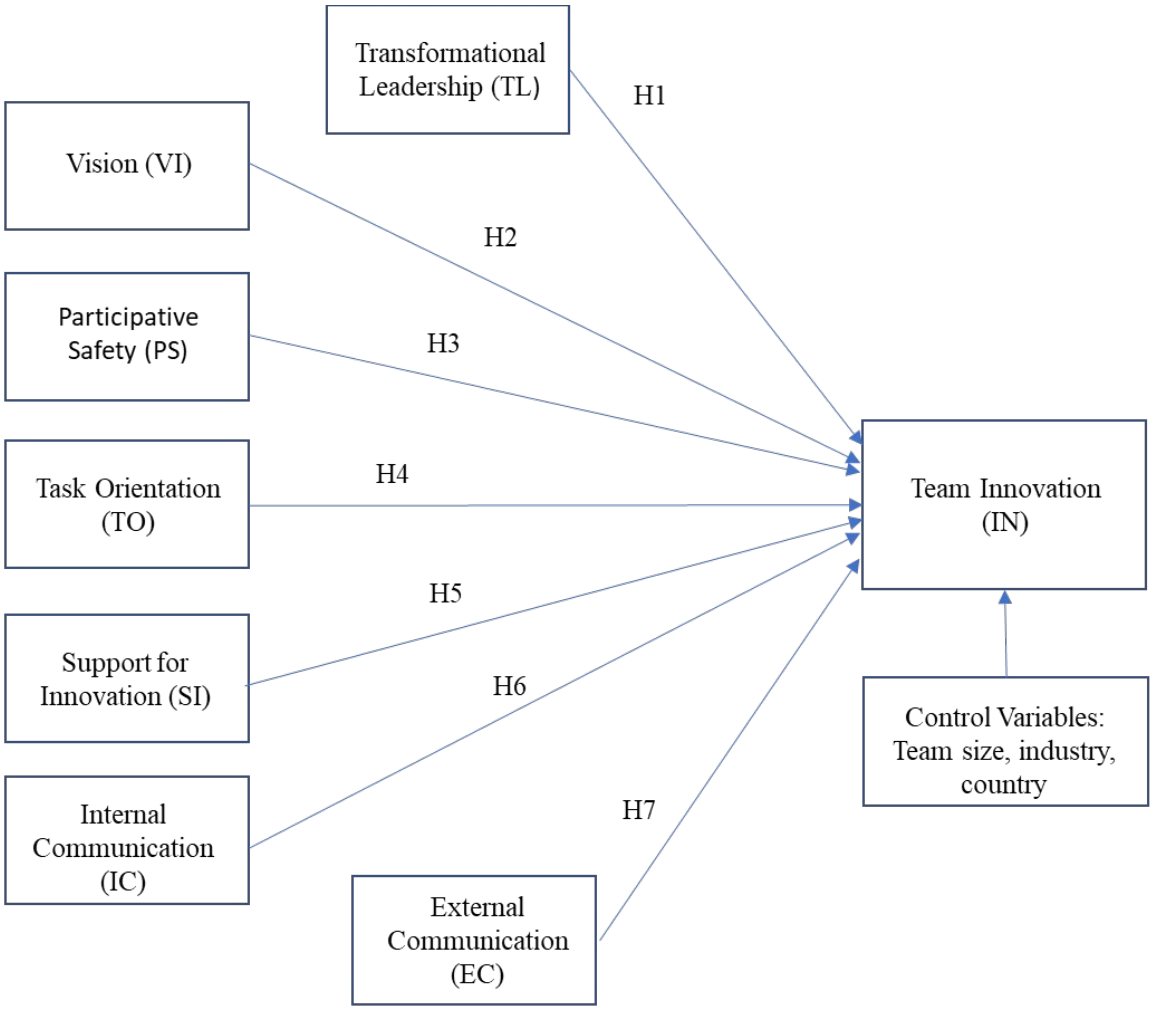
RESEARCH MODEL AND HYPOTHESIS DEVELOPMENT

Conceptual Framework

We proposed a conceptual framework for innovation in internal audit based on the theories presented in the previous section and the information available from empirical research. Figure 1 depicts a graphical representation of the model. The model guides the following hypothesis development.

Figure 1

Conceptual Research Model



Hypothesis Development

Transformational Leadership

Bass and Avolio (1990) define four characteristics for Transformational Leadership: idealized influence, intellectual stimulation, inspirational motivation and individualized consideration. Le and Lei (2019) associated these characteristics with the innovation process: the idealized influence persuades employees about the

need for change; leaders' inspirational motivation transmits enthusiasm to reach goals beyond expectations; intellectual stimulation inspires employees to think outside the box; and, the individualized consideration facilitates the development of employees' capabilities through learning opportunities and creative thinking, an essential ingredient for innovation.

Transformational leader's rise of innovation to the status of organizational goal will motivate employees to be more creative, do things differently, and improve the current processes and methods.

Existing research on the relationship between leadership and creativity demonstrates that democratic, considerate, and participative leadership styles have a strong correlation with creative and inventive group behaviors (Hage & Dewar, 1973). Furthermore, subordinate creativity is enhanced when leaders encourage problem-solving construction and team members' self-efficacy (Redmond et al., 1993)

In internal audit, the Chief Audit Executive (CAE) is responsible for the function strategy, budget, and resources. A CAE that provides idealized influence, intellectual stimulation, and individualized consideration to internal audit team members is a crucial resource for promoting innovation in the unit.

Thus, we formulate the following hypothesis:

H1: An increase in transformational leadership is associated with an increase in innovation in internal audit.

Vision

The concept is defined as " a valued outcome that represents a higher order goal and a motivating force at work" (West, 1990, p. 310). This dimension evaluates whether team members have a shared understanding of objectives and demonstrate a solid commitment to achieving those objectives (Hulsheger et al., 2009).

Vision in a work group consists of four components: clarity, visionary nature, attainability, and sharedness (West, 1990). Clarity assesses how easy it is to understand the vision; the essence of visionary nature is to assess whether the vision articulates a desirable outcome for team members and motivates them to strive towards team objectives (Burningham & West, 1995) ; attainability is a measure of how likely the team is to reach its objectives; and sharedness represents the extent to which a collective endorses the vision (Bunce & West, 1995).

The connection between the development of innovative teams and the need for team members to be committed to the group's objectives and to share a sense of purpose and responsibility has not only been noted by West but also by other authors in subsequent studies (e.g., Cardinal, 2001; Gilson & Shalley, 2004; Rickards et al., 2001).

According to the goal-setting theory (Locke & Latham, 1990), teams with clearly defined objectives are more likely to develop new goal-appropriate working methods since their efforts have focus and direction. Consequently, teams with a strong vision will be more likely to implement their creative ideas than teams with

an ambiguous and intangible vision, which may need help developing practical steps for executing innovative ideas (Somech & Drach-Zahavy, 2013).

In this context, we formulated our second hypothesis:

H2: An increase in vision is associated with an increase in innovation in internal audit.

Participative Safety

West (1990) describes participativeness and safety as a single psychological construct in which "involvement in decision-making is motivated and reinforced while occurring in an environment perceived as interpersonally non-threatening" (West, 1990, p. 311). Furthermore, Bunce and West (1995) hypothesize that the extent of individual engagement in the decision-making process—characterized by exerting influence, fostering social connections, and facilitating information exchange—correlates positively with their commitment to the outcomes of those decisions and propensity to advocate for innovative and enhanced operational methodologies.

Two elements define participative safety: active engagement in decision-making and the assurance of intragroup safety. Participation in decision-making reflects the level at which team members actively engage in sharing information and ideas and their involvement in the decision-making processes (Hulsheger et al., 2009). Individuals are more committed to their work and invest more effort when they participate in decision-making, have influence, and feel free to speak up (West & Anderson, 1996).

Intragroup safety refers to a psychologically non-threatening and mutually supportive environment within the team. This aspect is closely associated with psychological safety (Edmondson, 1999). Based on the concept of team adaptation (Burke et al., 2006), psychological safety assists three functions connected to team innovation.

First, psychological safety facilitates the formulation and development of plans by encouraging team members to speak up and contribute with their specific ideas and perspectives. In this case, psychological safety enables interpersonal risk-taking, promoting the presentation of new ideas even if they conflict with the group's prevailing beliefs. Second, psychological safety facilitates plan execution by influencing team members to embrace mutual performance monitoring, promote communication, and encourage back-up behavior. Third, psychological safety stimulates team learning by encouraging the discussion of mistakes, the formulation of questions, the search for feedback and considering alternative points of view (Hulsheger et al., 2009).

In conclusion, a collaborative work atmosphere, where individuals feel secure to voice their opinions and embrace risks, and where coworkers socialize, support each other, and join forces, promotes team creativity (Wright & Cordery, 1999) and foster innovation (Amabile et al., 1996). If participative safety is low, on the other hand, people may feel helpless and victimized by the innovation and fail to act when issues arise (Baer & Frese, 2003).

Based on the previous description, we formulate our third hypothesis:

H3: An increase in participative safety is associated with an increase in innovation in internal audit.

Task Orientation

Task orientation, also known as a climate for excellence (West, 1990), represents the team members' shared concern for achieving the highest standard of team performance (Somech & Drach-Zahavy, 2013). When task orientation is high, teams are motivated to reach the highest standards achievable. Team performance is driven by shared objectives and expected common outcomes and is measured and monitored by evaluations, controls, and regular critical appraisals (West, 1990).

Task orientation would be evidenced by the presence of elements that emphasize accountability at the individual and team level, performance evaluation and monitoring, critical approaches, and constructive feedback (Tjosvold, 1982). The most crucial objective of task orientation is to enhance the caliber of task execution: a team committed to excellence and supported by an environment that promotes continuous improvement.

Task orientation includes subconstruct task reflexivity, the ability of a team to examine how it works and adjust its objectives and procedures based on what is required. This assessment aims to improve team effectiveness and outcomes (Hulsheger et al., 2009). In the process, the team explores opposing points of view to increase the number of options evaluated and improve the decision-making process (Somech, 2006; Tjosvold et al., 2004).

From a different perspective, team adaptation theory (Burke et al., 2006) suggests that plan execution, a crucial process in innovative team performance, also requires team member performance monitoring and continuous feedback as a critical reflection on team goals.

Task orientation has also been compared to intrinsic motivation since both concepts drive individuals to search for excellence (Shalley, 2002). Task orientation works at the team level, while intrinsic motivation, a prerequisite for creativity, works at the individual level (Shalley & Perry-Smith, 2001).

When task orientation is high, team members are motivated to perform their duties with greater diligence (West, 1990). They are more likely to overcome obstacles to implement innovative ideas and transform them into significant product and process enhancements (Eisenbeiss et al., 2008). Team members need a commitment to excellence to ensure that team creativity will result in tangible innovations (Somech & Drach-Zahavy, 2013).

In this context, we formulated our fourth hypothesis:

H4: An increase in task orientation is associated with an increase in innovation in internal audit.

Support for Innovation

The term denotes the expectation, approval, and practical endorsement of efforts to introduce new and improved workplace performance methods (West, 1990).

Support for innovation characterizes by being both articulated and enacted. It is articulated in the sense that there is coordination through norms such as personnel documents and policy statements or even through word of mouth. The firm policies and procedures reflect the organizational preference for innovative initiatives. The support is also enacted by actively promoting innovative behavior by assigning sufficient time and resources for developing new ideas and tolerating unsuccessful initiatives, thus facilitating the innovation process (Burningham & West, 1995). In this context, team members are willing to take risks to implement new ideas (King et al., 1991; Sethi et al., 2001). When the organization and the team are open to change, promote and support the generation and implementation of new ideas, and recognize and reward them, innovation is more likely to occur (Amabile et al., 1996; Shin & Zhou, 2003).

Thus, we formulate our fifth hypothesis:

H5: An increase in support for innovation is associated with in an increase in innovation in internal audit.

Internal Communication

Management of complex problems requires a permanent flow of ideas and information. In this context, high-quality communication facilitates the exchange of knowledge and experience among the team members, generating new ideas that help resolve the problems (Van de Ven, 1986).

Communication also has a critical role during plan implementation, where team members support each other through monitoring, assistance, and feedback.

Communication is the foundation for trust and confidence in each other (Burke et al., 2006). In consequence, communication plays a critical role in idea generation and new idea implementation, both essential elements in the process of innovation (Hulsheger et al., 2009)

In the internal audit case, the continuous flow of information during peer reviews and discussions generates new ideas and practices improving the audit quality process (Duh et al., 2019). In the case of managers, the audit results' communication to other areas provides contextual information and assists them with recommendations to handle unexpected risks (Lhuillery et al., 2021).

We propose that internal communication positively affects innovation. Thus, we formulate our following hypothesis:

H7: An increase in internal communication is associated with an increase in innovation.

External Communication

Several studies have presented evidence of a positive relationship between external communication and innovation (Ancona & Caldwell, 1992; Keller, 2001) and, in some cases, even a strong correlation (Hulsheger et al., 2009).

In the case of internal audit, external sources also include professional associations, external audit firms, technology consultants, and regulators. The role of professional associations is essential for internal auditors. Practice exchange at professional associations could generate peer pressure and accelerate innovation

(Lhuillery et al., 2021). Internal audit teams also try to fill knowledge gaps with external consultants and advisors from Big 4 firms who have specific and specialized skills not available in the local team (Bae et al., 2016).

Communication with government or external regulators have also a role in increasing the knowledge base and supporting the innovation processes (Boland et al., 2018).

Like internal communication, we propose that external communication has a positive effect on innovation:

H8: An increase in external communication is associated with an increase in innovation in internal audit.

RESEARCH METHODOLOGY

Method

This study employs a cross-sectional survey methodology to capture perceptual data from internal audit professionals regarding team innovation. Survey research proves particularly advantageous when aiming to describe or explain characteristics of a large population, offering efficient access to general insights and facilitating a more focused research direction (DeCarlo, 2018). Notably, this approach boasts distinct advantages: cost-effectiveness, flexibility in distribution channels, and anonymity for participants. Its appropriateness in this study stems from its ability to reach geographically dispersed internal auditors, gather data from a large sample simultaneously, minimize cost through

social media distribution, and encourage frank responses, particularly relevant given inquiries into team leadership and dynamics.

Quantitative analysis is utilized to assess the relationships between the chosen dependent and independent variables. Specifically, this study implements Structural Equation Modeling (SEM), a widely employed analysis method in behavioral science research (Raykov et al., 1991), on the survey data. This method allows for simultaneous hypothesis testing and evaluation of potential causal relationships between variables. SEM's suitability resides in its ability to accommodate unobservable concepts. This study necessitates the measurement of abstract constructs like "transformational leadership" and "participatory safety," posing a challenge due to their indirect nature. Yet, SEM offers a statistically rigorous approach to inferring them from observable indicators (Kline, 2012). This eliminates the limitations imposed by the absence of direct measurements.

Representing unobservable concepts by latent variables and their corresponding measured items introduces dependence among them. SEM addresses this dependence by leveraging confirmatory factor analysis to estimate latent constructs (Brown, 2015). The employed SEM model comprises two interdependent components: the measurement model and the structural model. The former defines and operationalizes constructs through observed variables, assessing their validity and reliability. Subsequently, the structural model investigates causal relationships between latent variables, testing the study's hypothesized associations (Hair et al., 2021). Particularly, this study utilizes SMART PLS 4 for both measurement and structural model evaluation.

In conclusion, this research relies on a survey-based data collection strategy coupled with quantitative analysis for structured data organization and interpretation.

Survey design

This study employed a self-administered questionnaire survey to collect data on team-level variables potentially influencing innovation within audit teams. All survey items, including demographic questions, were mandatory for participants, whose participation remained voluntary. The survey instrument was designed and hosted on the Qualtrics platform, accessible online to individuals possessing the designated survey link or QR code. Prior to accessing the survey, participants were required to provide informed consent through a dedicated consent form.

Considering the primary location of the researcher´s professional network within Latin America, the survey was made available in Spanish. To guarantee translation accuracy, this study employed a rigorous back-translation process. This approach, which advocates for iterative translation and reconciliation, remains actively endorsed in diverse fields like healthcare and social sciences (Behr & Shishido, 2016). The initial English questionnaire was translated into Spanish by the researcher, followed by a subsequent back-translation into English by a separate professional translator (based in Peru) possessing expertise in both languages. This thorough approach permitted the identification and correction of minor discrepancies, resulting in a single word being revised per the translator's recommendations.

To safeguard the quality and reliability of the collected data, the survey incorporated several validation checks. These included a completion check to

automatically discard incomplete responses and per-survey timer checks to identify and disregard responses completed in less than five minutes, which was the minimum time taken to complete the survey based on the pilot study.

Operationalization of constructs

Transformational Leadership (TL)

Transformational leadership is defined as a leadership style fostering positive change, enhanced motivation, morale, and performance (Bass & Avolio, 1990). Transformational leaders connect with their followers' sense of identity by acting as role models, motivating them to assume greater responsibility for their work, and acknowledging their individual strengths and limitations (Avolio & Bass, 2001). Transformational leadership is measured using Dai et al. (2013) eight-item scale, adapted from the multifactor leadership questionnaire (MLQ) by Bass and Avolio (1990). All items are measured on a five-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The specific items employed can be found in Appendix 1.

Vision (VI)

Vision refers to the degree to which team goals are clearly articulated, valued, and enthusiastically embraced by its members (West & Anderson, 1996). The shared understanding and acceptance of objectives act as a driving force for team cohesion and collective effort. This study assesses Vision using a shortened version of Anderson and West (1996) Team Climate Inventory questionnaire, developed by Kivimaki and Elovainio (1999), focusing on the four items presented

in Appendix 1. All items are measured on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Participatory Safety (PS)

Participatory Safety defines the team member's perception of a non-threatening, collaborative environment where open communication, idea generation, and information sharing flourish without fear of judgment or criticism (West, 1990). This sense of psychological safety fosters active participation in decision-making and contributes significantly to team cohesiveness and innovation. This study captures Participatory Safety through a streamlined version of Anderson and West (1996) Team Climate Inventory questionnaire, adapted by Kivimaki and Elovainio (1999), focusing on the four items presented in Appendix 1. All items are measured on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Task Orientation (TO)

Task Orientation, also referred to as "climate for excellence," reflects the shared commitment of team members to achieving a high standard of performance (West, 1990). This emphasis on excellence cultivates a motivated environment where individuals strive for the highest attainable outcomes.This study assesses Task Orientation using a shortened version of Anderson and West (1996) Team Climate Inventory questionnaire, adapted by Kivimaki and Elovainio (1999), focusing on the three items aligning with the Task Orientation concept presented in

Appendix 1. All items are measured on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Support for Innovation (SI)

Support for Innovation quantifies the extent to which a team welcomes and fosters attempts to introduce new or improved approaches and practices (West, 1990). In such teams, a greater tolerance for failure fosters an environment where novel ideas are valued, publicly recognized, and rewarded. This supportive atmosphere encourages risk-taking and fuels creative exploration, ultimately contributing to team innovation. This study measures Support for Innovation through a shortened version of Anderson and West (1996) Team Climate Inventory questionnaire, adapted by Kivimaki and Elovainio (1999), focusing on the three items aligned with this construct detailed in Appendix 1. All items are measured on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Internal Communication (IC)

Internal communication encompasses the processes and channels through which information and ideas are exchanged within an organization (Kalla, 2005). Effective internal communication ensures the dissemination and sharing of critical information, fostering collaboration, alignment, and decision-making across all levels (Mishra et al., 2014). This study operationalizes Internal Communication using an adapted version of the questionnaire developed by Carr and Kaynak (2007). While initially designed to assess communication methods and information sharing within firms and with external parties (suppliers), this research focuses on

questions specifically reflecting internal communication practices. The adapted items, presented in Appendix 1, utilize a five-point Likert-type scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

External Communication (EC)

External Communication refers to the bidirectional exchange of knowledge, ideas, and information between a group and its external networks (Perry-Smith & Shalley, 2003). Through active engagement with external sources, organizations can supplement and diversify their internal knowledge base, gaining valuable insights and lessons learned from beyond their boundaries. This continuous inflow of information can foster innovation, adaptability, and a competitive edge. This study captures External Communication using the Boundary Spanning Subscale developed by Faraj and Yan (2009). This instrument focuses on the activities and behaviors facilitating knowledge exchange between an organization and its external stakeholders. The adapted items in Appendix 1 utilize a five-point Likert-type scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Team Innovation (IN)

Innovation encompasses the conception, adoption, implementation, or integration of novel ideas, practices, or artifacts within an organization (Damanpour & Aravind, 2012). In the context of internal audit, this translates to modifications in the audit process, team structure, applied techniques, or implemented tools and reports. These advancements improve audit effectiveness, efficiency, and relevance within the evolving business landscape. This study assesses innovation through two

distinct measures: "suggestions" and "implementations." "Suggestions" refer to the novel ideas proposed by the internal audit team, while "implementations" denote the successful application of these ideas in the audit process. This format, inspired by Axtell et al. (2000), captures innovation's ideation and realization aspects within the internal audit team. The specifitc questions utilized are detailed in Appendix 1.

Unit of analysis

The investigation of innovation has utilized diverse analytical levels, each offering distinct insights into the factors influencing its emergence and effectiveness. As outlined by Gupta et al. (2007), five central strands of research encompass these levels:

1. Individual: This level delves into the individual factors driving creativity, with some studies focusing on personality traits while others emphasize the influence of work and social contexts. These perspectives shed light on the personal foundation for innovative thinking.
2. Team/Group: This level analyzes factors promoting or hindering group creativity, focusing on how team composition and processes impact innovation. A deep understanding of these interrelationships is vital to nurturing a cooperative environment receptive to novel and groundbreaking concepts.
3. Organizational: This level emphasizes three key domains: technological innovation, business development, and inter-firm linkages. Research at this level explores how organizational structures, cultures, and strategies influence the generation and implementation of new ideas within a broader business context.

4. Industry: This level investigates the interplay between industry structure and forces, analyzing the diffusion and adoption of innovations. Understanding industry dynamics provides insights into the external factors shaping the pace and success of innovation across specific sectors.
5. Multilevel: An emerging approach examines innovation from a multilevel perspective, seeking to comprehend the complex relationships between different analytical levels, employing either bottom-up or top-down approaches. This level offers a holistic understanding of how individual, team and organizational factors interact to promote or hinder innovation.

This study focuses on the team level, seeking to identify variables that promote creativity and the implementation of new ideas within internal audit teams. Aligned with the second approach outlined by Gupta et al. (2007), this study measures team-level variables through individual perceptions of team innovation. This methodological choice acknowledges the subjective nature of team dynamics and emphasizes the individual's perspective in assessing the overall innovative environment.

Population of interest

The study's target population comprises professionals with experience in the internal audit function. Recognizing the geographical context of the research network, primarily consisting of individuals in Peru and other Latin American countries, the survey was administered in Spanish. Data collection leverages two sources: social media and professional conferences. Prior research in internal auditing highlights the potential difficulty of recruiting participants for survey-based studies, with published reports

documenting response rates as low as 1% for questionnaires distributed by professional associations (Spears & Barki, 2010). As a result, the study opted for a multi-channel recruitment approach to optimize participation and reach the target sample size. The survey's QR code was disseminated through two professional conferences: one virtual and one in-person event hosted in Peru. The survey link and QR code were also strategically shared on the LinkedIn platform to maximize accessibility.

With the unknown total population size of internal auditors accessible through LinkedIn, the Cochran formula was employed to calculate the minimum sample size necessary for achieving the desired level of accuracy. Based on a 95% confidence level, a 5% margin of error, and an anticipated variability level of 20% (reflecting the expected proportion of individuals in the population possessing the attribute of interest), the required sample size was determined to be 246 participants. This selection reflects the assumed homogeneity of the target population, aligning with its expected demographics and suggesting a relatively consistent distribution of the attribute under investigation.

Pilot study

Data Collection

The present study conducted a pilot test to validate the measurement instrument, serving as a testing ground for the main study. The objective of the pilot study was to obtain feedback from industry practitioners working in the internal audit field and make necessary adjustments to the survey instrument used in the main study. Convenience sampling was used to select participants from four Latin American countries who were part of the leading researcher's audit team. Data collection lasted two weeks, and the

response rate was 84.44%, resulting in 36 valid responses after the cleaning process. Participants provided 19 comments, which produced 11 adjustments to the instrument, mainly focused on rephrasing and structuring the questions. The survey instrument of the pilot study is included in Appendix 2; Table 1 summarizes the feedback received from participants.

Table 1

Pilot - feedback received.

Type of comments	Number of comments	Action performed
Formatting	Seven	Seven adjustments
Wording	Six	Four adjustments
Add information or questions	Six	Zero additions[a]

[a] The survey excluded recommendations due to their lack of alignment with the study's model variables.

Demographics

A breakdown of the participants demographics is presented in Table 2. In terms of gender, most respondents were male, accounting for 72.2% of the sample, 19.4% of the participants were female, and 8.3% preferred not to disclose their gender. The most prevalent age group among the respondents was between 25 and 34 years old, which accounted for 36% of the sample. Furthermore, most participants held more than five years of experience in the field, constituting 69.5% of the sample. Regarding team size, 55.6% of the participants belonged to a team of 2 to 10 members. Lastly, the sample was composed of 50% respondents from Peru, 33.3% from Colombia, and 8.3% each from Chile and Panama, respectively.

Table 2

Pilot study - Demographics

Variable	Category	Frequency (N=36)	Percentage
Gender	Female	7	19.4
	Male	26	72.2
	Prefer not to say	3	8.3
Age	Between 21 and 24 years	5	13.9
	Between 25 and 34 years	13	36.1
	Between 35 and 44 years	10	27.8
	Between 45 and 54 years	7	19.4
	Between 55 and 64 years	1	2.8
Years of Experience	Less than 2 years	7	19.4
	Between 2 and 5 years	4	11.1
	More than 5 years	25	69.5
Team Size	2 to 10 members	20	55.6
	11 to 50 members	13	36.1
	More than 50 members	3	8.3
Country	Peru	18	50.0
	Colombia	12	33.3
	Chile	3	8.3
	Panamá	3	8.3

Construct Reliability

A reliability analysis was performed to ensure the indicators adequately represent the constructs. Indicator reliability signals the appropriateness and ability of items to measure the main concept in a specific study (Black et al., 2010). The factor outer-loading matrix, which contains the bivariate correlations between a construct and its indicators, was examined to check indicator reliability. The correlations establish the specific effect of an item on its designated construct (Hair et al., 2018). Indicator loadings exceeding 0.708 are desirable because they account for more than 50 percent of the indicator's variance, signaling satisfactory indicator reliability; loadings from 0.40 to

0.708 could be removed if their deletion improves internal consistency reliability or convergent validity (Hair et al., 2010). Conversely, loadings below 0.40 should be consistently removed from the measurement model (Hair et al., 2021). Table 3 shows that all items in the pilot's outer loading matrix except three (IN0, IN1, IN3) exceed the required threshold. Considering that the exceptional items have loading between 0.708 and 0.40 and that the pilot study has a small sample size, the three items were retained.

Table 3

Outer loading matrix

	EC	IC	IN	PS	SI	TL	TO	VI
EC1	0.886							
EC2	0.932							
EC3	0.960							
EC4	0.916							
IC1		0.866						
IC2		0.889						
IC3		0.899						
IC4		0.874						
IN0			0.496					
IN1			0.444					
IN2			0.750					
IN3			0.699					
IN4			0.769					
IN5			0.799					
IN6			0.901					
IN7			0.931					
IN8			0.795					
IN9			0.774					
PS1				0.886				
PS2				0.898				
PS3				0.944				
PS4				0.945				
SI1					0.912			

SI2	0.949			
SI3	0.949			
TL1		0.916		
TL2		0.834		
TL3		0.922		
TL4		0.934		
TL5		0.946		
TL6		0.918		
TL7		0.897		
TL8		0.884		
TO1			0.936	
TO2			0.944	
TO3			0.879	
VI1				0.949
VI2				0.784
VI3				0.881

Internal Consistency Reliability

Internal consistency is pivotal in evaluating multi-item measures, assessing the degree to which respondents exhibit coherence in their responses across items intended to measure the same construct (Hair et al., 2019). A high degree of internal consistency implies that the items converge upon a unified underlying concept, substantiating the measure's validity (Price et al., 2015). Cronbach's alpha is the predominant statistical measure for assessing internal consistency. Values of 0.70 or greater are considered acceptable, indicating a robust level of coherence among item responses; values between 0.60 and 0.70 may be deemed provisionally acceptable in exploratory research contexts (Nunnally, 1978). Composite reliability omega c (rho_c) and omega a (rho_a) are other metrics commonly used to measure internal consistency reliability; the three coefficients assume the same thresholds.

Table 4 showcases the internal consistency of the pilot study's constructs. Notably, all Cronbach's alpha values in the first column surpass the recommended threshold of 0.70. In addition, both omega_a (rho_a) and omega_c (rho_c) values in columns two and three consistently meet the prescribed thresholds for all constructs. Consequently, the internal consistency of the constructs can be deemed acceptable.

Table 4

Cronbach's alpha, composite reliability, and AVE

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
External Communication	0.944	0.976	0.959	0.854
Innovation	0.909	0.934	0.925	0.563
Internal Communication	0.905	0.906	0.934	0.779
Participatory Safety	0.938	0.958	0.956	0.844
Support for Innovation	0.932	1.011	0.955	0.877
Task orientation	0.915	1.002	0.943	0.846
Transformation Leadership	0.970	0.991	0.974	0.823
Vision	0.854	1.109	0.906	0.764

Convergent Validity

Convergent validity is the extent to which a measure converges upon its intended construct. This convergence manifests in both strong positive correlations with theoretically related constructs and distinctness from conceptually dissimilar ones (Hair et al., 2019). The Average Variance Extracted (AVE) is a key metric for quantifying this convergence, capturing the mean of each indicator's squared loadings related to a

construct. Values of 0.50 or greater typically signify acceptable convergent validity. With all AVE values in Table 4 exceeding the 0.50 threshold, the pilot study provides compelling evidence of satisfactory convergent validity.

Discriminant Validity

Discriminant validity assesses the extent to which a construct is distinct from other constructs evaluated by empirical standards (Hair et al., 2010). It implies that measures of the construct should not share a significant amount of variance with measures of conceptually unrelated constructs within the model (Henseler et al., 2015). In essence, it provides empirical evidence that the construct stands apart from others, reflecting its unique theoretical meaning.

The two primary methods for assessing discriminant validity are the Fornell-Larcker criterion and the heterotrait-monotrait ratio of correlations (HTMT) technique. The Fornell-Larcker approach requires a latent variable to explain its own indicators' variance rather than sharing the explanation with other model constructs. In this case, the square root of a construct's AVE should be greater than its correlations with any other constructs (Fornell & Larcker, 1981). Once this condition is met, discriminant validity is established. The HTMT approach quantifies the degree of similarity between latent variables by measuring the average correlations of the indicators across constructs. If the heterotrait-monotrait ratio of correlations is significantly less than one, it indicates that there is discriminant validity (Henseler et al., 2015). The recommended HTMT threshold for constructs varies based on their conceptual proximity. A stricter threshold of 0.90 is commonly applied to assess discriminant validity for constructs with moderate overlap.

In contrast, a slightly lower threshold of 0.85 may be employed for highly distinct constructs, depending on the research context and sample size (Hair et al., 2021).

Recognizing the limitations of the Fornell-Larcker criterion in adequately assessing discriminant validity due to potential bias and dependence on model complexity (Radomir & Moisescu, 2020), this study adopts the more robust HTMT approach. The chosen 0.90 threshold reflects the moderate conceptual proximity among the constructs in the model, adhering to both empirical guidelines (Henseler et al., 2015) and software-specific recommendations (Smart PLS).

The outcomes of the pilot, as depicted in Table 5, indicate that most of the values do not surpass 0.9, except for certain items primarily associated with the construct "Vision" and “Task Orientation”. Considering that the pilot sample size and item feedback were limited, the decision was made to retain all items for main data collection to ensure comprehensive data coverage and allow for further refinement based on a larger dataset.

Table 5

Discriminant validity: HTMT approach

	EC	IN	IC	PS	SI	TO	TL	VI
EC								
IN	0.612							
IC	0.782	0.437						
PS	0.809	0.421	0.778					
SI	0.695	0.472	0.846	0.819				
TO	0.770	0.394	0.866	0.914	0.906			
TL	0.673	0.341	0.810	0.893	0.873	0.927		
VI	0.663	0.409	0.950	0.826	0.934	0.960	0.909	

In sum, the construct reliability and validity are supported by the data of the pilot study. Hence the main survey study employed the same survey questionnaire.

DATA ANALYSIS AND RESULTS

Main Study

Data Collection

The survey employed a multi-channel distribution strategy to maximize reach and diversify respondents. It was accessible via QR code at an online professional conference, an in-person professional conference, and through the researcher's LinkedIn network. Data collection spans three distinct occasions from October 11 to November 2, 2023, producing 420 responses. A detailed breakdown of respondent distribution across communication channels is provided in Table 11. Subsequently, meticulous data filtering and cleansing were implemented, resulting in the retention of 252 valid responses. This process involved the removal of incomplete surveys, responses from ineligible participants (lack of internal audit experience), surveys completed in under five minutes, and those lacking answer variability (identical responses to all questions). The data analysis is proceeded with the sample of 252 valid responses.

Table 6

Survey responses

Channel	Total responses
Virtual professional conference	297

In-person professional conference	39
Social media posting (LinkedIn)	84
Total	420

Demographics

Table 7 presents the demographic analysis of our 252 participants. Gender distribution was nearly balanced, with 126 (50.0%) males and 124 (49.2%) females, alongside two participants (0.8%) who elected not to disclose. Age predominantly clustered within three categories: 94 participants (37.3%) were aged 25-34, 88 (34.9%) were 35-44, and 39 (15.5%) were 45-54. Notably, 198 professionals (78.6%) possessed over five years of experience, indicating a seasoned sample. Team size distribution was relatively even, with 114 participants (45.2%) in smaller teams (2-10 members) and 113 (44.8%) in medium teams (11-50 members). The financial services industry dominated, encompassing over 62% of participants, while other sectors like health services and retail held modest representation. Geographically, most participants were based in Peru (154, 61.1%), followed by Colombia (47, 18.7%), Bolivia (30, 11.9%), and Chile (17, 6.7%). Further demographic details can be found in Table 7.

Table 7

Demographics Characteristics

Variable	Category	Frequency (N=252)	Percentage
Gender	Female	124	49.2
	Male	126	50.0
	Prefer not to say	2	0.8
Age	Less than 21 years	1	0.4
	Between 21 and 24 years	12	4.8
	Between 25 and 34 years	94	37.3
	Between 35 and 44 years	88	34.9

	Between 45 and 54 years	39	15.5
	Between 55 and 64 years	13	5.2
	More than 64 years	5	1.9
Years of Experience	Less than 2 years	19	7.5
	Between 2 and 5 years	35	13.9
	More than 5 years	198	78.6
Team Size	2 to 10 members	114	45.2
	11 to 50 members	113	44.8
	More than 50 members	25	10.0
Industry	Financial Services	158	62.7
	Health Services	15	6.0
	Retail	12	4.8
	Manufacturing	12	4.8
	Construction	9	3.6
	Professional Services	6	2.4
	Telecommunications	8	3.2
	Agriculture, livestock	7	2.8
	Other	25	9.7
Country	Peru	154	61.1
	Colombia	47	18.7
	Bolivia	30	11.9
	Chile	17	6.7
	Panama	2	0.8
	Ecuador	1	0.4
	USA	1	0.4

Measurement Model

A comprehensive series of statistical tests were conducted on the 252 records. The tests met the validation criteria for construct reliability, consistency reliability, convergent validity, and discriminant validity of the model. Below are the details.

Construct reliability was assessed by the factor outer-loading analysis. The results in Table 8 revealed robust construct reliability, with most items exceeding the 0.70 threshold. The exception, item IN4, exhibited a loading of 0.68, falling within the conditionally acceptable range of 0.40-0.70. Subsequent evaluation of internal

consistency, AVE, and HTMT, as recommended by Hair et al. (2019), yielded satisfactory results, thereby affirming the reliability of the IN4 indicator.

Table 8

Factor Outer Loading Matrix

	EC	IC	IN	PS	SI	TL	TO	VI
EC1	0.851							
EC2	0.890							
EC3	0.867							
EC4	0.802							
IC1		0.850						
IC2		0.921						
IC3		0.932						
IC4		0.843						
IN0			0.743					
IN1			0.714					
IN2			0.786					
IN3			0.731					
IN4			0.680					
IN5			0.766					
IN6			0.812					
IN7			0.841					
IN8			0.725					
IN9			0.742					
PS1				0.883				
PS2				0.910				
PS3				0.905				
PS4				0.902				
SI1					0.878			
SI2					0.918			
SI3					0.929			
TL1						0.824		
TL2						0.886		
TL3						0.870		
TL4						0.883		
TL5						0.903		

TL6	0.859		
TL7	0.821		
TL8	0.775		
TO1		0.922	
TO2		0.929	
TO3		0.907	
VI1			0.868
VI2			0.869
VI3			0.887

Internal consistency reliability of the measurement model was also rigorously assessed using two complementary measures: Cronbach's Alpha and Composite Reliability (CR) factors. All constructs exceeded the recommended threshold of 0.70 for Cronbach's Alpha, indicative of acceptable internal consistency. This finding was further corroborated by all constructs attaining CR values (rho a and rho_c) surpassing the recommended benchmark of 0.70 (Bagozzi & Yi, 1988). As detailed in Table 9, these findings provide robust evidence of the reliability of the constructs in the model.

Table 9

Cronbach's Alpha, Composite Reliability, and AVE

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
External Communication	0.875	0.876	0.914	0.728
Innovation	0.916	0.918	0.930	0.571
Internal Communication	0.910	0.925	0.937	0.787
Participatory Safety	0.922	0.924	0.945	0.810
Support for Innovation	0.894	0.896	0.934	0.825

Task orientation	0.908	0.916	0.942	0.845
Transformation Leadership	0.946	0.950	0.955	0.728
Vision	0.848	0.864	0.907	0.765

Convergent validity was assessed using the average variance extracted (AVE) measure, with results presented in Table 9. All constructs exceeded the recommended AVE threshold of 0.5, demonstrating that the items adequately captured their respective constructs and providing robust evidence of convergent validity (Hair et al., 2019). Furthermore, discriminant validity was evaluated through the Heterotrait-Monotrait ratio (HTMT) approach. While initial analysis revealed one item (VI4) exceeding the recommended HTMT threshold of 0.9, its removal yielded satisfactory results with no HTMT values surpassing the threshold, as detailed in Table 10. This finding indicates established discriminant validity between the constructs, signifying their distinctiveness and minimizing potential measurement bias.

Table 10

The HTMT Matrix

	EC	IN	IC	PS	SI	TO	TL	VI
EC								
IN	0.457							
IC	0.586	0.390						
PS	0.603	0.451	0.739					
SI	0.544	0.467	0.726	0.830				
TO	0.552	0.411	0.795	0.873	0.882			
TL	0.533	0.471	0.791	0.871	0.768	0.848		
VI	0.607	0.469	0.750	0.875	0.816	0.900	0.800	

Structural Model

The present study draws upon the conceptual foundation provided by the structural equation modeling (SEM) framework to explore the intricacies of the estimated structural model. This model unveils the causal relationships among latent variables and elucidates the residual variations that cannot be accounted for by the model (Kang & Ahn, 2021). The analysis emphasizes the statistical significance of the R^2 and path coefficients, which are determined by the p-values (Benitez et al., 2020). The R^2, a pivotal metric, provides crucial insights into the model's goodness of fit by quantifying the proportion of the dependent variable's variance attributable to the constructs included in the model (Hair et al., 2019). Path coefficients, representing standardized regression weights, delve further into the causal strength and directionality between independent and dependent variables. Notably, a path coefficient indicates the fraction of the dependent variable's variance that can be explained by an independent variable while keeping all other variables constant (Land, 1969). Finally, p-values play a pivotal role in evaluating the statistical significance of these path coefficients. By assessing the likelihood of observing the estimated strength of a relationship if none truly exists, p-values offer compelling evidence for the model's robustness (Benitez et al., 2020).

Establishing the statistical significance of relationships within an SEM model necessitates employing bootstrapping, a robust resampling technique (Hair et al., 2019). This approach leverages the inherent variability of the sample data itself to assess the variability of the model's parameters. By iteratively drawing n bootstrap samples and generating n corresponding estimates for each parameter, bootstrapping transcends

parametric assumptions, yielding more accurate assessments of parameter precision and statistical significance (Streukens & Leroi-Werelds, 2016). This advantage over traditional parametric tests, which rely on strict assumptions about data normality and homoscedasticity, makes bootstrapping particularly valuable in situations where these assumptions may be questionable (Efron & Tibshirani, 1994). Ultimately, this resampling technique provides a robust and generalizable method for rigorously evaluating the significance of relationships within SEM models, solidifying its place as a vital tool in gresearch (Hair et al., 2022).

In addition to ascertaining the statistical significance of relationships within the model, it is crucial to undertake a comprehensive examination of the model's goodness of fit during the analytical procedures (Alavi et al., 2020). This evaluation is instrumental in elucidating the extent to which the model accurately reflects the observed data (Hooper et al., 2008). A model fit index serves as a metric to gauge the degree of alignment between the observed data and the theoretical expectations postulated by the model. The index plays a major role in the decision-making process regarding the acceptance or rejection of the proposed model (Sarmento & Costa, 2019).

An SEM path analysis, conducted in SmartPLS, evaluated the proposed hypotheses under a 95% confidence level and complete bootstrapping two-tailed test with 10,000 samples. The two-tailed approach aligns with the possibility that the effects of the dependent variables over the independent variables could be positive as well as negative (Kock, 2015). Figure 1 presents the bootstrapping analysis results, including path coefficients and p-values for all model hypotheses.

The model demonstrates a statistically significant effect on the dependent variable, team innovation ($p < 0.001$). Independent variables collectively explain 27.2% of the variance in team innovation, falling within the acceptable range (10-50%) commonly observed in social science research (Ozili, 2023). . Further bolstering the model's validity, the team innovation Q^2 value of 0.204 surpasses the critical threshold of zero, indicating promising predictive relevance.

The study examined the potential influence of three control variables (team size, industry, and country) on the hypothesized model by incorporating their effects into the analysis. Categorical control variables were operationalized as dummy-coded sets representing their respective categories. To mitigate multicollinearity concerns, when constructs associated with these variables were included, only n-1 dummy items were entered, leaving the remaining one as the reference category. Statistical significance of the control variables was assessed using the same bootstrapping parameters applied in the main analysis. As illustrated in Figure 1, none of the control variables emerged as statistically significant, prompting their removal from the final model.

The analysis employed two model fit indices: the Standardized Root Mean Square Residual (SRMR) and the Normed Fit Index (NFI). The SRMR quantifies the square root of the discrepancy between the residuals of the observed covariance matrix and the covariance matrix predicted by the model (Hooper et al., 2008). Models that fit well typically have SRMR values below 0.05, though values up to 0.08 are acceptable (Hu & Bentler, 1999). The NFI compares the model's chi-square value with that of a null model to assess fit (Bentler & Bonett, 1980). NFI values range from 0 to 1, with values at or

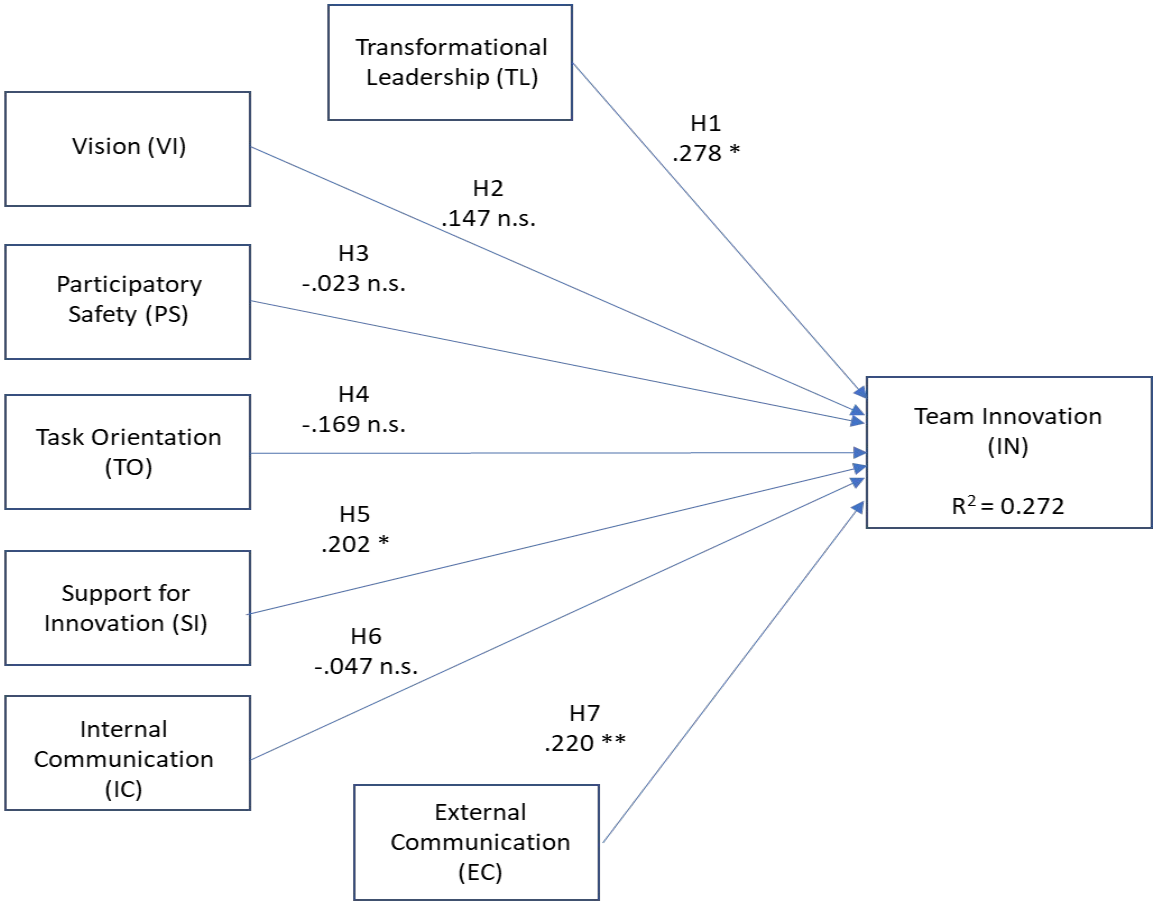
above 0.95 indicating a very good fit, values between 0.9 and 0.95 suggesting a good fit, values between 0.8 and 0.9 indicating a weak fit, and values below 0.8 denoting a poor fit (Sarmento & Costa, 2019). Like the SRMR, the NFI is sensitive to sample size and may underestimate fit for small samples (Bentler, 1990; Mulaik et al., 1989).

The model's SRMR value stands at 0.056, comfortably below the maximum threshold of 0.8. However, the NFI value is marginally lower at 0.778, just shy of the acceptable benchmark of 0.8. Considering that the sample size in the study is 252, it is conceivable to assume that this factor has influenced the NFI results. While fit indices provide valuable guidance, a well-supported structural model should also align with established theory (Hooper et al., 2008). In this case, the SRMR suggests a good fit, and the model effectively explains the data, addresses the research question, allows for future outcome predictions, and offers valuable insights for practitioners. Considering these factors alongside the potential influence of sample size on the NFI, retaining the model appears to be a justified decision.Among the seven proposed hypotheses, three received empirical support. H1, postulating a positive association between transformational leadership and internal audit team innovation, is supported by a significant t-statistic of 2.146 ($p < 0.05$). Similarly, H5 finds support with a t-statistic of 1.961 ($p < 0.05$), confirming the positive relationship between support for innovation and internal audit team innovation. Finally, H7 receives strong support with a t-statistic of 3.188 ($p < 0.01$), demonstrating the positive association between external communication and internal audit team innovation. The study results did not support Hypothesis 2, which postulated that clear objectives and vision promote creativity and accelerate innovation (t-statistic = 1.366, $p > 0.05$). Similarly, Hypothesis 3, which stated that team members' sense of

participatory safety would increase their engagement in developing innovative ideas within the team, was not supported (t-statistic = 0.185, $p > 0.05$). Hypothesis 4, which postulated that task orientation within a team encourages the implementation of new ideas, was also not supported (t-statistic = 1.449, $p > 0.05$). Finally, Hypothesis 6, which assumed that internal communication facilitates knowledge exchange and promotes innovation within internal audit teams, did not receive support (t-statistic = 0.185, $p > 0.05$). Table 11 shows a comprehensive summary of all hypothesis test results.

Figure 2

Summary of Results



Notes: n.s.=not significant; * p<0.05; **p<0.01

Table 11

Summary of Results

Hypothesis	Hypotheses path	Coefficient	T value	P value	Result
H1	TL -> IN	0.278	2.146	0.016	Supported
H2	VI -> IN	0.147	1.366	0.086	Not supported

H3	PS -> IN	-0.023	0.185	0.427	Not supported
H4	TO -> IN	-0.169	1.449	0.074	Not supported
H5	SI -> IN	0.202	1.961	0.025	Supported
H6	IC -> IN	-0.047	0.475	0.317	Not supported
H7	EC -> IN	0.220	3.188	0.001	Supported

DISCUSSION

This research delves into the team-level factors that nurture innovation within internal audit teams. Drawing on established theoretical frameworks, the study examines how transformational leadership, a clear vision, a culture of participative safety, task focus, robust support for innovation, and effective internal and external communication influence creativity and innovation in these teams. The model estimation results reveal that three of the seven hypothesized relationships are statistically significant, highlighting the pivotal role of these specific variables in fostering innovation within internal audit teams. The results reinforce their importance and provide valuable insights for practitioners seeking to cultivate an environment conducive to creative and innovative internal audit practices.

This chapter examines the research findings, exploring their significance both theoretically and practically. By bridging the gap between theory and real-world application, the chapter showcases the research's tangible impact and engages the audience in considering its practical implications for internal audit teams.

Findings

The study confirms Hypothesis 1, establishing a positive link between transformational leadership and internal audit team innovation. This result aligns with existing research, such as Vaccaro et al. (2010), who demonstrated how this leadership style fosters creativity and innovative behavior. Under transformational leaders, internal auditors experience empowerment, enabling them to challenge established practices, generate novel ideas, and adopt diverse perspectives. These leaders actively encourage questioning assumptions, ultimately cultivating a team culture conducive to innovation. This positive environment stems from the leader's ability to connect with members through trust, idealized influence, inspirational motivation, intellectual stimulation, and individualized attention (Bass & Avolio, 1990). Based on the findings from Hypothesis 1, these four characteristics must be present in internal audit team leaders.

Literature suggests that transformational leaders must build relationships at the personal value system level to exert an idealized influence and promote innovation (Gardner & Avolio, 1998). Given the finding, this study calls for sharing experiences and knowledge readily throughout the audit process strengthens this bond. During the walkthrough and discovery phases, when multiple approaches to testing and sampling emerge, leaders can build trust and influence the team by actively listening to diverse team perspectives, offering feedback informed by past experiences, and even acknowledging past mistakes. This experience opens honest communication, fosters strong team relationships, and reinforces trust.

The findings also highlight the inspirational role of transformational leaders in innovation (Bass & Avolio, 1990). The findings imply that transformational leaders should inspire their internal audit teams by advocating for them in professional organizations, external events, and internal meetings, particularly during discussions of audit findings. They should support team members and defend their positions when discrepancies with business process owners arise.

Support for Hypothesis 1 also implies the link between leadership, intellectual stimulation, and team innovation. Transformational leaders in internal audit should foster intellectual growth by encouraging team members to exercise active research, particularly in relevant business processes, new regulations, evolving technologies, and methodological updates. Transformational leaders from internal audit also should demonstrate individual consideration for audit professionals by providing constructive feedback and personalized support during audit project progress assessments and regular performance evaluations.

The study's findings also validate Hypothesis 5, solidifying the significant role of a supportive environment in fostering innovation within internal audit teams. These findings align with Madjar et al. (2002), who highlighted the critical influence of team and family support in encouraging creativity, exploring new solutions, and embracing risk-taking. Based on these findings, internal auditors should create supportive teams that provide structural and cultural frameworks for innovative endeavors, exhibit tolerance for failures, and empower members to engage in risk-taking and novel-solution-seeking behaviors.

The finding informs managers of internal audit teams to creating a supportive environment conducive to innovation. Based on existing literature (Hargadon, 2003), internal audit managers could follow several key steps to implement the innovative environment. First, encouraging collaboration among team members is crucial, as collaborative efforts often yield more inventive solutions than individual thinking. Audit leaders can promote teamwork by establishing clear goals at the team level, such as improve project documentation accuracy or implementing a new technology to streamline the audit process. Additionally, knowledge sharing fosters a collaborative environment. Disseminating knowledge empowers colleagues facing similar situations to approach them with new or similar solutions. In the context of internal audit, sharing past audit experiences, such as dealing with testing when there are data limitations or having difficult conversations with business process owners, can spark creative solutions for future challenges.

A second element that audit managers should develop is support for risk-taking behavior. Creative behaviors are often intertwined with risk-taking. Auditors should feel comfortable proposing new or significantly updated methodologies, auditing processes, or testing approaches and confident that their team, leader, and colleagues approve of taking risks to propose, experiment, and innovate. Statements, rewards, and performance reviews should demonstrate tolerance for risk-taking. Integrating risk-taking and innovation into the team's purpose statement promotes the understanding that creativity and change are vital for team and individual growth. Internal audit leaders must also recognize and reward innovation to emphasize the importance of implementing new organizational processes, tools, or methodologies. Audit managers should prioritize

intrinsic rewards, such as recognition at team and organizational levels, to avoid undermining inherent motivation with extrinsic rewards like bonuses.

Internal audit leaders can also utilize performance reviews as another tool to cultivate an innovation-supportive culture. Integrating performance indicators related to adopting new technologies, developing scripts or algorithms for audit tasks, or replacing outdated audit reports with visualization tools fosters a focus on innovation. In addition, assigning dedicated time in the audit plan for exploring, implementing, and training new ideas is crucial. If auditors are consistently overloaded with assigned tasks, only those with spare time outside of regular hours and the willingness to dedicate it will engage in exploration and experimentation.

Finally, team leaders can demonstrate their commitment to innovation by encouraging and promoting auditor participation in internal and external innovation competitions. Recognition for participating in such events sends a clear message about the importance of innovation for internal audit teams and the firm.

Hypothesis 7 finds further support, revealing a positive relationship between external communication and internal audit team innovation. The findings suggest that team members actively engaging in external channels, seeking information and resources from other teams and organizations, and leveraging external relationships for knowledge and perspective exchange exhibit higher levels of creativity and innovation. The findings align with research by Keller (2001) and others, highlighting the critical role of interpersonal communication beyond the team in fostering novel ideas and approaches.

The findings also support the management literature that underscores the significance of external communication networks in driving innovation (Perry-Smith & Shalley, 2003).

Based on the findings, internal auditor teams should seek external information and advice about their context and facilitate the navigation of change. In detail, internal auditors should engage in "environmental scanning" to monitor evolving trends and innovative approaches relevant to their profession. Audit managers should actively encourage participation in external events and communication with key stakeholders, including professional associations, colleagues from other firms, suppliers, and educational and research institutions. Engaging in conferences organized by professional bodies like the Institute of Internal Auditors and ISACA facilitates valuable networking and knowledge exchange on methods and tools for navigating the dynamic regulatory landscape. Collaborating with colleagues at other organizations allows learning from methodological advancements, new risk detection technologies, previous risk assessment experiences, and emerging risk auditing approaches. Additionally, participation in communities of practice and interest groups fosters discussions on various aspects of the profession. Collaboration with software providers can explore new functionalities and uses of audit tools. Finally, connecting with universities and research institutions can offer insights into emerging trends and technologies.

While external communication provides valuable, previously unavailable information, transforming this knowledge into innovation hinges on internal team capabilities. Based on the findings, internal audit teams and leaders should foster such

ability to leverage external input creatively and innovatively determines the true impact on internal audit practices.

The research, however, presents some interesting divergences from initial assumptions. Hypotheses 2 (Vision), 3 (Participatory Safety), 4 (Task Orientation), and 6 (Internal Communication) were not statistically supported. Hypothesis 2, which posited a significant role for vision in driving innovation, did not receive empirical support. Contrary to prior research suggesting that clear, achievable goals contribute to innovation (West, 1990), the results indicate that clarity in objectives and alignment with team goals alone do not directly correlate with increased creativity and innovation within internal audit teams. A possible explanation is that vision may have a more decisive influence over other types of innovation, such as product development, rather than innovation in internal audit units. This result calls for further investigation into the complex interplay between vision, goal setting, and other factors in fostering an innovative environment in internal audit units.

Hypothesis 3, proposing a positive impact of participatory safety on innovation in internal audit teams, also lacked empirical support. Auditors' perceptions of a safe, collaborative environment with open communication, idea generation, and information sharing did not demonstrate a correlation with increased team innovation. This finding contradicts existing literature, such as the work of Hulsheger et al. (2009), which identified at least a weak positive relationship. The fact that internal audit is mostly a team-based discipline where auditors feel secure and open to providing an opinion might diminish the effect of participatory safety in promoting innovation. Further research

should explore the reasons behind this unexpected outcome and identify potential boundary conditions where the hypothesized association might hold true.

Similarly, the analysis failed to identify a causal relationship between task orientation and innovation in internal audit teams, failing to support Hypothesis 4. The commitment of internal auditors to achieve excellence and cultivate a motivated environment did not translate into an increased generation and implementation of new ideas. While statistically not supported, the findings indicate a weak relationship and thus are weakly in line with the findings by Hulsheger et al. (2009). A possible explanation for such weak relationship is that the role of regulatory aspects and the need for compliance with regulations may generate additional workload that prevents task orientation from promoting creativity in internal audit teams. This discrepancy necessitates further inquiry to delve deeper into the specific characteristics of internal audit teams and their unique motivational dynamics.

Finally, Hypothesis 6, which posited a positive impact of internal communication on innovation, also failed to find support in the data. Effective internal communication, defined by the timely dissemination of crucial information and promotion of collaboration and alignment, did not positively influence the generation and implementation of new ideas within internal audit teams. While García-Morales et al. (2011) and others identified a positive relationship in organizational and team contexts, the assurance services provided by internal audit and its results (audit findings) may generate a different type of communication between audit teams and the rest of the organization. The type of the communication may more audit-result oriented than

innovation-oriented, resulting insignificant relationship between internal communication and team innovation. Further research is needed to explore the specific nuances of internal audit teams and identify potential factors that might moderate the hypothesized connection.

The analysis reveals supportive and divergent findings regarding the factors influencing innovation in internal audit teams. While some hypothesized relationships received empirical confirmation, others present avenues for future research. Understanding the complex interplay between leadership, team environment, and communication is crucial for nurturing a culture of innovation within internal audit teams and maximizing their effectiveness in today's dynamic organizational landscape.

Implications

Theoretical Contributions

This study stands as one of the first to delve into innovation within the internal audit function. Its findings have illuminated crucial points for both theoretical and practical understanding of internal audit and managerial innovation. By shedding light on the elements fostering creativity and implementation of creative ideas in internal audit teams, this research enriches the academic literature on internal audit topics. As acknowledged by Behrend and Eulerich (2019) and Roussy and Perron (2018), academic studies on internal audit practices remain limited, particularly regarding resource and technology utilization. Additionally, the presence of respondents from South America, a region often overlooked in internal audit and managerial innovation research in favor of other regions as North America and Europe (Khosravi et al., 2019), highlights the

potential influence of cultural differences on the internal audit process and creative endeavors. These findings pave the way for further generalizing results from previous studies conducted in other geographical regions.

Beyond internal audit, this research offers four significant contributions to the broader field of managerial innovation. Firstly, building upon established frameworks for evaluating general team innovation, this study proposes and tests a model specifically tailored to the business function of internal audit, identifying factors impacting innovation within this unique context. Despite the abundance of literature on innovation and the existence of theoretical frameworks for analyzing the phenomenon at team and organizational levels, Damanpour and Aravind (2012) and Castellacci et al. (2016) highlight the understudied nature of innovation within specific business functions. This research addresses this gap by providing an empirical analysis in the context of internal audit.

Secondly, this study's findings lend empirical support to the influential role of transformational leadership, support for innovation, and external communication in team innovation. As Damanpour and Aravind (2012) and Khosravi et al. (2019) point out, while managerial innovation research is growing, much of it remains focused on theoretical perspectives rather than empirical testing. By collecting data from practitioners and testing a theoretically driven model, this study strengthens the understanding of these drivers through empirical evidence.

Thirdly, while past theoretical research has established the positive impact of a four-factor team climate on overall innovation, this study reveals that vision,

participatory safety, and task orientation do not directly influence innovation within internal audit teams. This divergence from previous studies suggests the need for further investigation into the potential moderating factors or context-specific considerations that might influence these relationships.

Lastly, this study embraces an approach not favored by most managerial innovation research (Khosravi et al., 2019), considering the impact of various drivers in conjunction rather than in isolation. This holistic approach provides a more complete picture of the complex dynamics driving innovation within internal audit teams.

Practical Contributions

This research was initiated to address a crucial need: understanding what elements facilitate and promote creativity and innovation within the internal audit function. The primary aim was to provide chief audit executives, internal audit leaders, and practitioners with the empirical evidence and insights needed to implement effective change and innovation initiatives that enhance both internal audit's own value and its contribution to organizational effectiveness.

The findings shed light on three key areas that hold significant practical implications for the internal audit community:

Empowering Transformational Leadership: The study reveals the central role of transformational team leaders in igniting and nurturing innovation. Internal auditors thrive and innovate more confidently when their leaders actively guide, encourage them to think outside the box, and champion change. Leaders must be aware of their significant influence on their teams' creative impulses and embrace their responsibility to foster a

culture that welcomes new ideas, experimentation, and growth. This requires demonstrating high commitment to innovation, working closely with their teams, conveying the importance of change, and offering unwavering support throughout the process.

Cultivating a Supportive Environment: Beyond individual leadership, fostering a supportive environment where innovation is not just tolerated but actively nurtured is crucial. This objective goes beyond mere words and requires embedding the value of innovation within the team's organizational structure, policies, procedures, and goals. Leaders must promote an iterative experimentation mentality that embraces trial and error as a stepping stone to progress. By creating a safe space for exploration and learning, where new ideas are heard and considered, internal audit teams can unleash their full creative potential.

Embracing External Connections: The study also highlights the critical role of external information exchange in fueling innovation. Encouraging internal auditors to actively participate in professional conferences, associations, communities of practice, and industry discussions opens doors to fresh perspectives, emerging technologies, and best practices. These external connections empower internal audit teams to stay abreast of advancements in the profession, challenge conventional thinking, and ultimately, drive innovative solutions that benefit both the team and the organization.

Overall, these findings equip Chief Audit Executives, Internal Audit Leaders, and practitioners with practical strategies to cultivate a culture of innovation within their teams. By empowering leadership, nurturing a supportive environment, and embracing

external connections, internal audit can unlock its full potential as a driver of positive change and enhanced organizational effectiveness.

LIMITATIONS, FUTURE RESEARCH AND CONCLUSIONS

Limitations

This study acknowledges several limitations. First, the self-administered survey format carries the risk of response and self-selection bias. Respondents might provide socially desirable answers or selectively participate, leading to potential sample skew. Additionally, survey fatigue could impact response accuracy, particularly in extended questionnaires. While the survey length was carefully balanced for reasonable completion time, it acknowledges the trade-off with deeper exploration of responses.

Second, the study provides a snapshot at a single point in time. This static approach does not capture dynamic environmental, business, and individual changes that occur over time, potentially limiting the generalizability of findings.

Third, the data collection method, relying on professional conferences and a single LinkedIn profile, resulted in a concentration of respondents from specific South American countries and the financial services industry. While such data is valuable, generalizability is restricted until similar studies with broader participant profiles corroborate the findings.

Finally, the study leverages individual perceptions to draw conclusions about team behavior. While a common approach, alternative methods like team consensus questionnaires might yield different results, necessitating further exploration.

Future Research

This study's findings and limitations prompt avenues for further exploration. First, applying alternative methods like interviews or team questionnaires could shed deeper light on innovation determinants within internal audit and other business functions. Comparing individual team member and leader perspectives within teams would offer insightful contrasts.

Second, future surveys could employ different data collection strategies. Collaborating with organizations like the Institute of Internal Auditors or ISACA would enable global reach and facilitate comparisons across regions, countries, and industries. Expanding the data pool is crucial for generalizability.

Third, longitudinal studies tracking teams over time are valuable tools. As firms and organizations adapt to technological advancements and regulatory pressures, team dynamics evolve accordingly. Capturing these changes through data collection at different points can provide a richer understanding of whether team-based innovation determinants fluctuate alongside environmental shifts.

Furthermore, investigating individual and organizational level perspectives of innovation within internal audit would complement this study's findings and create a more holistic view of the phenomenon within this specific discipline.

Moderation analysis exploring whether other variables impact the observed effects, particularly regarding non-significant variables from the West's team climate model, could yield valuable insights. It is possible that the influence of these variables might be amplified or diminished by other independent variables.

Finally, enriching the current model with additional variables could offer a more comprehensive understanding of internal audit team innovation dynamics. The current model explains roughly one-third of the observed variance, leaving room for further exploration and potentially uncovering significant additional factors.

Conclusions

This quantitative study aimed to contribute to the understanding of team-level determinants of innovation within internal audit. By providing insights and guidance to team leaders and chief audit executives, the study aspired to encourage change, creativity, and innovation within internal audit functions.

As one of the first empirical explorations of innovation determinants in internal audit, this study used online and in-person surveys to examine the influence of factors like transformational leadership, vision, task orientation, participative safety, support for innovation, and internal/external communication on team innovation. The findings suggest that leadership style, a supportive environment, and the capture of external knowledge are the most significant determinants.

This research contributes to both theoretical and managerial perspectives. It expands the managerial innovation field by providing empirical evidence for the impact

of transformational leadership, support for innovation, and external communication on team innovation in internal audit. However, further research is needed to generalize the findings and build upon this study's insights and existing theory.

Managerially, the study offers practical implications for the internal audit community by highlighting three key areas with significant impact: leadership style, fostering a supportive environment, and actively accumulating external knowledge. Implementing effective change and innovation initiatives within these areas holds the potential to significantly enhance internal audit practices.

LIST OF REFERENCES

Alavi, M., Visentin, D. C., Thapa, D. K., Hunt, G. E., Watson, R., & Cleary, M. (2020). Chi-square for model fit in confirmatory factor analysis. Journal of advanced nursing, 76(9), 2209-2211.

Amabile, T. M. (1983). The social psychology of creativity: A componential conceptualization. *Journal of Personality and Social Psychology*, *45*(2), 357–376. https://doi.org/10.1037/0022-3514.45.2.357

Amabile, T. M. (1988). A model of creativity and innovation in organizations. *Research in Organizational Behavior*, *10*(10), 123–167. https://ci.nii.ac.jp/naid/20000708825

Amabile, T. M., Conti, R., Coon, H. M., Lazenby, J., & Herron, M. C. (1996). Assessing the Work Environment for Creativity. *Academy of Management Journal*, *39*(5), 1154–1184. https://doi.org/10.5465/256995

Amabile, T. M., Hill, K. G., Hennessey, B. A., & Tighe, E. M. (1994). The Work Preference Inventory: Assessing intrinsic and extrinsic motivational orientations. *Journal of Personality and Social Psychology*, *66*(5), 950–967. https://doi.org/10.1037/0022-3514.66.5.950

Ancona, D. G., & Caldwell, D. F. (1992). Bridging the Boundary: External Activity and Performance in Organizational Teams. Administrative Science Quarterly, 37(4), 634. https://doi.org/10.2307/2393475.

Anderson, N., & West, M. A. (1996). The Team Climate Inventory: Development of the TCI and its applications in teambuilding for innovativeness. European Journal of work and organizational psychology, 5(1), 53-66.

Avolio, B. J., & Bass, B. M. (2001). Developing potential across a full range of Leadership Tm: Cases on transactional and transformational leadership. Psychology Press.

Axtell, C. M., Holman, D. J., Unsworth, K. L., Wall, T. D., Waterson, P. E., & Harrington, E. (2000). Shopfloor innovation: Facilitating the suggestion and implementation of ideas. Journal of occupational and organizational psychology, 73(3), 265-285.

Bae, G. S., Choi, S. U., & Lamoreaux, P. T. (2016). Auditors and Client Investment Efficiency. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2754394

Baer, M., & Frese, M. (2003). Innovation is not enough: climates for initiative and psychological safety, process innovations, and firm performance. *Journal of Organizational Behavior*, *24*(1), 45–68. https://doi.org/10.1002/job.179

Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. Journal of the academy of marketing science, 16, 74-94.

Barac, K., Plant, K., Kunz, R., & Kirstein, M. (2021). Audit practice: A straightforward trade or a complex system?. International Journal of Auditing, 25(3), 797-812.

Bass, B. M. (1985). Leadership: Good, better, best. *Organizational Dynamics*, *13*(3), 26–40. https://doi.org/10.1016/0090-2616(85)90028-2

Bass, B. M., & Avolio, B. J. (1990). Developing Transformational Leadership: 1992 and Beyond. *Journal of European Industrial Training*, *14*(5). https://doi.org/10.1108/03090599010135122

Bass, B. M., Avolio, B. J., & Atwater, L. (1996). The Transformational and Transactional Leadership of Men and Women. *Applied Psychology*, *45*(1), 5–34. https://doi.org/10.1111/j.1464-0597.1996.tb00847.x

Behr, D., & Shishido, K. (2016). The translation of measurement instruments for cross-cultural surveys. The SAGE handbook of survey methodology, 55, 269-87.

Behrend, J., & Eulerich, M. (2019). The evolution of internal audit research: a bibliometric analysis of published documents (1926–2016). Accounting History Review, 29(1), 103-139.

Bélanger, F., & Watson-Manheim, M. B. (2006). Virtual Teams and Multiple Media: Structuring Media Use to Attain Strategic Goals. *Group Decision and Negotiation*, *15*(4), 299–321. https://doi.org/10.1007/s10726-006-9044-8

Benitez, J., Henseler, J., Castillo, A., & Schuberth, F. (2020). How to perform and report an impactful analysis using partial least squares: Guidelines for confirmatory and explanatory IS research. Information & management, 57(2), 103168.

Bennis, W. G., & Nanus, B. (1985). *Leaders: The Strategies for Taking Charge*. New York : Harper & Row.

Bentler, P. M. (1990). Comparative fit indexes in structural models. Psychological bulletin, 107(2), 238.

Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. Psychological bulletin, 88(3), 588.

Birkinshaw, J. M., & Mol, M. J. (2006). How management innovation happens. MIT Sloan management review, 47(4), 81-88.

Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Multivariate data analysis: A global perspective. Pearson.

Boehm, J., Brown, J. S., Sabbagh, L., & Thomas, K. (2021, June 30). *Lessons from banking to improve risk and compliance and speed up digital transformations*. McKinsey & Company. https://www.mckinsey.com/capabilities/mckinsey-digital/our-insights/lessons-from-banking-to-improve-risk-and-compliance-and-speed-up-digital-transformations

Boland, C. M., Daugherty, B. E., & Dickins, D. (2018). Evidence of the Relationship between PCAOB Inspection Outcomes and the Use of Structured Audit Technologies. *AUDITING: A Journal of Practice & Theory*, *38*(2), 57–77. https://doi.org/10.2308/ajpt-52214

Bowers, D., & Seashore, S. E. (1966). Predicting Organizational Effectiveness With a Four-Factor Theory of Leadership. *Administrative Science Quarterly*, *11*(2), 238. https://doi.org/10.2307/2391247

Brown, T. A. (2015). Confirmatory factor analysis for applied research. Guilford publications.

Bunce, D., & West, M. A. (1995). Self perceptions and perceptions of group climate as predictors of individual innovation at work. Applied Psychology: An International Review, 44(3), 199–215. https://doi.org/10.1111/j.1464-0597.1995.tb01076.x

Burke, C. S., Stagl, K. C., Salas, E., Pierce, L. L., & Kendall, D. L. (2006). Understanding team adaptation: A conceptual analysis and model. *Journal of Applied Psychology*, *91*(6), 1189–1207. https://doi.org/10.1037/0021-9010.91.6.1189

Burningham, C., & West, M. (1995). Individual, Climate, and Group Interaction Processes as Predictors of Work Team Innovation. *Small Group Research*, *26*(1), 106–117. https://doi.org/10.1177/1046496495261006

Cardinal, L. B. (2001). Technological Innovation in the Pharmaceutical Industry: The Use of Organizational Control in Managing Research and Development. *Organization Science*, *12*(1), 19–36. https://doi.org/10.1287/orsc.12.1.19.10119

Carr, A. S., & Kaynak, H. (2007). Communication methods, information sharing, supplier development and performance. *International Journal of Operations &Amp; Production Management*, *27*(4), 346–370. https://doi.org/10.1108/01443570710736958

Carrière, J., & Bourque, C. (2009). The effects of organizational communication on job satisfaction and organizational commitment in a land ambulance service and the mediating role of communication satisfaction. *Career Development International*, *14*(1), 29–49. https://doi.org/10.1108/13620430910933565

Castellacci, F., Gulbrandsen, M., Hildrum, J., Martinkenaite, E., Simensen, E., & Tveito, V. (2016). How Does Innovation Differ across Business Functions? Employee-level

Analysis of a Multinational Company (No. 20160321). Centre for Technology, Innovation and Culture, University of Oslo.

Christ, M. H., Eulerich, M., Krane, R., & Wood, D. A. (2021). New Frontiers for Internal Audit Research*. *Accounting Perspectives*, *20*(4), 449–475. https://doi.org/10.1111/1911-3838.12272

Cohen, W. M., & Levinthal, D. A. (1990). Absorptive Capacity: A New Perspective on Learning and Innovation. *Administrative Science Quarterly*, *35*(1), 128. https://doi.org/10.2307/2393553

Conger, J. A., & Kanungo, R. N. (1998). *Charismatic Leadership in Organizations (Southeastern United States)* (1st ed.). SAGE Publications, Inc.

Crossan, M. M., & Apaydin, M. (2010). A multi-dimensional framework of organizational innovation: A systematic review of the literature. Journal of management studies, 47(6), 1154-1191.

Dai, Y. D., Dai, Y. Y., Chen, K. Y., & Wu, H. C. (2013). Transformational vs transactional leadership: which is better? *International Journal of Contemporary Hospitality Management*, *25*(5), 760–778. https://doi.org/10.1108/ijchm-dec-2011-0223

Damanpour, F., & Aravind, D. (2012). Managerial innovation: Conceptions, processes and antecedents. Management and organization review, 8(2), 423-454.

Damanpour, F., & Evan, W. M. (1984). Organizational innovation and performance: the problem of" organizational lag". Administrative science quarterly, 392-409.

Damanpour, F., & Schneider, M. (2006). Phases of the Adoption of Innovation in Organizations: Effects of Environment, Organization and Top Managers1. *British Journal of Management*, *17*(3), 215–236. https://doi.org/10.1111/j.1467-8551.2006.00498.x

Damanpour, F., Sanchez-Henriquez, F., & Chiu, H. H. (2018). Internal and external sources and the adoption of innovations in organizations. British Journal of Management, 29(4), 712-730.

DeCarlo, M. (2018). Scientific inquiry in social work. https://openlibrary-repo.ecampusontario.ca/jspui/handle/123456789/550

Deci, E. L., & Ryan, R. M. (1985). The general causality orientations scale: Self-determination in personality. *Journal of Research in Personality*, *19*(2), 109–134. https://doi.org/10.1016/0092-6566(85)90023-6

Dess, G. G., & Picken, J. C. (2000). Changing roles: Leadership in the 21st century. *Organizational Dynamics*, *28*(3), 18–34. https://doi.org/10.1016/s0090-2616(00)88447-8

DeFond, M., & Zhang, J. (2014). A review of archival auditing research. Journal of accounting and economics, 58(2-3), 275-326.

Dewangan, V., & Godse, M. (2014). Towards a holistic enterprise innovation performance measurement system. *Technovation*, *34*(9), 536–545. https://doi.org/10.1016/j.technovation.2014.04.002

Diehl, M. R., & Stroebe, W. (1991). Productivity loss in idea-generating groups: Tracking down the blocking effect. *Journal of Personality and Social Psychology*, *61*(3), 392–403. https://doi.org/10.1037/0022-3514.61.3.392

Duh, R. R., Knechel, W. R., & Lin, C. C. (2019). The Effects of Audit Firms' Knowledge Sharing on Audit Quality and Efficiency. *AUDITING: A Journal of Practice & Theory*, *39*(2), 51–79. https://doi.org/10.2308/ajpt-52597

Edison, H., Bin Ali, N., & Torkar, R. (2013). Towards innovation measurement in the software industry. *Journal of Systems and Software*, *86*(5), 1390–1407. https://doi.org/10.1016/j.jss.2013.01.013

Efron, B., & Tibshirani, R. J. (1994). An introduction to the bootstrap. CRC press.

Edmondson, A. C. (1999). Psychological Safety and Learning Behavior in Work Teams. *Administrative Science Quarterly*, *44*(2), 350–383. https://doi.org/10.2307/2666999

Eisenbeiss, S. A., Van Knippenberg, D., & Boerner, S. (2008). Transformational leadership and team innovation: Integrating team climate principles. *Journal of Applied Psychology*, *93*(6), 1438–1446. https://doi.org/10.1037/a0012716

Faraj, S., & Yan, A. (2009). Boundary work in knowledge teams. *Journal of Applied Psychology*, *94*(3), 604–617. https://doi.org/10.1037/a0014367.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. Journal of marketing research, 18(1), 39-50.

Fornelli, C. (2018, February 8). Making Teamwork Work: A View from Auditing. *https://www.linkedin.com*. https://doi.org/10.1108/09534810810856435.

García-Morales, V. J., Matías-Reche, F., & Verdu-Jover, A. J. (2011). Influence of internal communication on technological proactivity, organizational learning, and organizational innovation in the pharmaceutical sector. Journal of Communication, 61(1), 150-177.

Gardner, W. L., & Avolio, B. J. (1998). The Charismatic Relationship: A Dramaturgical Perspective. *Academy of Management Review*, *23*(1), 32–58. https://doi.org/10.5465/amr.1998.192958

Gault, F. (2018). Defining and measuring innovation in all sectors of the economy. *Research Policy*, *47*(3), 617–622. https://doi.org/10.1016/j.respol.2018.01.007

Gilson, L., & Shalley, C. E. (2004). A Little Creativity Goes a Long Way: An Examination of Teams' Engagement in Creative Processes. *Journal of Management*, *30*(4), 453–470. https://doi.org/10.1016/j.jm.2003.07.001

Gruning, G. (2022). *IABC Handbook of Organizational Communication (2nd, 11) by Gillis, Tamara - IABC [Hardcover (2011)]*. JoseyBas, Hardcover(2011).

Gupta, A. K., Tesluk, P. E., & Taylor, M. S. (2007). Innovation at and across multiple levels of analysis. Organization science, 18(6), 885-897.

Guzzo, R. A., & Shea, G. P. (1992). Group performance and intergroup relations in organizations. In M. D. Dunnette & L. M. Hough (Eds.), Handbook of industrial and organizational psychology (2nd ed., pp. 269–313). Consulting Psychologists Press

Hackman, J. R. (1992). Group influences on individuals in organizations. *Handbook of Industrial and Organizational Psychology (Vol. 3)*.

Hage, J., & Dewar, R. L. (1973). Elite Values Versus Organizational Structure in Predicting Innovation. *Administrative Science Quarterly*, *18*(3), 279. https://doi.org/10.2307/2391664

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Multivariate data analysis (7th ed.). Englewood Cliffs: Prentice Hall.

Hair, J. F., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2018). An overview of recent and emerging developments in PLS-SEM. Advanced Issues in Partial Least Squares SEM, June.

Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. European business review, 31(1), 2-24.

Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). Partial least squares structural equation modeling (PLS-SEM) using R: A workbook (p. 197). Springer Nature.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). A primer on partial least squares structural equation modeling (PLS-SEM), 3rd ed., Thousand Oaks, CA: Sage.

Hargadon, A. (2003). How breakthroughs happen: The surprising truth about how companies innovate. Harvard Business Press.

Hater, J. J., & Bass, B. M. (1988). Superiors' evaluations and subordinates' perceptions of transformational and transactional leadership. *Journal of Applied Psychology*, *73*(4), 695–702. https://doi.org/10.1037/0021-9010.73.4.695

Hennessey, B. A., & Amabile, T. M. (1998). Reality, intrinsic motivation, and creativity. *American Psychologist*, *53*(6), 674–675. https://doi.org/10.1037/0003-066x.53.6.674

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. Journal of the academy of marketing science, 43, 115-135.

Hooper, D., Coughlan, J., Mullen, M. (2008). Structural Equation Modelling: Guidelines for Determining Model Fit. Electronic Journal of Business Research Methods, 6(1), 53-60.

Howell, J. M., & Avolio, B. J. (1993). Transformational leadership, transactional leadership, locus of control, and support for innovation: Key predictors of consolidated-business-unit performance. *Journal of Applied Psychology*, *78*(6), 891–902. https://doi.org/10.1037/0021-9010.78.6.891

Hulsheger, U. R., Anderson, N., & Salgado, J. F. (2009). Team-level predictors of innovation at work: A comprehensive meta-analysis spanning three decades of research. *Journal of Applied Psychology*, *94*(5), 1128–1145. https://doi.org/10.1037/a0015978

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. Structural equation modeling: a multidisciplinary journal, 6(1), 1-55.

Kalla, H. K. (2005). Integrated internal communications: a multidisciplinary perspective. Corporate communications: An international journal, 10(4), 302-314.

Kang, H., & Ahn, J. W. (2021). Model setting and interpretation of results in research using structural equation modeling: A checklist with guiding questions for reporting. Asian Nursing Research, 15(3), 157-162.

Katz, D., & Kahn, R. L. (1978). *The Social Psychology of Organizations*.

Keller, R. T. (2001). Cross-Functional Project Groups in Research and New Product Development: Diversity, Communications, Job Stress, and Outcomes. *Academy of Management Journal*, *44*(3), 547–555. https://doi.org/10.5465/3069369

Khosravi, P., Newton, C., & Rezvani, A. (2019). Management innovation: A systematic review and meta-analysis of past decades of research. *European Management Journal*, *37*(6), 694–707. https://doi.org/10.1016/j.emj.2019.03.003.

Kivimaki, M., & Elovainio, M. (1999). A short version of the Team Climate Inventory: Development and psychometric properties. Journal of occupational and organizational psychology, 72(2), 241-246.

King, N. (1990). Innovation at Work: The Research Literature. In *Wiley eBooks*. Wiley. http://eprints.hud.ac.uk/id/eprint/10162/

King, N., Anderson, N., & West, M. (1991). Organizational innovation in the UK: A case study of perceptions and processes. *Work & Stress*, *5*(4), 331–339. https://doi.org/10.1080/02678379108257031

Kirkpatrick, S. A., & Locke, E. A. (1996). Direct and indirect effects of three core charismatic leadership components on performance and attitudes. *Journal of Applied Psychology*, *81*(1), 36–51. https://doi.org/10.1037/0021-9010.81.1.36

Kline, R. B. (2012). Assumptions in structural equation modeling. Handbook of structural equation modeling, 111, 125.

Kock, N. (2015). One-tailed or two-tailed P values in PLS-SEM? International Journal of e-Collaboration (IJeC), 11(2), 1-7.

Kurtzberg, T. R., & Amabile, T. M. (2001). From Guilford to Creative Synergy: Opening the Black Box of Team-Level Creativity. *Creativity Research Journal*, *13*(3–4), 285–294. https://doi.org/10.1207/s15326934crj1334_06.

Lai, J., Lui, S. S., & Tsang, E. W. K. (2015). Intrafirm Knowledge Transfer and Employee Innovative Behavior: The Role of Total and Balanced Knowledge Flows. *Journal of Product Innovation Management*, *33*(1), 90–103. https://doi.org/10.1111/jpim.12262.

Land, K. C. (1969). Principles of path analysis. Sociological methodology, 1, 3-37.

Latham, G. P., & Yukl, G. (1975). A Review of Research on the Application of Goal Setting in Organizations. *Academy of Management Journal*, *18*(4), 824–845. https://doi.org/10.2307/255381.

Lawler, E. E., & Hackman, J. R. (1969). Impact of employee participation in the development of pay incentive plans: A field experiment. *Journal of Applied Psychology*, *53*(6), 467–471. https://doi.org/10.1037/h0028657

Le, P. B., & Lei, H. (2019). Determinants of innovation capability: the roles of transformational leadership, knowledge sharing and perceived organizational support. *Journal of Knowledge Management*, *23*(3), 527–547. https://doi.org/10.1108/jkm-09-2018-0568

Lhuillery, S., Tellechea, M., & Thiery, S. (2021). Open innovation in managerial innovation: the case of internal audit.

Locke, E. A. (1968). Toward a theory of task motivation and incentives. *Organizational Behavior and Human Performance*, *3*(2), 157–189. https://doi.org/10.1016/0030-5073(68)90004-4

Locke, E. A., & Latham, G. P. (1990). *A Theory of Goal Setting & Task Performance*.

Madjar, N., Oldham, G. R., & Pratt, M. (2002). There's No Place like Home? The Contributions of Work and Nonwork Creativity Support to Employees' Creative Performance. *Academy of Management Journal*, *45*(4), 757–767. https://doi.org/10.5465/3069309

Magadley, W., & Birdi, K. (2012). Two sides of the innovation coin? An emprical investigation of the relative correlates of idea generation and idea implementation. International Journal of Innovation Management, 16(01), 1250002.

McCafferty, J. (2020). How Internal Audit Leaders Can Cultivate a Culture of Innovation. *Internal Audit 360*. https://internalaudit360.com/how-internal-audit-leaders-can-cultivate-a-culture-of-innovation/

Mishra, K., Boynton, L., & Mishra, A. (2014). Driving employee engagement: The expanded role of internal communications. International Journal of Business Communication, 51(2), 183-202.

Mol, M. J., & Birkinshaw, J. (2009). The sources of management innovation: When firms introduce new management practices. *Journal of Business Research*, *62*(12), 1269–1280. https://doi.org/10.1016/j.jbusres.2009.01.001

Morris, M. W., & Leung, K. (2010). Creativity east and west: Perspectives and parallels. Management and Organization Review, 6(3), 313-327.

Mulaik, S. A., James, L. R., Van Alstine, J., Bennett, N., Lind, S., & Stilwell, C. D. (1989). Evaluation of goodness-of-fit indices for structural equation models. Psychological bulletin, 105(3), 430.

Mumford, M. D., & Gustafson, S. B. (1988). Creativity syndrome: Integration, application, and innovation. *Psychological Bulletin*, *103*(1), 27–43. https://doi.org/10.1037/0033-2909.103.1.27

Nair, B. (2022, July 13). The Evolution of Internal Audit in a Digital-First Environment. *www.isaca.org*.

Nunnally, J. C. (1978). Psychometric theory (2nd ed.). New York: McGraw-Hill.

Ozili, P. K. (2023). The acceptable R-square in empirical modelling for social science research. In Social research methodology and publishing results: A guide to non-native English speakers (pp. 134-143). IGI global.

Pearce, J. M., & Ravlin, E. C. (1987). The Design and Activation of Self-Regulating Work Groups. *Human Relations*, *40*(11), 751–782. https://doi.org/10.1177/001872678704001104

Perry-Smith, J. E., & Shalley, C. E. (2003). The social side of creativity: A static and dynamic social network perspective. Academy of management review, 28(1), 89-106.

Price, P. C., Jhangiani, R., & Chiang, I. C. A. (2015). Research methods in psychology. BCCampus.

Radomir, L., & Moisescu, O. I. (2020). Discriminant validity of the customer-based corporate reputation scale: Some causes for concern. Journal of Product & Brand Management, 29(4), 457-469.

Raykov, T., Tomer, A., & Nesselroade, J. R. (1991). Reporting structural equation modeling results in Psychology and Aging: some proposed guidelines. Psychology and aging, 6(4), 499.

Redmond, M., Mumford, M. D., & Teach, R. D. (1993). Putting Creativity to Work: Effects of Leader Behavior on Subordinate Creativity. *Organizational Behavior and Human Decision Processes*, *55*(1), 120–151. https://doi.org/10.1006/obhd.1993.1027

Rickards, T., Chen, M., & Moger, S. (2001). Development of a Self-Report Instrument for Exploring Team Factor, Leadership and Performance Relationships. *British Journal of Management*, *12*(3), 243–250. https://doi.org/10.1111/1467-8551.00197

Rodriguez, M., Doloreux, D., & Shearmur, R. (2017). Variety in external knowledge sourcing and innovation novelty: Evidence from the KIBS sector in Spain. *Technovation*, *68*, 35–43. https://doi.org/10.1016/j.technovation.2017.06.003

Rogers, M. (1998). *The Definition and Measurement of Innovation* (Vols. 10–98). Melbourne Institute of Applied Economic and Social Research.

Roussy, M., & Perron, A. (2018). New Perspectives in Internal Audit Research: A Structured Literature Review. *Accounting Perspectives*, *17*(3), 345–385. https://doi.org/10.1111/1911-3838.12180

Sarmento, R. P., & Costa, V. (2019). Confirmatory factor analysis--a case study. arXiv preprint arXiv:1905.05598.

Schlegel, D., & Kraus, P. (2023). Skills and competencies for digital transformation–a critical analysis in the context of robotic process automation. International Journal of Organizational Analysis, 31(3), 804-822.

Schumpeter, J.A. (1934). The theory of economic development. An inquiry into profits, capital, credit, interest, and the business cycle. Cambridge: Harvard University Press.

Sethi, R., Smith, D. J., & Park, C. S. (2001). Cross-Functional Product Development Teams, Creativity, and the Innovativeness of New Consumer Products. *Journal of Marketing Research*, *38*(1), 73–85. https://doi.org/10.1509/jmkr.38.1.73.18833

Shalley, C. E. (2002). How Valid and Useful is the Integrative Model for Understanding Work Groups' Creativity and Innovation? *Applied Psychology*, *51*(3), 406–410. https://doi.org/10.1111/1464-0597.00995

Shalley, C. E., & Perry-Smith, J. E. (2001). Effects of Social-Psychological Factors on Creative Performance: The Role of Informational and Controlling Expected Evaluation and Modeling Experience. *Organizational Behavior and Human Decision Processes*, *84*(1), 1–22. https://doi.org/10.1006/obhd.2000.2918

Shamir, B., House, R. J., & Arthur, M. A. (1993). The Motivational Effects of Charismatic Leadership: A Self-Concept Based Theory. *Organization Science*, *4*(4), 577–594. https://doi.org/10.1287/orsc.4.4.577

Shin, S. J., & Zhou, J. (2003). Transformational Leadership, Conservation, and Creativity: Evidence From Korea. *Academy of Management Journal*, *46*(6), 703–714. https://doi.org/10.5465/30040662

Shivram, V. (2024). Auditing with AI: A theoretical framework for applying machine learning across the internal audit lifecycle. EDPACS, 1-19.

Smit, N. (2020). Innovating internal audit functions: What should internal audit functions do to enhance their innovative potential? (Unpublished master's thesis). Erasmus University.

Somech, A. (2006). The Effects of Leadership Style and Team Process on Performance and Innovation in Functionally Heterogeneous Teams. *Journal of Management*, *32*(1), 132–157. https://doi.org/10.1177/0149206305277799

Somech, A., & Drach-Zahavy, A. (2013). Translating Team Creativity to Innovation Implementation. *Journal of Management*, *39*(3), 684–708. https://doi.org/10.1177/0149206310394187

Sosik, J. J., Kahai, S. S., & Avolio, B. J. (1998). Transformational Leadership and Dimensions of Creativity: Motivating Idea Generation in Computer-Mediated Groups. *Creativity Research Journal*, *11*(2), 111–121. https://doi.org/10.1207/s15326934crj1102_3.

Spears, J. L., & Barki, H. (2010). User participation in information systems security risk management. MIS quarterly, 503-522.

Streukens, S., & Leroi-Werelds, S. (2016). Bootstrapping and PLS-SEM: A step-by-step guide to get more out of your bootstrap results. European management journal, 34(6), 618-632.

Tjosvold, D. (1982). Effects of approach to controversy on superiors' incorporation of subordinates' information in decision making. *Journal of Applied Psychology*, *67*(2), 189–193. https://doi.org/10.1037/0021-9010.67.2.189

Tjosvold, D. (1991). Rights and responsibilities of dissent: Cooperative conflict. *Employee Responsibilities and Rights Journal*, *4*(1), 13–23. https://doi.org/10.1007/bf01390435

Tjosvold, D., Tang, M., & West, M. (2004). Reflexivity for Team Innovation in China. *Group & Organization Management*, *29*(5), 540–559. https://doi.org/10.1177/1059601103254911

Tkalac Verčič, A., Sinčić Ćorić, D., & Pološki Vokić, N. (2021). Measuring internal communication satisfaction: validating the internal communication satisfaction questionnaire. *Corporate Communications: An International Journal*, *26*(3), 589–604. https://doi.org/10.1108/ccij-01-2021-0006

Tsai, W. (2001). Knowledge Transfer in Intraorganizational Networks: Effects of Network Position and Absorptive Capacity on Business Unit Innovation and Performance. *Academy of Management Journal*, *44*(5), 996–1004. https://doi.org/10.5465/3069443

Tysiac, K. (2018). How internal audit can improve by embracing technology. *Journal of Accountancy*.

Vaccaro, I. G., Jansen, J. J. P., Van Den Bosch, F. a. J., & Volberda, H. W. (2010). Management Innovation and Leadership: The Moderating Role of Organizational Size. *Journal of Management Studies*, *49*(1), 28–51. https://doi.org/10.1111/j.1467-6486.2010.00976.x

Van De Ven, A. H. (1986). Central Problems in the Management of Innovation. *Management Science*, *32*(5), 590–607. https://doi.org/10.1287/mnsc.32.5.590

Volberda, H. W., Van Den Bosch, F. A., & Heij, C. V. (2013). Management innovation: Management as fertile ground for innovation. European Management Review, 10(1), 1-15.

Vroom, V. H., & Yetton, P. W. (1973). *Leadership and Decision-making*. [Pittsburgh] : University of Pittsburgh Press.

Wall, T. D., & Lischeron, J. A. (1978). Worker Participation: A Critique of the Literature and Some Fresh Evidence. *Administrative Science Quarterly*, *23*(1), 171. https://doi.org/10.2307/2392445

Welch, M., & Jackson, P. R. (2007). Rethinking internal communication: a stakeholder approach. *Corporate Communications: An International Journal*, *12*(2), 177–198. https://doi.org/10.1108/13563280710744847

West, M. A. (1990). The social psychology of innovation in groups. In M. A. West & J. L. Farr (Eds.), Innovation and creativity at work: Psychological and organizational strategies (pp. 309–333). John Wiley & Sons.

West, M., & Anderson, N. (1996). Innovation in top management teams. *Journal of Applied Psychology*, *81*(6), 680–693. https://doi.org/10.1037/0021-9010.81.6.680

Williamson, O. E. (1975). Markets and hierarchies: analysis and antitrust implications: a study in the economics of internal organization. University of Illinois at Urbana-Champaign's Academy for Entrepreneurial Leadership Historical Research Reference in Entrepreneurship.

Wright, B. A., & Cordery, J. (1999). Production uncertainty as a contextual moderator of employee reactions to job design. *Journal of Applied Psychology*, *84*(3), 456–463. https://doi.org/10.1037/0021-9010.84.3.456

Wu, J., & Wu, Z. (2014). Integrated risk management and product innovation in China: The moderating role of board of directors. *Technovation*, *34*(8), 466–476. https://doi.org/10.1016/j.technovation.2013.11.006

Yam, R. C., Lo, W., Tang, E. P., & Lau, A. K. (2011). Analysis of sources of innovation, technological innovation capabilities, and performance: An empirical study of Hong Kong manufacturing industries. Research policy, 40(3), 391-402.

APPENDIX

Construct Measures

Transformation Leadership

Leadership style that promotes change and enhances motivation, morale, and performance. It connects with employee´s sense of identity being a role model, inspiring and challenging followers to take greater ownership for their work and understanding the strengths and weaknesses of followers.

1. My internal audit supervisor can understand my personal and work situation and give me encouragement and assistance.
2. My internal audit supervisor encourages me to take challenges.
3. I believe my internal audit supervisor can overcome any challenge at work.
4. My internal audit supervisor encourages us to make efforts towards fulfilling the company vision.
5. My internal audit supervisor encourages me to think about problems from a new perspective.
6. My internal audit supervisor encourages me to rethink opinions that have never been doubted in the past.
7. I believe I can complete my work under the leadership of my internal audit supervisor.
8. My internal audit supervisor spends time to understand my needs.

Vision

Vision is the extent to which the team's goals are clear, valued, and embraced by its members (Anderson & West, 1996).

1. I am always in agreement with my internal audit team's objectives.
2. My internal audit team's objectives are clearly understood by other members of the team.
3. I think my internal audit team's objectives can be achieved.
4. I think my internal audit team's objectives are worthwhile.

Participatory safety

Participatory safety is the perception by team members that they work in a non-threatening, participative environment where they can propose new ideas and solutions without being judged or criticized, share information, and participate in decision-making (West, 1990).

1. In my internal audit team, we have a "we are in it together" attitude.
2. In my internal audit team, people keep each other informed about work-related issues.
3. In my internal audit team, people feel understood and accepted by each other.
4. There are real attempts to share information throughout my internal audit team.

Task orientation

Task orientation, also known as "climate for excellence," represents the shared concern of team members for reaching a high standard of performance; the

greater the task orientation, the greater the motivation to reach the highest standard achievable (West, 1990).

1. My internal audit team members are prepared to question the basis of what the team is doing.
2. My internal audit team critically appraises potential weaknesses in what we do to achieve the best possible outcome.
3. My internal audit team builds on each other's ideas to achieve the best possible outcome.

Support for innovation

Support for innovation evaluates whether the team expects and encourages attempts to initiate new or enhanced approaches and practices. Failure is more tolerated, and new ideas are valued and rewarded publicly (West, 1990).

1. People in my internal audit team are always searching for fresh, new ways of looking at problems.
2. In my internal audit team, we take the time needed to develop new ideas.
3. People in my internal audit team cooperate to help develop and apply new ideas.

Internal Communication

Internal Communication is the process of transferring information from one source to another; it facilitates the dissemination and sharing of valuable information.

1. Critical information is shared in a timely manner between my internal audit team and other units.
2. Information shared between my internal audit team and other units is accurate and complete enough to meet each unit requirements.
3. Information shared between my internal audit team and other units are frequent and timely enough to meet each unit requirements.
4. The existing communication channels help to resolve conflict between my internal audit team and other units.

External Communication

The process of transferring information from and to a source that is external to the organization. The team will supplement and diversify the internal knowledge base obtaining ideas and lessons learned from external sources.

1. My internal audit team encourages its members to solicit information and resources from elsewhere beyond the firm.
2. My internal audit team encourages its members to try to influence important actors elsewhere beyond the firm on behalf of the team and its work.
3. My internal audit team values its members for making use of their relationships with other organizations on behalf of the team.
4. My internal audit team depends on information and resources actively solicited by team members, including information and resources beyond official channels.

Innovation

It is the generation, adoption, implementation, or incorporation of new ideas, practices, or artifacts. In the case of Internal Audit, innovation implies changes in the process of auditing; changes in the way the team is organized; the use of a different technique; or the implementation of new tools or reports.

1. In the last twelve months, you proposed changes or suggestions in the following field:

    a. Targets or objectives.

    b. New working methods or techniques.

    c. New methods to achieve work targets.

    d. New information or recording systems.

    e. In other aspects of work.

2. In the last twelve months, your proposed changes or suggestions in the following field were implemented:

    a. Targets or objectives.

    b. New working methods or techniques.

    c. New methods to achieve work targets.

    d. New information or recording systems.

    e. In other aspects of work.

Construct	Definition	Source	Instrument	Source
Transformational Leadership	Leadership style that promotes change and enhances motivation, morale and performance.	Bass and Avolio (1988)	Eight-question adaptation of Bass and Avolio's (1990) multifactor leadership questionnaire (MLQ).	Dai et al. (2011).
Vision	The extent to which the team's goals are clear, valued, and embraced by its members.	West (1990)	Four items related to vision from the fourteen-item adaptation of Anderson and West (1996) Team Climate Inventory questionnaire.	Kivimaki and Elovainio, (1999)
Participative safety	The perception by team members that they work in	West (1990)	Four items related to participative	Kivimaki and Elovainio (1999)

	a non-threatening, participative environment where they can propose new ideas and solutions without being judged or criticized.		safety from the fourteen-item adaptation of Anderson and West (1996) Team Climate Inventory questionnaire.	
Task orientation	The shared concern of team members for reaching a high standard of performance.	West (1990)	Three items related to task orientation from the fourteen-item adaptation of Anderson and West´s (1996) Team Climate Inventory questionnaire.	Kivimaki and Elovainio (1999)
Support for	Level of	West	Three items	Kivimaki and

innovation	expectations, encouragement and approval of attempts to initiate new or enhanced approaches and practices	(1990)	related to support for innovation from the fourteen-item adaptation of Anderson and West´s (199) Team Climate Inventory questionnaire.	Elovainio (1999)
Internal Communication	The process of transferring ideas from one source to another within the organization.	Welch and Jackson (2007)	Information sharing within a firm questionnaire	Carr and Kaynak (2007)
External Communication	It is the process of transferring ideas from and to an external source to the organization.	Cohen and Levinthal (1990)	Boundary Spanning Subscale	Faraj and Yan (2009)
Innovation	It is the generation,	Gault (2018)	Innovation at work	Axell et al. (2000).

	adoption, implementation, or incorporation of new ideas, practices, or artifacts.		questionnaire	

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