



Tomas Bata University in Zlín
Faculty of Management and Economics

Doctoral Thesis

The relationship between innovation leadership, team learning, and individual performance: An empirical study in the aviation service

Vztah mezi inovačním vedením, týmovým učením a individuálním výkonem: Empirická studie v letecké službě

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ABSTRACT

My study reviews empirical research on innovation leadership and team learning, which are important and relevant constructs affecting employee and team performance in aviation, tourism, and hospitality contexts. Prior scholars have focused on innovation leadership and individual performance. However, the existing literature has identified research gaps that call for understanding the relationships among innovation leadership, team exploitative and team exploratory learning, individual performance, and the roles of social media and CRM in these relationships, especially in the aviation service industry.

Thus, this thesis aims to develop a comprehensive framework aimed at investigating (1) the relationship between (IL) innovation leadership and (TEL/TIL) team learning, (2) the connection between employee or team performance and team learning, as well as the mediating roles of team and employee innovation, (3) and the moderating roles of crm and social media usage. I apply a mixed-methods approach in this study, combining quantitative and qualitative methods. A qualitative study was designed to complete the questionnaires. The quantitative research uses a survey of 430 respondents (257 for airline carriers, 100 for aviation organizations, and 73 for tourism companies) and SMART PLS statistical software to analyze data.

The results in Smart PLS showing the relationships between variables (constructs) in the author's model are all supported by data testing and have medium to large effects. These results show that innovation leadership and team explorative learning (TEL/ TIL) play an important role in the innovation and creativity process in aviation and tourism organizations. However, some relationships, such as team innovation, team performance, and the interaction between CRM and team exploratory learning and employee innovation, have a statistically significant effect, with CRM moderating, indicating that CRM played an important role in the relationship between team learning and team innovation. In other words, team learning has a strong impact on team innovation within an organization, and the application of CRM in businesses will further develop innovation and creativity for business sustainability, which is entirely consistent with theories tested in practice in the aviation and tourism sectors.

This study adds to the existing literature, extending OAM, Social learning, Social exchange, and POS theories. It significantly contributes to knowledge in the Aviation industry, especially in the Vietnam Aviation market. More importantly, limitations and further research are also mentioned for practical, managerial implications, and further studies for aviation organizations and tourism companies to effectively promote Innovation leadership and Team learning in the workplace.

ABSTRAKT

Předkládaná disertační práce se zabývá přehledem empirického výzkumu v oblasti inovačního vedení a týmového učení, které představují významné a relevantní konstrukty ovlivňující výkonnost zaměstnanců i týmů v prostředí cestovního ruchu především v letectví a hotelnictví. Dosavadní výzkumy se zaměřovaly především na inovační vedení a individuální výkonnost. Existující literatura však poukazuje na výzkumné mezery, které vyžadují hlubší porozumění vztahům mezi inovačním vedením, dvěma formami týmového učení — učením zaměřeným na využívání stávajících znalostí a učením zaměřeným na objevování nových znalostí — individuální výkonností a rolí sociálních médií a kultury CRM v těchto vztazích, zejména v odvětví leteckých služeb.

Za účelem překlenutí této výzkumné mezery disertační práce navrhuje komplexní rámec zaměřený na zkoumání:

1. vztahu mezi inovačním vedením a týmovým učením,
2. vlivu týmového učení na výkonnost zaměstnanců a týmovou výkonnost prostřednictvím mediující role inovativního chování zaměstnanců a týmové inovativnosti,
3. moderujících účinků kultury CRM a využívání sociálních médií.

V práci je využit smíšený výzkumný přístup, který kombinuje kvalitativní výzkum za účelem tvorby dotazníku a kvantitativní analýzu založenou na datech získaných prostřednictvím dotazníkového šetření u 430 respondentů z leteckých společností, leteckých organizací a podniků cestovního ruchu. Data jsou analyzována pomocí softwaru SmartPLS.

Výsledky ukazují, že inovační vedení a týmové učení významně přispívají k posílení inovativnosti a výkonnosti. Týmové učení má výrazný pozitivní vliv na týmovou inovativnost a kultura CRM tento vztah dále posiluje, čímž se potvrzuje její zásadní role při podpoře organizačních inovací. Naopak moderující účinek využívání sociálních médií je omezený.

Tato disertační práce přispívá k odborné literatuře rozšířením teorií organizační ambidextrie, sociálního učení, sociální směny a vnímané organizační podpory. Zároveň přináší praktická doporučení pro posílení inovačního vedení a týmového učení ve vietnamském leteckém průmyslu.

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LIST OF ABBREVIATIONS

Abbreviations	
AMO	Ability-Motivation-Opportunity theory
SET	Social Exchange theory
POS	Perceived Organizational Support
PLS-SEM	Partial least squares structural equation modeling
CAAV	Civil Aviation Authority of Vietnam
IATA	The International Air Transport Association
ICAO	The International Civil Aviation Organization
IL	Innovaiton Leadership
TEL	Team Explorative Learning
TIL	Team Exploitative Learning
TI	Team Innovation
EI	Employee Innovation
EP	Employee Performance
TP	Team Performance
CRM	Customer Relationship Management
SMU	Social Media Usage
HRM	Human Resource Management

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1. INTRODUCTION

1.1 Aviation Industry and Vietnam

Aviation and tourism face many challenges and competition in terms of service quality, safety, and security. Maintaining an excellent commitment to service quality and professionalism across all functional departments requires continuous training and recurrent development programs to enhance service standards. Knowledge and awareness of security and safety are essential, along with keeping up to date with new information and service industry trends.

Arnaldo Valdés et al., (2019) state that during the past 40 years, aviation has become a significant force behind social and economic advancement. It accounts for about USD 2.7 trillion in global economic activity, or 3.6% of the world's gross domestic product (GDP), and 62.7 million jobs worldwide. Aviation enables local access to international markets, fosters social growth and exchange, and supports humanitarian relief efforts. Joyce et al. (2021) revealed at the Aviation Future: Challenge and Solution (International Conference on Aviation Future) AFCS (2020) that before COVID-19, aviation in Asia grew by approximately 10% annually. Additionally, there was rapid development of connectivity, infrastructure, urban planning, and transportation (POST, 2019). Up to that point, ASEAN was expected to experience substantial growth, and the growing middle class in Asia would have greater access to affordable air travel, previously available only to a select few residents or foreign visitors. If the 19th century is considered the legacy of Europeanization and the 20th century the legacy of Americanization, then Asianization is emerging in the 21st century. Over 56% of the world's population currently resides in Asia. The region is transitioning from low-income to middle-income status within a single generation, making Asia an increasingly important global economic center (Jonathan Woetzel, 2019).

Lohmann & Pereira (2019) report that, for a long time, the aviation sector has been recognized as a driver of significant advancements across many areas. These developments, which enable global connections to occur in hours rather than days, reduce distances and open the door to mass tourism, including technological advancements, safety procedures, and economic deregulation. The airline sector is still pushing the boundaries of technology to achieve the goal of Flying Net Zero by 2050 and to provide accessible, affordable, and sustainable travel for everyone, despite the difficulties faced in recent years (IATA, 2023). Airline carriers have become increasingly important to the worldwide economy because they connect regional and global markets. For cities to maintain their social and economic prosperity, national and international connectivity is essential, with sea and air travel playing a major role (Group, W. B., January'2019).

Leadership in today's business environment is rarely a lone endeavor but rather a well-planned and executed performance. Well-educated and knowledgeable people

are increasingly employed by leading knowledge-intensive companies that offer customers knowledge-intensive services and products (Wensveen, 2023). Therefore, an appropriate leadership style is required in such a knowledge-intensive environment. Scholars studying human resource development have become increasingly interested in leadership and management research in recent years.

However, studies of innovative leadership and individual performance through team innovation and team learning in organizations remain rare. Therefore, this research has been conducted using data from employees working in aviation and tourism organizations of different nationalities to examine the relationships among leadership, innovation, and their roles in facilitating knowledge-based organizations. The study investigates innovative leadership and team learning in organizations operating in both local and global environments, and their performance.

According to Pan & Scarbrough (1998), management is crucial in guiding knowledge management strategies. Effective leadership in high-impact sectors affects the bottom line financially as well as critical human safety issues. Overall quality, productivity, performance, and service quality must be managed to improve safety systematically while maintaining a profitable and viable organization. This assumption is foremost in airline organizations' leadership (Brent Bowen et al., 2013).

There is no denying the dynamic relationship between organizational leadership performance and the execution of the entire organization. The relationship between leadership and organizational success may seem obvious, but it is based on complex, multidimensional, and multilevel factors. This is particularly true for the airline industry, where the performance of corporate leaders operates within a complex network of national and international government regulations, training requirements, safety considerations, and the interconnectivity of multiple related yet separately managed systems (e.g., air traffic control, maintenance, flight security, etc.), and the operation of highly complex high-tech equipment. For leaders and business researchers, determining the organizational leader's role concerning the organization's performance in such a high-consequence, highly structured environment presents particular challenges (Brent Bowen et al., 2013).

In early 2020, the novel coronavirus disease 2019 spread worldwide, prompting countries to close borders and restrict travel. The aerospace industry's history is a chronicle of constant adaptation to shifting economic and governmental environments Wensveen, (2023). The International Air Transport Association (IATA) states that Vietnam is among the nations with the fastest-recovering domestic aviation sectors in the world, following the lifting of COVID-19 travel restrictions. Additionally, it is expected to grow to 150 million air passengers by 2035. In the first half of 2022, Vietnam's airports handled 765,000 tons of cargo and 40.7 million passengers, representing increases of 56.8% and 30.6%, respectively, from the same period the previous year, according to the Civil Aviation Authority

of Vietnam (CAAV). Airports around the country are expected to handle 1.5 million tons of cargo and 87.8 million passengers in 2022, up 190% and 5%, respectively, over 2021. CAAV also estimates that the average annual growth rate for freight traffic will be 8.4-9.7% and passenger traffic will be 7.5-8.5% between 2021 and 2030. By 2030, passenger traffic is anticipated to reach 278 million, and freight throughput to reach 4.1 million tons. Vietnam is investing significantly in expanding freight transport, increasing aircraft maintenance and overhaul capacity, advancing innovations in air traffic services, and constructing and renovating airports.

1.2 Inspiration for Study in Aviation

The ability of an organization to innovate is widely recognized as essential to long-term success. Innovation represents a crucial component of the modern economy and plays a significant role in cultural development, organizational survival, and sustainable growth (Gliddon & Rothwel, 2018). Some scholars argue that innovation leadership integrates multiple leadership styles to inspire employees to generate innovative ideas, products, services, and solutions. Such leadership capabilities can be applied across teams, organizations, industries, and even governments (Gliddon & Rothwell, 2018). According to Arnaldo Valdés et al. (2019), the aviation industry has transformed over the past four decades from a specialized sector into a major global economic driver. Around the world, businesses, governments, and professional associations recognize the strategic importance of aviation in stimulating economic growth and international development. However, in an increasingly technology-driven environment, the aviation industry is facing new challenges related to sustainability, operational efficiency, and long-term performance. Consequently, innovation has become one of the industry's most critical sources of competitive advantage. Achieving these objectives requires a collaborative and continuous approach to innovation.

For many years, aviation has also faced persistent concerns regarding safety and security. Recent technological developments, including virtual and augmented reality and environmentally friendly solutions, may offer new opportunities to address these issues. New approaches are needed to reduce accidents, improve aircraft operations in increasingly congested airspace, and minimize environmental risks (Gohardani et al., 2011; Shyur, 2008). In addition, implementing non-intrusive security screening systems, improving boarding procedures, and strengthening cybersecurity across aviation data networks are increasingly necessary to enhance overall operational efficiency (Nguyen et al., 2017). Despite these advances, complex computational challenges involving scheduling systems, flight arrival sequencing, timing algorithms, and parallel processing still require further innovation (Date et al., 2019)

Several scholars have emphasized that successful teams can adapt to changing environments and generate new knowledge collaboratively through team learning behaviors when performing innovation-related tasks (Srivastava et al., 2006; Lee et al., 2010). Similarly, Decuyper et al. (2010) identified three critical learning behaviors: knowledge sharing, constructive conflict, and co-construction as key dimensions of effective team learning. Teams that demonstrate these behaviors are better able to solve complex problems, develop new knowledge, and create innovative solutions collaboratively (Van den Bossche et al., 2006; Paavola et al., 2004). Furthermore, Edmondson (1999) suggested that team effectiveness depends substantially on both learning behaviors and interpersonal dynamics among team members.

Leadership in the aviation industry has attracted increasing attention from different perspectives. The remarkable success of low-cost carriers has demonstrated the sector's capacity for innovation and its ability to manage long-term commercial risks effectively. Previous studies have highlighted the importance of leadership in promoting team learning behaviors (Bucic et al., 2010; Burke et al., 2006). Lee et al. (2010) further found that leaders who motivate and inspire employees to experiment and generate new ideas can significantly strengthen learning behaviors in innovative teams. Similarly, Van den Bossche et al. (2006) and Paavola et al. (2004) confirmed that teams displaying strong learning behaviors are more capable of generating innovation outcomes.

The concepts of exploration and exploitation have been widely applied in research on technological innovation, organizational learning, and strategic management (Li et al., 2008). March (1991) defined exploration as experimentation, flexibility, discovery, and innovation, whereas exploitation refers to efficiency, refinement, implementation, production, and execution. Exploration emphasizes risk-taking, search, and variation, while exploitation focuses on efficiency, control, and reducing variation. These two orientations may have different implications for organizational performance and often require distinct structures, processes, strategies, capabilities, and cultures.

Employee performance is another critical determinant of organizational success and has been extensively examined in prior studies (Campbell, 1990). Employee performance may be understood as the extent to which employees meet organizational expectations and achieve individual work goals (Audenaert et al., 2016). Mensah (2015) further described employee performance as the positive contribution of employees to organizational success. In this regard, team learning activities are considered an important mechanism for enhancing employee performance.

Moreover, team learning has become increasingly important in helping organizations respond to rapid technological change, growing environmental pressures, and rising expectations for social responsibility (Ashauer & Macan, 2013). Barker & Neailey (1999) argued that team learning plays a vital role in promoting workplace innovation. Although team learning has received considerable scholarly attention, prior studies have mainly focused on vertical leadership from a leadership perspective (Koeslag-Kreunen et al., 2018)

In summary, there are four main reasons for selecting this topic and the aviation industry as the research context. First, prior studies have emphasized the importance of leadership and team learning in improving employee performance. Second, the relationship between innovation and team learning has received limited attention within the aviation industry. Third, innovation in aviation has primarily been examined from technical perspectives rather than managerial and operational viewpoints. Fourth, empirical studies focusing on aviation operations and employee performance in the Vietnamese market remain limited. Therefore, this study aims to develop a conceptual framework linking innovation leadership, team exploitative learning, team explorative learning, and employee performance within aviation organizations. In doing so, the study seeks to enrich the literature and contribute to the development of Vietnam's aviation sector and the broader service industry.

1.3 Research Gaps

The challenge of human resources in aviation is how to maintain and continue to develop people factors for growth, as well as to cope with the competitive new trends and challenges in the context of development and survival with many risks and being affected by unexpected elements such as natural disasters, epidemics, geopolitical conflicts, and economic instability. So, continuous training and recurrent development are among the most essential factors for aviation organizations to confirm their capabilities, alongside professional qualifications.

Based on the research objectives and an analysis of prior empirical studies that were published in journals that were indexed in the databases Scopus and Web of Science, the following research gaps were identified by this study:

Firstly, the relationship between innovation leadership and team learning

According to Ali et al. (2021), despite their seemingly opposite focuses, exploitative learning, which acquires knowledge that revitalizes and refines existing competencies, and exploratory learning, which develops knowledge aimed at altering the nature of current practices and competencies, are viewed as complementary and mutually constituting fundamental sources of organizations' long-term performance (March, 1991; Smith et al., 2017; Uhl-Bien & Arena, 2018). Exploitative learning involves activities that enhance pre-existing knowledge and

skills, while exploratory learning focuses on developing new talents. However, existing studies primarily concentrate on team performance outcomes rather than the role of team learning itself (Burke et al., 2006; Nicolaides et al., 2014).

More specifically, according to Lundvall (2013), the central concept of innovation studies ought to be innovation as a process of interactive learning; the conceptualization of innovation as an interactive process involving many actors and extending over time is the closest we get to such a core in innovation studies. At the workplace, learning by doing is a crucial way to create new knowledge and information (Fagerberg et al., 2013). Many researchers (Burke et al., 2006; Bucic et al., 2010) have demonstrated the critical role of team leadership behavior in fostering team learning. According to Lee et al. (2010), leaders who motivate and inspire team members to generate new ideas and experiment with different approaches foster learning behaviors in innovative teams.

Tung & Yu (2016) revealed that supportive and participative leadership are positively associated with supervisory-rated subordinates' creativity when those subordinates focus on promotion and improvement. The authors examine the impact of reciprocal leadership behavior on the perceived application of talent management strategies in the aviation business Nicolene Barkhuizen et al. (2020). Reciprocity between company executives and talent management is crucial in attracting, developing, and retaining talent (Guerci & Solari, 2012). According to Kaye and Smith (2012), company executives are already at a disadvantage in attracting and retaining their most valued employees if they lack the right mindset toward talent management. Additionally, innovation leadership can be crucial in boosting team and employee outcomes. Klaic et al. (2020) mention that team innovation is essential for organizational effectiveness.

Innovative leadership is essential to an organization and its role in employee behavior and performance. However, empirical research in the aviation context is limited, particularly regarding the relationships among innovation leadership, team learning, and employee performance.

Secondly, activities of team learning and team or employee performance, as well as team explorative and exploitative learning and performance

Some authors (Zellmer-Bruhn & Gibson, 2006; Edmondson, 1999; Edmondson et al., 2001; Van Der Vegt & Bunderson, 2005) have demonstrated a positive relationship between team performance and learning behavior. However, few studies have examined how different types of team learning activities influence distinct performance dimensions.

However, team performance and learning are multifaceted constructs that involve multiple dimensions and processes (Paauwe, 2009; Dunphy & Bryant, 1996; Ancona & Caldwell, 1992). Since teams are meant to be effective learning agents, the expected outcome of a team-based organization is the stimulation of collective

learning (van Offenbeek, 2001). The efficiency and effectiveness of team learning can be influenced by knowledge sharing and interaction among members (Ellis et al., 2003; Chan et al., 2003). However, learning does not always lead to improved performance, and improved performance is not always a result of learning (Wilson et al., 2007). The efficiency and effectiveness of the team's collective learning process can be influenced by the knowledge and skills acquired by individual members and shared through interaction among team members (Ellis et al., 2003). In this approach, a team's output is considered higher than the sum of its members' individual accomplishments. However, it has been acknowledged that teams can only learn through individual members' shared expertise and experience for organizations to grow (Chan et al., 2003).

Ellis et al. (2003) described team learning as a relatively permanent change in the team's skill level and collective knowledge skill level produced by shared experience of the team members. Also, it is important to consider the performance ratings of both team members and managers since these actors have different interests and knowledge (van Woerkom & Croon, 2009). However, learning does not always lead to a change in a team's overall performance, and improved performance is not always a result of learning (Wilson et al., 2007). Six team learning behaviors were found by Decuyper et al. (2010) after conducting a comprehensive review: (a) sharing, (b) co-construction, (c) constructive conflict, (d) reflexivity, (e) activity, and (f) boundary crossing. Sharing refers to exchanging each other's ideas, knowledge, expertise, and opinions through interaction and communication (Faraj & Sproull, 2000). Many scholars have found that sharing determines team performance (e.g., Lee & Park, 2014; Srivastava et al., 2006). The team members can overcome these and other coordination challenges through training in explicit communication techniques and abilities.

According to Driskell & Salas (1992), a crucial team composition variable is having team members who have a collective orientation. In high collective orientation, team members are more likely to pay attention to the inputs and requirements of other team members during the performance. This greater focus on other team members facilitates coordination and communication, ultimately increasing team performance. According to Day et al. (2004) and Decuyper et al. (2010), performance improvement and task mastering are consequences of team processes because they develop from behavioral learning processes within the team.

The requirement to coordinate exploration and exploitation activities was first introduced by March (1991), who was the first to define these activities in the context of a learning organization. Few people agree on the nature of orientations and how they influence exploration and exploitation. Despite this, there is broad agreement that firms must simultaneously explore and exploit for short-term performance and long-term survival. There has been only limited advancement in the knowledge and understanding of how firms manage exploration and exploitation, since March's seminal article (O'Reilly & Tushman, 2013; Birkinshaw

& Gupta 2013; Levinthal & March, 1993). According to studies of O'Reilly & Tushman (2013) and Bierly & Chakrabarti (1996), exploration and exploitation behaviors are suggested to require different capacities, structures, management systems, cultures, and routines in the workplace. Understanding that skills, resources, and orientations should align with each activity when companies engage in exploitation or exploration practices (or both) is crucial (O'Reilly & Tushman, 2013).

The above scholars show positive relationships between team learning activities and team or individual performance. However, empirical research examining how exploitative and exploratory learning jointly influence performance, particularly in specific service sectors such as aviation, remains limited. The aviation industry is highly dependent on human factors, where high performance requires coordination, compliance with safety standards, and continuous training in daily operations. Learning activities play a vital role in maintaining service quality, especially in aviation, where recurrent training is mandatory for many roles, including ground staff, cockpit crew, cabin crew, and technical personnel. Despite this, empirical evidence on the practical contribution of team (exploitative and explorative) learning to performance in aviation remains limited.

Thirdly, the Team and Employee Innovation role in the relationship of team learning and performance

According to Decuyper et al. (2010), a team activity is "learning by doing," which includes experimenting with solutions (Kasl et al., 1997). Members of a team can share knowledge and ideas through implicit or unconscious team activities, such as knowledge ingrained in specialized skills (Eraut, 2000). However, it should come as no surprise that creating ideas in their teams is not always easy. Working in a team involves psychological and social processes that might affect how new ideas are accepted, developed, judged, and implemented. For example, team members are less likely to share unique ideas and to come up with unusual ideas, if they anticipate that these would be quickly criticized or rejected (West & Anderson, 1996; Mumford & Gustafson, 1988). Instead, a team and organizational atmosphere that promotes fair evaluation, open communication and appropriate implementation of creative ideas is needed (Amabile & Grysiewicz, 1987).

Innovations allow businesses to gain advantages from the external environment. At the same time, they ensure effective internal operations that underpin service or product production processes. Innovations benefit workers by improving working conditions, increasing job satisfaction, and enhancing other aspects of well-being, in addition to enhancing work processes (such as enhanced workplace communication) (Anderson et al., 2004; Janssen, 2000; Kanter, 1988). Additionally, innovation is a dynamic, developmental process with significant consequences for employees' professional growth and is considered a critical outcome (Evers et al., 2011; Messmann & Mulder, 2012). Despite the benefits of innovation for both

organizations and employees, practitioners and researchers have mostly focused on its return on investment. In contrast, the process of developing innovation, and particularly the role of employees in this process, has received limited attention (Crossan & Apaydin, 2010). Studies on individual innovation have recently become more prevalent, highlighting how firms increasingly depend on employees to actively participate in innovation processes (Bunce & West, 1995; Scott & Bruce, 1994). This line of research examines the identification of opportunities for innovation, followed by the generation, promotion, and implementation of creative ideas by employees, commonly referred to as innovative work behavior (Hammond et al., 2011).

The association between innovation and firm performance has been widely demonstrated in the service literature (Crawford & Di Benedetto, 2007; Cheng & Krumwiede, 2012). Process and product innovations have dominated empirical investigations in this field. According to Damanpour (1991) the process of innovation refers to the development and adoption of new elements, such as input materials, task specifications, information flows, and equipment, to improve production processes. According to Anning-Dorson (2016), in the service sector, innovation refers to “the extent to which service firms modify their service systems to enhance value delivery.”

Only a few studies have examined the relationships among knowledge management processes, innovation, and their components, although both have been recognized as essential to business performance. While some studies (Theriou et al., 2011; Wang & Wang, 2012; Li et al., 2014) found that knowledge management processes improve firm performance, others (e.g, Han et al., 1998) indicated that innovation is directly associated with firm performance. However, empirical research examining the integrated relationship between knowledge management, innovation, and performance remains limited. Only a few studies (Nawaz et al., 2014; Uhlaner et al., 2007; Darroch, 2005; Arumugam & Mojtahedzadeh, 2011) have examined these relationships.

Only a few studies have examined the relationships among knowledge management processes, innovation, and their constituent parts, even though both have been identified as essential to business performance. While some studies (Theriou et al., 2011; Wang and Wang, 2012; Li et al., 2014) showed that the knowledge management process increased company performance, others, such as Han et al. (1998), claimed that innovation aspects were related to firm performance. Only a few researchers (Nawaz et al. 2014; Uhlaner et al., 2007; Darroch, 2005; Arumugam & Mojtahedzadeh, 2011), have attempted to examine the relationships between company performance and innovation, the knowledge management process.

Therefore, this study aims to address this gap by examining the mediating role of team and employee innovation in the relationship between team learning (as a form of knowledge management) and performance in the Vietnamese aviation industry.

Fourthly, the moderating role of Social media and CRM towards the relationship between Team Learning and Performance.

From a CRM perspective, this is about developing distinct learning relationships with each customer (internal and external), based on what has been learned about that customer across the organization. Successfully managing this generative learning process is a crucial loyalty driver that necessitates adopting new ways of looking at businesses. Researchers have recognized the significance of CRM and innovation for individual performance (Lin et al., 2010). Additionally, though evidence is sparse, prior conceptual work has suggested that CRM can enhance an organization's innovation capability (Battor & Battor, 2010). In addition, Lin et al. (2010) state that not enough research has been conducted on the relationship between CRM and innovation capabilities. This issue is also important in this study, as it clarifies the moderating role of CRM practices in the relationship between team (explorative and exploitative) learning and team performance, while examining the mediating effects of team and employee innovation.

A study conducted by Chang & Hsiao (2014) discovered that social media's rapid expansion and broad use had transformed communication in people's lives. Social media's widespread use has also extended to the workplace, enabling knowledge work and organizational communication that were previously impossible (McAfee, 2006). Previous research has offered exploratory insights into the capability of social media. However, their adoption in the workplace remains debatable. On the negative side, social media has gained a reputation for increasing disturbance and reducing productivity. While previous research has predominantly focused on a specific medium, the synthesized impact of social media has been ignored. Prior studies have mostly concentrated on a particular media, but the combined effects of social media have been overlooked.

Furthermore, communication can only contribute to task performance to some extent. Social factors may also improve task performance. To address these issues, the author examines the following questions from the perspective of employees in organizations: Can social media influence employees' work performance? And what is the mechanism for how social media creates value at work? In addition, this study examines the moderating role of social media in the relationships among team learning, team innovation, and employee performance in the aviation context.

Finally, the conceptual framework is the general research in the aviation service

A well-researched and rigorous model of innovative leadership, team learning, the mediating role of individual and team innovation, and CRM or SMU implementation may have a positive impact. This study not only provides an initial

step but also lays a comprehensive foundation for more focused, in-depth investigations into each functional area, particularly in the aviation service industry. From there, it shows that encouraging the implementation of the author's research model is necessary to fill the gap in industry-specific research.

Therefore, an in-depth empirical investigation with detailed testing is necessary to achieve a comprehensive understanding of workplace dynamics and daily operations in the aviation industry, this empirical research is relatively novel in the aviation and tourism industry in the Vietnamese market where working in teams is a fundamental prerequisite for flight operations; it requires for excellent coordination, task execution, and high performance in challenging and complex situations that may arise at any time. Moreover, there is still a strong demand for human resources to support the development of the aviation industry in Asia and Vietnam.

1.4 Research problems

There is an undeniable dynamic relationship between organizational leadership and overall organizational performance. Although this idea may seem self-evident, the mechanisms underlying the relationship between leadership and organizational performance are intricate, multidimensional, and multilevel. In the airline industry, where corporate leadership is implemented within a multi-layered web of national government and international regulations, training requirements, safety considerations, the interconnection of multiple related yet independently operated systems (e.g., security, air traffic control, maintenance, flight, etc.), and the operation of highly complex high-technology equipment, this is particularly true. In such a high-impact, highly organized environment, determining the organizational leader's role in the organization's success poses challenges for corporate leaders and scholars (Bowen et al., 2013).

High-consequence sectors face more than financial measures of leadership effectiveness at risk; they also bear a profound responsibility to maintain safety as a core priority (Bowen et al., 2011). Although overall systemic safety is improving, the financial outlook for airline performance remains uncertain and mixed. The most important thing in these situations is to avoid being complacent in the face of such safety confidence (Bowen et al., 2012).

Basic aviation knowledge and professional expertise are the two crucial components of the airline carrier's professional training process in the aviation sector. Basic aviation knowledge includes security, safety, dangerous goods, and fundamental operational knowledge, whereas professional knowledge refers to the specific skills required for each position. It depends on each person's ability, thinking, speed, and accuracy in their daily work. Professional training also involves mastering

knowledge, acquiring skills, and developing professional competencies. Employees receive orders and use specialized operating technology to ensure security and safe flight operations. So, learning can help mitigate human resource risks, improve service quality, enhance safety, and support financial performance. Training and education within airlines and aviation organizations must be prioritized as essential capabilities for safe operations and regulatory approval from the Civil Aviation Authority in each country.

Many innovations of the 1980s and 1990s were marked by the introduction of the internet and new business models based on fare segmentation, such as low-cost or budget fare strategies. Following airline deregulation, passengers could avoid paying high costs for unwanted perks, thanks to lean business models fostered by airlines with low-cost/budget fare strategies (Franke, 2007). The internet began offering a direct distribution channel in the 1990s, allowing prospective clients to book and find information without going through travel agencies. Travel agents' commissions were consequently decreased or converted to a fixed amount (Law & Leung, 2000).

Job performance is crucial in some fields, especially those that involve high risk and significantly impact the natural environment and society, such as the aviation, maritime, petrochemical, and nuclear industries. As a result, incidents in these sectors have been called "human error," causing enormous human, environmental, and financial losses, as illustrated by hundreds of commercial aviation accidents, Three Mile Island and the Chernobyl nuclear disasters, and the Exxon Valdez oil spill (Flin et al., 2008). Therefore, it is necessary to examine workplace learning and the roles of those directly or indirectly responsible for supporting such learning interventions. It also responds to the stated purpose of "focusing on learning in the workplace" (Mavin & Roth, 2015).

The key research problem is the limited understanding of how innovation leadership drives different types of team learning and how these learning processes translate into performance outcomes in complex service environments, such as aviation. This problem is further compounded by the lack of empirical evidence examining the combined effects of exploitative and exploratory learning, the mediating roles of team and employee innovation, and the moderating influences of CRM practices and social media usage in such contexts.

Based on the above research gaps, this study aims to explore the role of innovation leadership in shaping team learning and its influence on team and employee performance, through the mediating roles of team and employee innovation in the relationship between team learning (explorative and exploitative) and team or employee performance in the workplace. Thus, this study is important because it addresses the research problem of understanding the relationships between innovation leadership (IL), team explorative and team exploitative learning (TEL and TIL), and individual performance (EP), as well as the mediating role of team

and employee innovation (TI and EI) and the moderating role of Social Media Usage (SMU) and CRM practices in those relationships in the aviation service context.

1.5 Research contributions

- **Theoretical:** This study adds to the existing knowledge and literature by extending (1) Social exchange theory, (2) OAM theory, (3) the Social Learning Theory, and (4) POS theory. It significantly contributes to knowledge in the aviation industry, especially in Viet nam aviation market. This research is also developing a comprehensive primary model to determine and analyze the relationships among innovation leadership, team learning, and performance in aviation and tourism services, thereby filling literature gaps. This research makes a significant contribution to the existing body of knowledge in the field.

- **Managerial:** First, the research suggests an initial study about innovation leadership in aviation and enhancing the leadership's role in the aviation organization in the Vietnamese market. Second, innovation capabilities making a challenging together with CRM & SMU in the hospitality and service industry. Third, contributing to human resources and talent management networking in an innovative atmosphere of job-loving, inspiring work.

- **Practical:** The study suggests innovation abilities and innovation leadership can be considered as a valuable tool to create value and sustainable competitive advantage. The empirical results help management levels to examine solutions to improve employees' performance and behaviors, as well as to create a spiritual environment for learning and innovating to support colleagues to generate ideas and improvements at the workplace.

-**Social:** The globalization of personnel and international regulations, cultural and economic influence, and cultural diversity in service activities are the features of the aviation and tourism industries. This study recommends ways to address cross-border cultural and professional work environments, both locally and globally. This study also contributes to innovation leadership and team learning by extending previous studies to organizations and other economic institutions. It increases understanding of employees' performance in aviation and tourism organizations and the challenges faced in maintaining their quality of tasks as well as further guidelines for understanding innovation and CRM culture in the business and economic sector

1.6 Structure of the thesis

Chapter 1: Introduction, which briefly presents the overview of the aviation in the world and in Asia, Asean, trend and growth indicators as well as information in social and economic of international aviation market; it is also including inspiration to study in aviation, the thesis contents such as: innovation and leadership and its'role in aviation together with the link of innovation in team and knowledge

through learning activities in organization, performance of employee 'role in an organization as well as business growth. Research gaps, problems.

Chapter 2: Literature review: theories applied, including social exchange theory, social learning theory, OAM theory, and POS theory. Theoretical background of briefing about the definition of innovation leadership, team explorative and exploitative learning, CRM practices, Social Media Usage, and team and employee innovation.

Chapter 3: Research objectives and questions; theoretical framework, including figure 1: full framework, figure 1a: a conceptual framework part A, figure 1b: a conceptual framework part B, figure 1c: research question- research objective and hypothesis; hypothesis development.

Chapter 4: Research methodology: research approaches, methods of the study, research sampling; qualitative research; quantitative research; data collection technique, measurement; analysis of the data.

Chapter 5: Results and discussions present key findings of qualitative and quantitative results: descriptive information of respondents; model statistic descriptions (full and part A, part B of the model); model fit; descriptive statistics and correlations; assessing the measurement model, including construct reliability and validity, consistency reliability and convergent validity, discriminant validity; evaluation of structural model and hypothesis testing.

Chapter 6: Expected contributions of the study, consisting of theoretical, practical, managerial, and social implications.

Chapter 7: Conclusion and limitations.

Finally, appendices including expert interviewees and protocol, research questionnaires, publications, references, and the author's curriculum vitae

2. LITERATURE REVIEW

2.1 Theoretical backgrounds

2.1.1 Social Exchange Theory

According to Homans (1961), the main focus was on the individual behavior of actors interacting with one another. His main objective was to comprehensively explain the fundamental mechanisms underlying social behavior, such as power, compliance, leadership, justice, and status. Homans emphasized that social behavior can be understood through interactions between individuals under given conditions; however, this view differs from Blau (1964) that of those who introduced the concept of social structure and emphasized the "emergent" properties of social

systems. As discussed by Cook & Rice (2006), variations across exchange theory perspectives exist; however, these differences are not critical, as the primary goal remains understanding how social exchange relationships create structures that both constrain and enable actors in their daily work interactions. Whether these interactions are viewed as negotiated or reciprocal, they are ubiquitous in social life and important to research (Cook & Rice, 2006).

Blau (1964) defined social exchange as “voluntary actions that are contingent on rewarding reactions from others.” He further highlighted that social exchanges differ from economic exchanges because their terms are not formally specified but are instead based on mutual expectations and obligations between individuals.

According to Cropanzano et al. (2017), social exchange theory is one of the most well-known conceptual viewpoints in management and related fields such as social psychology and sociology. When an organizational actor or perpetrator, typically a supervisor or coworker, treats a target individual negatively or positively, the social exchange process begins (Eisenberger et al., 2004; Rusbult et al., 1988; Farrell et al., 1981); Positive initiating behaviors, such as organizational support or fairness, tend to elicit reciprocal positive responses (Cropanzano & Rupp, 2008), whereas negative behaviors may elicit adverse reactions (Tepper et al., 2009). This reciprocal mechanism is grounded in the norm of reciprocity (Gouldner, 1960) in which employees feel obligated to reciprocate the organization's favorable treatment (Aryee et al., 2002).

In organizational settings, social exchange relationships play a critical role in shaping teamwork, knowledge sharing, and collaborative learning processes. Gould-Williams & Davies (2005) suggest that teamwork is strongly associated with commitment, consistent with social exchange theory, as organizations initiate exchange relationships expecting employees to reciprocate through positive work behaviors. Managers and supervisors act as key facilitators in these exchanges by providing resources, information, and support that enhance team coordination and performance.

Importantly, in team-based environments, repeated interactions among team members strengthen social exchange relationships, which, in turn, foster trust, knowledge sharing, and collective learning. These interactions are often more influential at the team level than at the broader organizational level, particularly in contexts requiring high coordination, such as aviation operations.

Managers and supervisors are vital agents in social exchange processes (Graen & Scandura, 1987). Employees often interpret managerial actions as representative of organizational intentions (Wayne et al., 1997). When employees perceive leadership behaviors positively, they are more likely to reciprocate by engaging in behaviors that contribute to organizational goals.

In this study, social exchange theory is applied as a primary theoretical lens to explain how innovation leadership influences team learning (explorative and exploitative) through reciprocal relationships between leaders and team members. Specifically, when leaders provide support, encouragement, and resources for innovation and learning, employees are more likely to reciprocate by engaging in learning behaviors and contributing to team and individual performance.

Furthermore, social exchange theory helps explain the indirect mechanisms in the model, where team learning leads to team and employee innovation, which subsequently enhances performance outcomes. It also provides a foundation for understanding how positive exchange relationships create an environment that promotes innovation and continuous learning within organizations, see Figure 1.

2.1.2 Social Learning theory

The social learning theory explains why and how leaders influence their followers (Brown et al., 2005). The theory holds that we learn from social interactions. People tend to imitate others' actions by observing their behavior. After observing a behavior, people tend to assimilate and imitate others' behavior, particularly if their observational experiences are rewarding or involve rewards associated with the observed action. According to Bandura (1978) imitation is defined as the reproduction of observed motor actions.

Social learning processes operate across the lifespan, as individuals continuously learn through exposure to influential role models who control resources and shape behaviors in organizational contexts (Newman Barbara & Philip, 2007). In many significant, powerful models that manage resources are common in life, and modeling makes it possible to always learn new things (Newman Barbara & Philip, 2007). Based on these broad principles, learning can take place without behavioral changes. In other words, behaviorists hold that learning must result in permanent behavioral change; however, social education theorists contend that people can learn through observation alone and may not consistently demonstrate their knowledge through performance (Bandura, 1965).

Social learning theory (Bandura, 1977) describes how individuals learn in teams through both direct and vicarious experiences, even without direct reinforcement. Lyndon et al. (2020) pointed out that direct experiences originate from their own, and observed experiences occur when one models others' behavior. In team contexts, leadership provides opportunities for both direct and observational learning, allowing members to acquire knowledge through participation and observation. When team members take on the leadership role and direct the team, they have the opportunity to learn through direct experience by carefully considering the outcomes of their interactions. Additionally, there are opportunities to learn from observational experience when a member takes on the role of a follower and chooses to be led by another member. Also, frequent interaction, knowledge, and information

sharing in teams is not led by a formal leader but by multiple members taking on leadership roles in rotation, based on the situation, providing more team learning opportunities.

According to social learning theories, humans learn by interacting with others and their environment (Schunk, 2003; Bandura, 1977, 1986, 1993; Vygotsky, 1978, 1979). Cognitive development emerges from shared experiences, including interactions with more knowledgeable others. In aviation training contexts, Jeppesen (2002) highlights the importance of trust between instructors and trainees, as trust enhances learning effectiveness. This is particularly critical in aviation environments, where trainees rely heavily on instructors for safety and skill development. Learning in such contexts extends beyond rote memorization to include higher-order cognitive processes such as application, analysis, and evaluation (Amy L Hoover, 2008)

In this study, social learning theory is used to explain how team learning (exploitative and explorative) emerges through interactions, observation, and knowledge sharing among team members. Employees who engage in teamwork and exploratory learning are more likely to learn from others, improving their work efficiency and engagement, which, in turn, facilitates innovative behaviors. Accordingly, this perspective supports the relationships among team learning, team and employee innovation, and performance outcomes.

Thus, social learning theory provides a theoretical foundation for hypotheses related to the effects of team learning on team and employee innovation and performance (H2, H3, H6, and H2', H3', H6'). See Figures 1a and 1b.

2.1.3 OAM (Opportunity-Ability-Motivation) theory

According to Rothschild (1999), opportunity is the environmental or contextual mechanism that enables action, while motivation reflects an individual's willingness to act. Ability refers to a person's specific skills or knowledge required to perform a given task. Siemsen et al. (2008) further discussed the OAM framework in the context of knowledge sharing, emphasizing that informal communication processes facilitate knowledge transfer among team members. Knowledge sharing can be understood as the extent to which employees actively share job-related knowledge with coworkers within the same workgroup. Dixon (2000) highlighted that such knowledge consists of both explicit and tacit elements derived from employees' experiences in performing organizational tasks.

According to Blumberg & Pringle (1982), employee performance is a function of opportunity, ability, and motivation. The Opportunity -Abilities-Motivation (OAM) theory (Appelbaum, 2000) builds upon this premise, suggesting that organizations can enhance performance by ensuring that employees possess the necessary skills,

motivation, and opportunities to perform their tasks effectively. In organizational contexts, these three elements jointly determine the extent to which employees can translate knowledge and learning into actual performance outcomes. When applied to workforce sustainability, researchers argue that organizations must continuously develop employees' abilities and motivation while providing sufficient opportunities for them to perform effectively (De Lange, 2014; van der Heijden, 2012). This implies that performance is not solely dependent on individual capability but also on the organizational context that enables or constrains employees' actions.

Based on OAM theory, Yu et al. (2020) suggested that human resource management practices can enhance performance by influencing employees' ability, motivation, and opportunity. For instance, training and development improve employees' ability, motivational practices enhance their willingness to perform, and organizational support provides opportunities for engagement (Renwick & Stuart Maguire, 2013; Subramanian et al., 2016). Performance reviews, encouragement, and the perceived ease of participation can enhance employees' motivation and perceived opportunity to engage in work-related activities, thereby facilitating the translation of learning and innovation into performance outcomes (Martínez-del-Río et al., 2012)

Furthermore, prior studies have proposed an integrated model that incorporates opportunity (e.g., time, resources, and environment), ability (e.g., knowledge and experience), and motivation (e.g., attitudes and intentions) as key determinants of behavior (Blumberg & Pringle, 1982; Ölander & Thøgersen, 1995; Hughes, 2007). These components collectively influence how individuals engage in work-related activities and achieve performance outcomes.

In this study, OAM theory is applied to explain how team learning (explorative and exploitative) and innovation activities are translated into team and employee performance. Specifically, team learning enhances employees' abilities through knowledge acquisition; innovation processes increase motivation by encouraging engagement and creativity; and organizational factors, such as CRM practices and social media use, provide opportunities that facilitate performance. Moreover, opportunity in organizational contexts refers to the extent to which employees perceive that tools, resources, and systems are available to support their work behaviors (Hughes, 2007). Ability is reflected in employees' knowledge and skills, which are developed through experience and learning processes (Jackson, 2005). These elements are critical in enabling employees to effectively apply learned knowledge and participate in innovation activities, thereby contributing to performance outcomes.

I apply this OAM theory to contribute to the literature by examining the effectiveness of human resource management in aviation organizations in influencing employee performance, which is conceptualized as a function of

employees' opportunity, ability, and motivation to work. Furthermore, this theory can be used to explain the mechanisms within the conceptual framework, in which CRM practices and social media use moderate the relationships between team learning (knowledge sharing and learning within the organization) and team and employee innovation, thereby enhancing team and employee performance outcomes (H2, H3, H6, H7, H8, H9 and H2', H3', H6', H7', H8', H9'). (See Figure 1a and 1b).

2.1.4 POS (Perceived organizational support) theory

POS is crucial to the employee-employer relationship and affects how well employees can align with the company's objectives (Kurtessis et al., 2017). POS is defined as employees' global perception of the extent to which the organization values their contributions and cares about their well-being (Eisenberger et al., 1986), Kurtessis et al. (2017) claim that POS influences psychological well-being in addition to meeting socioemotional demands. Akgunduz et al. (2018) propose enhancing POS when the organization values employee contributions and fulfills their needs. However, organizations should invest in employees' development to strengthen their perceived support, enhance their skills, and increase their capacity for creative work (Aldabbas et al., 2021). POS refers to rewarding, appreciating, recognizing, and motivating employees who demonstrate creativity and encouraging them to generate novel ideas (Zhou & George, 2001; Neves & Eisenberger, 2014). According to Luksyte & Spitzmueller (2016), POS is grounded on the OST (the organizational support theory), which highlights the significance of viewing employees as valued and appreciated corporate assets worthy of the company's investment. Employees are motivated to adopt positive actions and attitudes when they receive strong organizational support (Tsachouridi & Nikandrou, 2019).

Luksyte & Spitzmueller (2016) suggest that high POS levels mitigate person-environment misfit, as evidenced by reduced felt contributions and elevated stress. POS is based on organizational support theory, highlighting the importance of viewing employees as valued corporate assets who deserve a company's time and money to help them reach their full potential. Similarly, norms of reciprocity state that when workers feel valued and appreciated, they will return the favor by exhibiting the required behaviors for their employers (Cropanzano & Mitchell, 2005). Based on these arguments, workers who believe they are overqualified, regardless of the basis for their belief, will benefit from increased POS, as high POS signals that their contributions are valued and their well-being is supported. These workers' ingenuity is likely to increase as a result of the improved needs supply fit. Lower organizational support may stifle innovation by signaling that employees' contributions are not appreciated (Luksyte & Spitzmueller, 2016).

According to organizational support theory (OST), workers have a general impression of how much the company appreciates their contributions and cares about their welfare (a concept known as perceived organizational support), POS (Eisenberger et al., 1986; Shore et al., 1995; Eisenberger & Stinglhamber, 2011). From the employees' point of view, OST has attracted considerable interest as it

explains the employee-organization relationship through employees' perceptions of organizational treatment. OST and POS strongly rely on the employees' perceptions of the organization's motivations for treating them well or poorly. OST and POS are strongly influenced by employees' perceptions of the organization's motivations for treating them well or poorly. In turn, POS initiates a social exchange process in which staff members feel obligated to assist the company in achieving its aims and objectives and anticipate receiving greater rewards from their increased efforts. POS also meets socioemotional needs, leading to greater identification and commitment, increased desire to help the organization succeed, and greater psychological well-being (Kurtessis et al., 2017).

A study by Eisenberger et al. (2001) based on the reciprocity norm found that such perceived organizational support (POS) would make employees feel obligated to care for the organization's well-being and assist it in achieving its goals. Due to the reciprocity norm, positive relationships have repeatedly been found between affective commitment, performance, and POS. According to organizational support theory, POS is believed to satisfy socioemotional needs (affiliation, emotional support, approval, and esteem), thereby leading to identification with the organization. Based on organization support theory, affective organizational commitment arises from social exchange and self-enhancement. In terms of self-enhancement, through the development of shared values and the promotion of stronger relational bonds between employees and corporate representatives, the corporate identification arising from POS may lead to affective organizational commitment (Meyer et al., 2006).

POS theory is applied as part of social exchange theory to contribute to the literature and to explore the relationship between leadership and employee creativity. It also extends knowledge of team and employee innovation toward team and employee performance. From a theoretical perspective, POS acts as a key mechanism that strengthens employees' engagement in innovation activities, thereby linking team learning to performance. From a psychological perspective, employee innovation is a crucial consequence of POS because it signals to employees that they should become more engaged in creative activities. The theory suggests that POS between team managers and organizational employees demonstrates that they care about their employees. Similarly, norms of reciprocity predict that motivated employees are more likely to perform more productively and creatively and will repay their organizations with desired behaviors. Therefore, POS theory is essential for explaining the mediating roles of team innovation and employee innovation in the conceptual framework. This theoretical foundation supports hypotheses H4, H5, and H4', H5'. (See figure 1a and figure1b).

2.2 Concepts: Innovation leadership and its outcomes

2.2.1 Innovation leadership

Carmeli et al. (2010) state that the authors' concept of innovation leadership includes providing clear, comprehensive performance evaluation feedback, encouraging individual initiatives, outlining individual roles, and maintaining a strong task orientation. Besides, they discuss how an organization's leaders can foster an innovative culture by developing the attitudes and behaviors that, in turn, improve the organization's fit with its environment, thereby enhancing employee and team performance. Furthermore, the idea that innovative leadership is essential to fostering strategic fit is grounded in the strategic leadership literature. However, according to the authors (Chassagnon & Haned, 2015), innovation leadership is the dynamic capability of an innovative firm to grasp innovation opportunities, driven by enhanced innovativeness and a proactive investment policy, based on these varying discussions and definitions of innovation and leadership. The study examines the relationship between innovation and innovation leadership and how it may build and sustain a team in which the innovation leader is essential to the entire enterprise's success.

2.2.2 Team explorative and exploitative learning

March (1991) was the first to propose that exploration and exploitation are distinct learning processes. Exploration involves experimentation, flexibility, search, variation, and discovery, whereas exploitation concerns efficiency, selection, refinement, and execution. The concept suggests that a well-balanced combination of exploitative and exploratory learning is essential for long-term success (Levinthal & March, 1993).

However, organizations may face challenges when they overemphasize exploitation, leading to rigid routines and the persistence of outdated knowledge and competencies. The authors' (Ali et al., 2021) results from obstinate efforts to exploit obsolete knowledge and competencies. As such, one of the significant issues facing leaders today is helping organizations become more adaptable and gain a sustainable competitive advantage in an increasingly demanding and dynamic business environment. To do this, leaders must leverage both exploratory and exploitative learning (Crossan et al., 1999; Koo et al., 2015; Zacher & Rosing, 2015; Smith et al., 2018). This dual learning mechanism is particularly critical in team-based environments, where balancing exploration and exploitation determines both innovation outcomes and performance effectiveness.

Building on Savelsbergh et al. (2009) and adopted from Edmondson (1999); definition of team learning is an ongoing process of shared reflection and action. This process involves activities such as exploring experiences, reflecting on outcomes, discussing errors and unexpected results, seeking feedback, and engaging in both individual and collective experimentation. These elements represent distinct,

observable learning behaviors within teams. Edmondson (1999) further emphasizes that such behaviors enable learning at the group level. For example, team members actively test their assumptions, openly share differing viewpoints, and engage in collective discussions rather than withholding opinions. This openness allows teams to identify gaps in their plans and make timely adjustments.

2.2.3 Customer relationship management (CRM) practices

van Bentum & Stone (2005) defined customer relationship management (CRM) as a holistic customer experience strategy both internal and external customer-focused activities. In this context, CRM creates value by managing the entire customer experience value chain, which involves three key stakeholder groups: consumers, employees, and shareholders.

van Bentum & Stone (2005) also emphasized that an organization's business plan must include continuous improvements in creating organizational value to benefit from CRM fully. They argued that organizational learning speed can serve as a sustainable source of competitive advantage, highlighting the close linkage between CRM and learning processes. CRM refers to the use of advanced technologies and strategic approaches to identify, acquire, and retain valuable customers to maintain long-term relationships (Sin et al., 2005).

A study by Guerola-Navarro et al. (2021) examined the culture of customer relationship management (CRM), which refers to the set of organizational values, strategies, and activities that support effective customer relationship management. This culture comprises several key dimensions, including customer involvement, long-term partnerships, information sharing, and joint problem-solving. These dimensions reflect the collaborative and knowledge-sharing nature of CRM practices within organizations.

Similarly, Valmohammadi (2017) identified five key CRM practices: long-term partnership, customer involvement, joint problem-solving, information sharing, and technology-based CRM. Together, these practices enhance information exchange, coordination, and responsiveness, thereby supporting organizational learning and innovation processes.

In this study, CRM practices are conceptualized as an important organizational mechanism that facilitates knowledge sharing and coordination, thereby strengthening the relationship between team explorative learning and innovation outcomes. Specifically, CRM practices provide the necessary organizational context and resources that enable teams to better transform learning activities into team and employee innovation, and ultimately into team performance. Therefore, CRM practices are expected to moderate the relationships between team explorative learning and (i) team innovation, (ii) employee innovation, and (iii) team performance.

2.2.4 (SMU) Social Media Usage

Social media usage (SMU) describes the application of social media tools (Web, Google, Facebook, and WeChat, etc.) to enhance customer engagement, generate value from interactions with customers, and thus, improve business performance (Trainor, 2012; Rapp et al., 2013). Beyond customer engagement, SMU also plays an important role in facilitating internal communication and knowledge sharing among employees.

According to Dennis et al. (2008) media synchronicity theory, synchronicity occurs when people collaborate simultaneously on a project with a shared objective (or focus); the authors describe media synchronicity as the "The extent to which people can attain synchronicity thanks to a communication medium's capabilities." Cao et al. (2016) have also studied effective social networking platforms. Social media comprises a variety of information and communication tools that provide multiple channels for communication in both work environments and society. In organizational contexts, these tools enable real-time information exchange, reduce communication barriers, and enhance collaborative work processes.

Employees use social media for more than just finding and sharing information; it also helps them build relationships, develop a sense of belonging, and strengthen interpersonal connections. Network ties reflect how frequently employees communicate and how strong these relationships (Chiu et al., 2006). Social media is a flexible tool that professionals can use to engage in both simple work coordination and complicated job collaboration. More importantly, social media facilitates informal interactions and strengthens network ties, which are essential for knowledge exchange and collaborative learning.

In this study, SMU is conceptualized as a technological and social mechanism that enhances communication, interaction, and knowledge sharing among employees, particularly in exploitative learning processes. Specifically, SMU supports the efficient exchange of information, coordination of tasks, and refinement of existing knowledge, which are key characteristics of team exploitative learning. Therefore, SMU is expected to strengthen the relationship between team exploitative learning and (1) team innovation, (2) employee innovation, and (3) employee performance.

2.2.5 Team innovation

According to Klaic et al. (2020), team innovation is defined as "the result of attempts to develop and improve ways of doing things and to introduce new practices " (Anderson et al., 2014), which implies that team innovation includes both idea generation as well as their implementation (Rosing et al., 2011). These two processes are particularly relevant for knowledge-intensive and professional teams (West & Anderson, 1996; Hülsheger et al., 2009). Members of such scientific teams need to be creative and innovative to formulate theories, develop new methods, and solve emerging problems.

Klaic et al. (2020) also mentioned that although team cohesion is generally considered a positive factor for team innovation (Hülshager et al., 2009), it could be argued that under certain conditions, high levels of cohesion might have negative effects. For one, team innovation requires divergent thinking of team members, which may be difficult to achieve when a team is too cohesive, and team members do not want to criticize each other (Brodbeck et al., 2007)

Drach-Zahavy & Somech (2001) examined team innovation, drawing on West & Wallace (1991) a definition that describes it as the deliberate introduction and implementation of new ideas, processes, products, or procedures within a team to generate benefits for individuals, the team, the organization, or society. This perspective highlights that innovation is driven by team members' purposeful actions aimed at achieving expected outcomes, rather than imposed through top-down directives. Furthermore, it highlights that innovation requires not only idea generation but also practical application, which inherently involves social interaction and collaboration within teams.

De Dreu & West (2001) defined team innovation as "the introduction or application within a team of ideas, processes, products, or procedures that are new to that team and that are designed to be useful," applying this broad concept to the team level. This perspective reinforces the view that team innovation is a collective, dynamic process driven by both cognitive and social interactions among team members. Many processes, including intra-individual cognitive processes and inter-individual social processes, are likely to lead to innovation in the workplace (Anderson et al., 2014; Rank et al., 2009; Rosing et al., 2011).

In this study, team innovation is conceptualized as a key mediating mechanism through which team learning (explorative and exploitative) is translated into team performance. Specifically, team learning processes provide the knowledge foundation and interaction patterns necessary for generating and implementing new ideas, while team innovation represents the observable outcome of these learning activities. Therefore, team innovation is expected to mediate the relationships between team learning and team performance.

2.2.6 Employee Innovation

Researchers consider individual creativity the basis of organizational innovation (Hunter et al., 2007). Idea generation as a behavioral aspect of creativity is thus present in all studies of employee innovative behavior (De Jong & Den Hartog, 2010; Tierney et al., 1999; Scott and Bruce, 1994; Zhou & George, 2001; Janssen, 2000). In addition to idea generation, employee innovation involves actively seeking new ideas within and outside the organization, consistent with findings that innovative activities often build on existing knowledge sources (Tang et al., 2012). Successful innovation requires that novel ideas are acted upon and implemented (De Jong et al., 2015; Bledow et al., 2009).

The innovation champion initiates implementation activities by preparing implementation plans. He/she involves others in the implementation, communicates a vision of what the innovation entails, and demonstrates enthusiasm and confidence in it (Howell et al., 2005). This highlights that employee innovation is a multi-stage process encompassing idea generation, promotion, and implementation. Notably, innovation outputs have been inconsistently defined in the literature and are sometimes confounded with implementation activities (De Jong & Den Hartog, 2010). Organizational climate for innovation captures employee perceptions of resource supply and (organizational) support for innovation (Scott and Bruce, 1994), constructive feedback, rewards, mechanisms for developing new ideas, and a shared vision at the organizational level (Amabile et al., 1996). Such supportive conditions encourage employees to engage more actively in innovative behaviors and contribute to organizational outcomes.

In this study, employee innovation is conceptualized as an individual-level mechanism through which team learning (explorative and exploitative) is translated into employee performance. Specifically, team learning provides employees with knowledge, skills, and opportunities for interaction, while employee innovation reflects how individuals apply and transform this knowledge into new ideas and practices. Therefore, employee innovation is expected to mediate the relationships between team learning and employee performance.

2.2.7 Team performance

As mentioned by Savelsbergh et al. (2009), team performance or team effectiveness has been seen as a combination of task performance and team (or group) viability (McGrath et al., 1984; Sundstrom et al., 2000; Kulik et al., 1987) advanced the conceptualization of team viability by distinguishing two core dimensions: “(a) the team’s capacity to sustain effective collaboration among members over time, and (b) the extent to which the team satisfies members’ needs and expectations. Beyond viability, work teams are inherently goal-driven entities that emphasize performance outcomes”. In this regard, drawing on Hackman (1990) Hackman’s perspective, task performance can be understood as the degree to which a team successfully achieves its objectives and produces outputs that effectively fulfill its intended mission (Bushe & Coetzer, 2007)

Team performance is viewed as a dynamic, multilevel process rather than a static outcome, emerging from how team members coordinate and manage both individual tasks and collective team activities (Kozlowski & Klein, 2000). Within this framework, teamwork is embedded in team performance and encompasses a set of interconnected cognitions, attitudes, and behaviors that collectively shape and sustain the ongoing performance process.

Salas et al. (2008) define performance and effectiveness at the team level as closely parallel to their definitions at the individual level. That is, performance is the activities engaged in while completing a task, and effectiveness involves an appraisal of the outcomes of that activity (Campbell, 1990; Koopmans et al., 2011). Whereas team performance improvements have been achieved through the application of team training programs, the science of teams has also led to the development and implementation of technologies to support team performance. This includes the development of displays and tools to support shared situation awareness, for example, by providing individuals with representations of fellow team members' actions and intentions, and by tracking and displaying complex task performance over time (Gutwin & Greenberg, 2004).

In this study, team performance is conceptualized as the outcome of team-level learning and innovation processes. Specifically, team learning (explorative and exploitative) enhances knowledge sharing and coordination, while team innovation reflects the application of that knowledge into new practices. Together, these processes contribute to improved team effectiveness, goal achievement, and team members' ability to collaborate on future tasks. Therefore, team performance represents a key outcome variable in the conceptual framework.

2.2.8 Employee performance

Employee performance is generally defined as the extent to which an employee successfully carries out work-related tasks and responsibilities, reflected in both the quality and quantity of outputs achieved.

According to Narcisse & Harcourt (2008), they emphasize that performance appraisal represents one of the most emotionally sensitive aspects of organizational life, as it involves evaluating an employee's contributions and capabilities. In a similar vein, Boxall & Purcell (2011)) argue that the establishment of a clear and systematic performance evaluation process is essential for ensuring the effective functioning of an organization.

Gould-Williams & Davies (2005) argue that there is growing awareness that employees' positive work attitudes and discretionary behaviors are important factors affecting organizational performance (Podsakoff et al., 1997). Gaining a better understanding of the motivational basis for such work attitudes and behaviors is now regarded as an important component of research agendas relating to management practice (Aryee et al., 2002).

Thompson (2005) suggests that proactive employees perform more efficiently than those who have low proactivity. Overall, employees with high proactivity tend to take initiative, voice their opinions, anticipate and prevent potential problems in their work environments, enhance their own performance, and positively influence their peers (Parker & Collins, 2010). In addition, employees with strong continuance

commitment are more likely to align their behaviors with organizational goals, whereas those with lower levels of commitment may be less willing to support such objectives (Chen & Francesco, 2003).

In this study, employee performance is conceptualized as the individual-level outcome influenced by team learning and innovation processes. Specifically, team learning (explorative and exploitative) enhances employees' knowledge and capabilities, while employee innovation reflects the application of this knowledge into new ideas and practices. These processes collectively improve individual performance outcomes. Therefore, employee performance represents a key dependent variable in the conceptual framework.

3. RESEARCH OBJECTIVES AND QUESTIONS, THEORETICAL FRAMEWORK, AND HYPOTHESES DEVELOPMENT

3.1 Research objectives and questions

The main goal of the research is to develop a comprehensive model to investigate the role of innovation leadership in team learning and its influence on team and employee performance.

Thus, to address these research goals, this study aims to answer the following question: **How does innovation leadership influence team learning and both team and employee performance in the workplace?**

3.1.1 Research Objectives (RO)

RO1: to investigate the direct effects of innovation leadership on team learning (team explorative and exploitative learning).

RO2: to test the indirect effects of team explorative learning on team performance and team exploitative learning on employee performance.

RO3: to examine the mediating roles of team innovation and employee innovation in the relationship between team learning (exploratory and exploitative) and team and employee performance.

RO4: to explore the moderating roles of CRM practices in the relationship between team explorative learning and team innovation, employee innovation, and team performance.

RO5: to explore the moderating roles of social media usage in the relationship between team exploitative learning towards team innovation, employee innovation, and employee performance.

3.1.2 Specific Research Questions (RQ)

RQ1: To what extent does innovation leadership influence team learning (explorative and exploitative)?

RQ2: How does team explorative learning influence team performance, and how does team exploitative learning influence employee performance?

RQ3: How do team and employee innovation play distinct **mediating roles** in the relationships between team learning (explorative and exploitative) and performance outcomes?

RQ4: How do CRM practices **moderate** the relationships among team explorative learning, team, employee innovation, and team performance?

RQ5: How does social media usage **moderate** the relationships between team exploitative learning and both team and employee innovation, leading to employee performance?

3.2 Theoretical Framework:

Based on a review of the literature, the study develops a research model shown in Figure 1.

Figure 1: A conceptual framework

Figure 1a: A conceptual framework (Part a)

Figure 1b: A conceptual framework (Part b)

Figure 1c: (RQ) Research Question - (RO) Research Objective - (H) Hypotheses

Source: research by the author

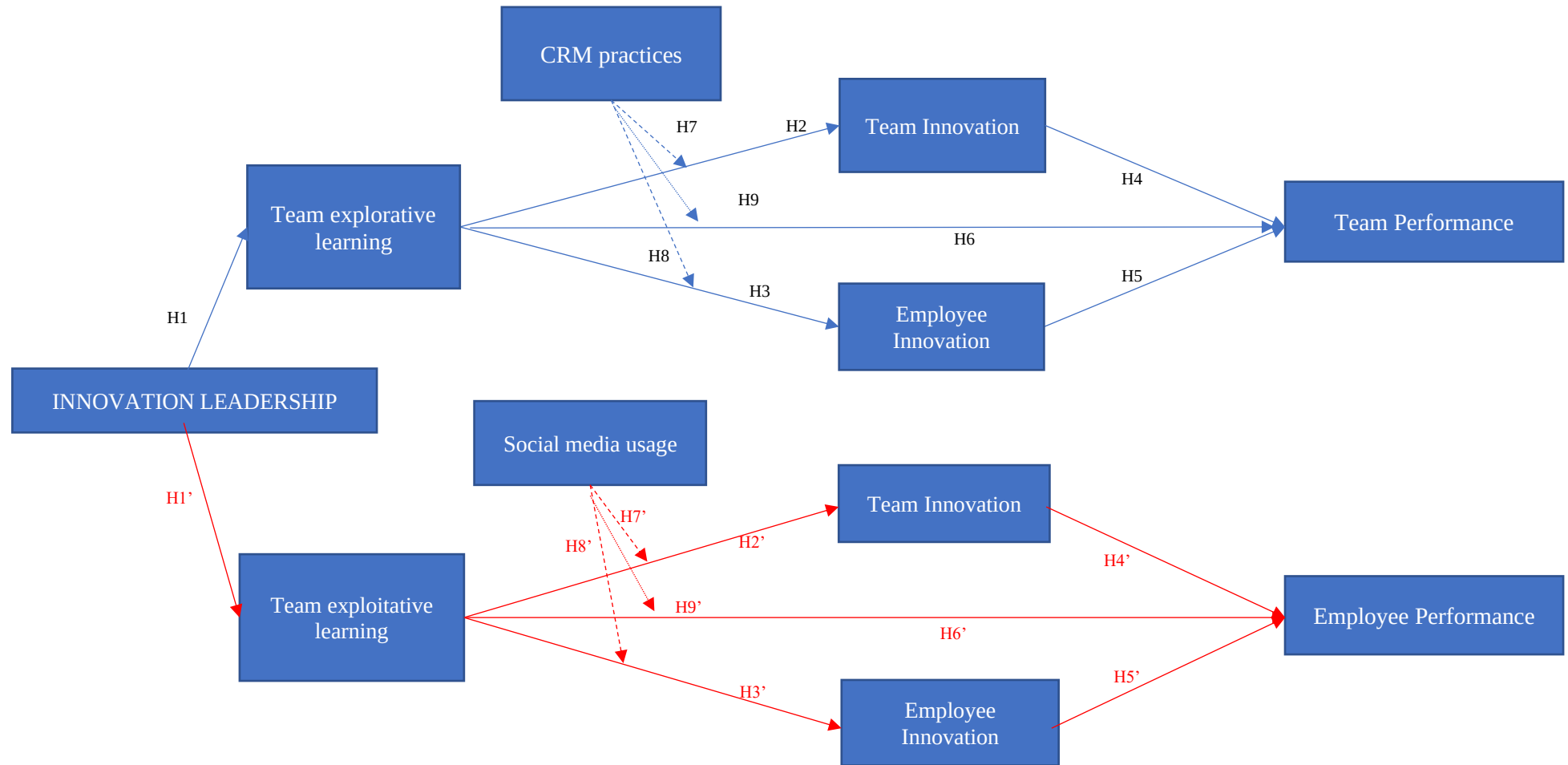


Figure 1: A conceptual framework

Source: Author's research

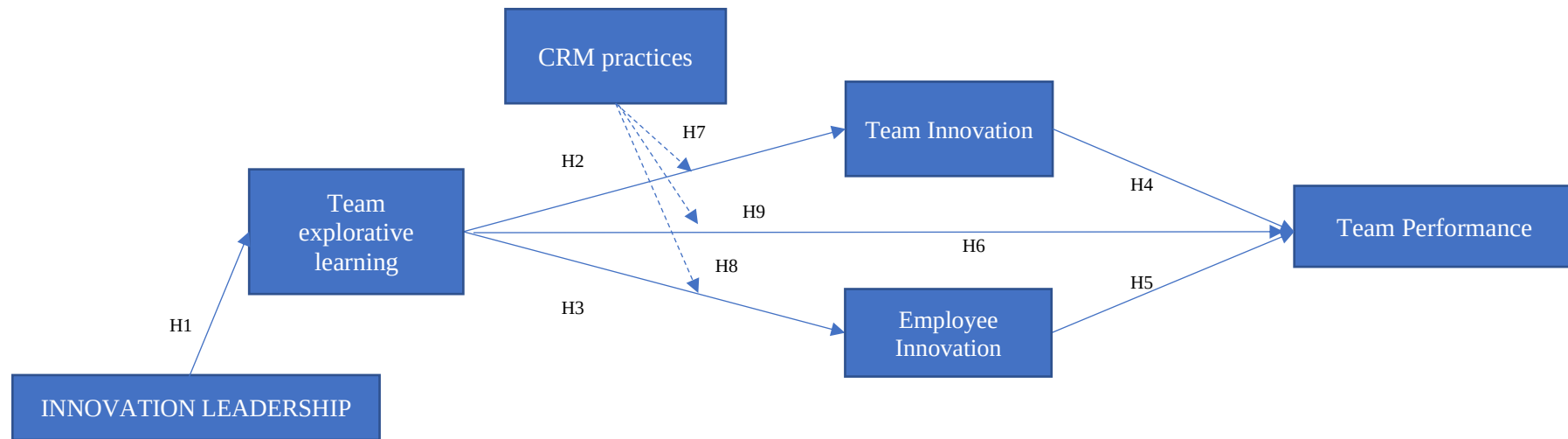


Figure 1a: A conceptual framework (Part a)

Source: Author's research

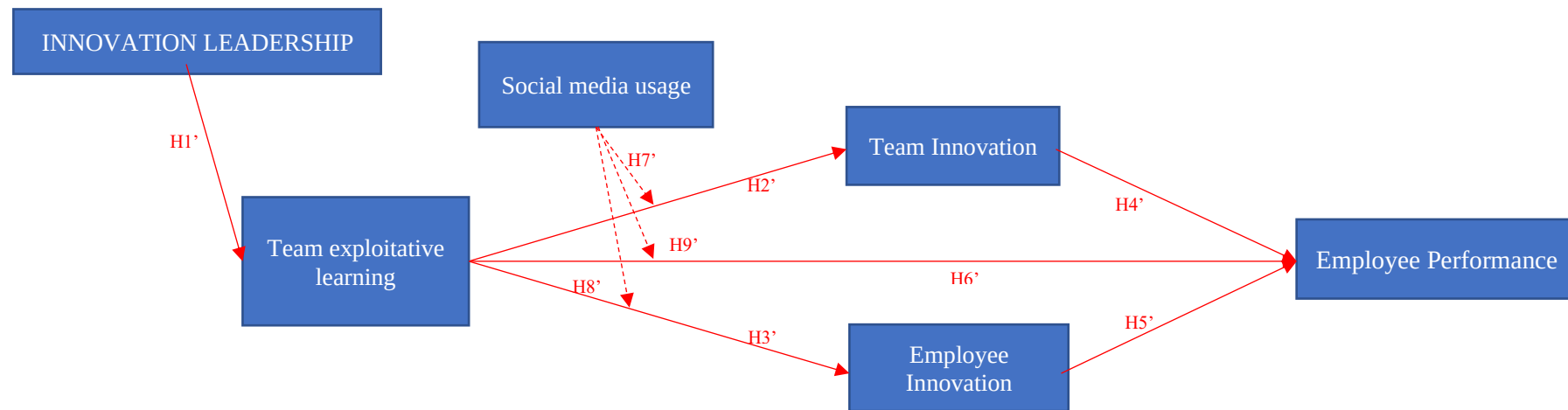


Figure 1b: A conceptual framework (Part b)
Source: Author's research

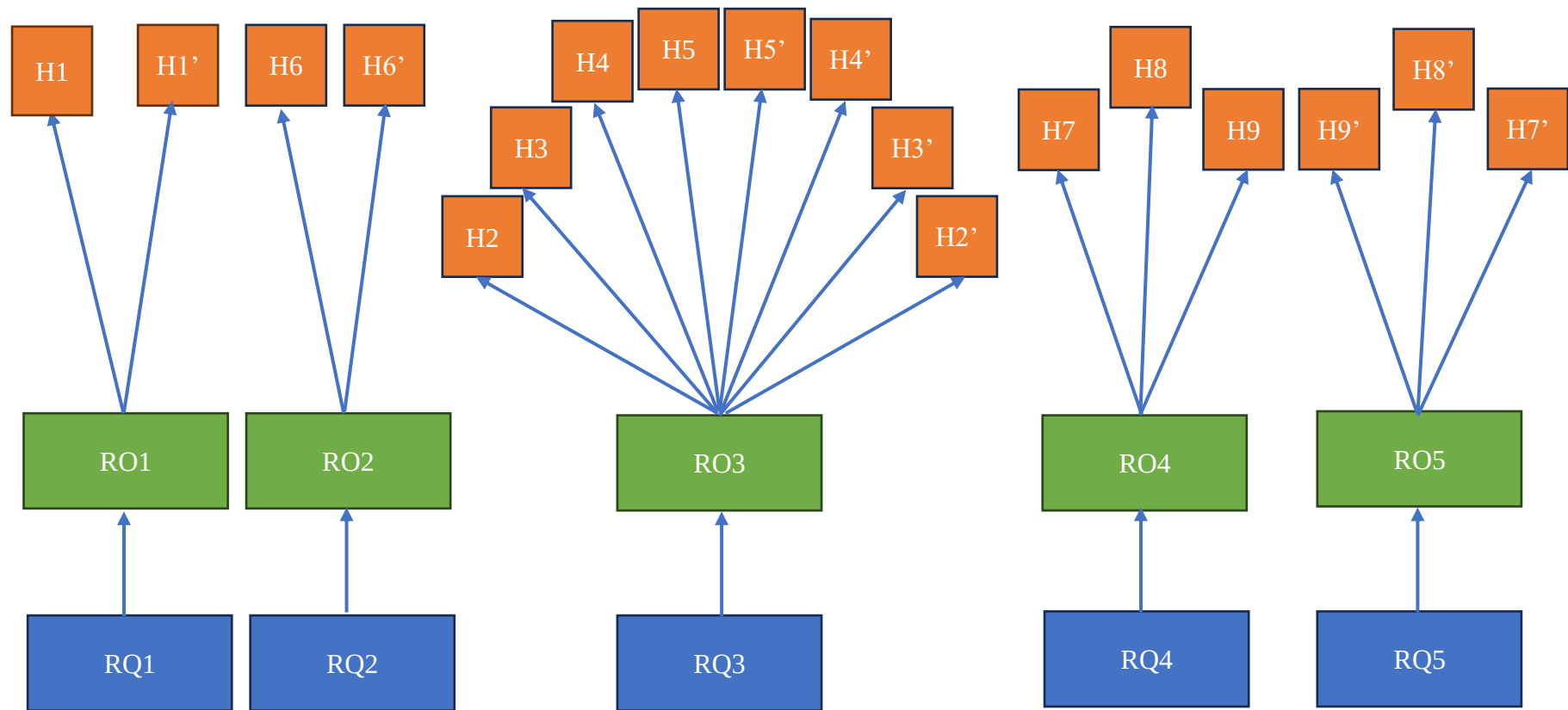


Figure 1c: (H) Hypotheses - (RO)Research Objectives- (RQ) Research Questions Source: The author's works

3.3 Hypothesis Development

Based on the literature review, the hypotheses of this study are as follows:
Table 1: Hypotheses of the research

H1	Innovation leadership positively influences team explorative learning
H2	Team explorative learning has a positive impact on team innovation
H3	Team explorative learning has a positive impact on employee innovation
H4	Team innovation mediates the relationship between team explorative learning and team performance
H5	Employee innovation mediates the relationship between team explorative learning and team performance
H6	Team explorative learning has a positive impact on team performance
H7	CRM practices moderate the relationship of team explorative learning with team innovation (Hypothesis 2)
H8	CRM practices moderate the relationship between team explorative learning and employee innovation (Hypothesis 3)
H9	CRM practices moderate the relationship between team explorative learning and team performance (Hypothesis 6)
H1'	The innovation leadership has a positive influence on team exploitative learning
H2'	Team exploitative learning has a positive impact on team innovation
H3'	Team exploitative learning has a positive impact on employee innovation
H4'	Team innovation mediates the relationship between team exploitative learning and employee performance
H5'	Employee innovation mediates the relationship between team exploitative learning and employee performance
H6'	Team exploitative learning has a positive impact on employee performance
H7'	Social media usage moderates the relationship between team exploitative learning and team innovation (Hypothesis 2')
H8'	Social media usage moderates the relationship between team exploitative learning and employee innovation (Hypothesis 3')
H9'	Social media usage moderates the relationship between team exploitative learning and employee performance (Hypothesis 6')

3.3.1. Innovation leadership and team learning (explorative and exploitative)

As Hansen et al. (2020) and Senge (1990) were one of the earliest to characterize team learning as essential to organizational change. The importance of team learning has since been demonstrated in research at an ever-increasing rate. Edmondson et al. (2007) identified three leading concepts of team learning in research: team learning as performance improvement (a change in knowledge) Ellis et al., (2003), team learning as task mastery (the ability to coordinate team members' knowledge to accomplish tasks; (Wilson et al., 2007) and team learning as a process (e.g., collectively sharing, discussing, and reflecting; (A. Edmondson, 1999). Team learning processes occur when individual knowledge and experiences are shared, discussed, and reflected on at the team level (Kozlowski & Ilgen, 2006). These processes are examples of team learning behaviors, because they build shared cognitions that enable teams to modify ideas, change protocols, and develop new knowledge together (Van den Bossche et al., 2006)

Team learning research builds upon and complements decades of research on organizational learning in the management literature. Both topics stem from the assumption that collectives, not just individuals, can learn. Many have argued that organizations must learn to succeed in a constantly changing world (Garvin, 2000; Senge, 1990), yet the topic of organizational learning has received more theoretical than empirical attention (Weick & Westley, 1993). Researchers in organizational behavior later elaborated Senge's notion that teams are the fundamental unit of learning in organizations (Edmondson, 2002). However, prior research has shown that simply grouping knowledgeable individuals does not guarantee effective learning or performance, as successful collaboration depends on how knowledge is processed, shared, and integrated among team members (Barron, 2000).

Van den Bossche et al. (2006) offer conceptualizing learning in a collaboration that entails both an understanding of sociocognitive processes that give rise to cognitive development and a sense of the social, interpersonal dimension of teamwork by taking a group-level perspective on the interactions that give rise to mutually shared cognitions and by integrating with findings on the importance of interpersonal, social factors as described in social and organizational research.

Innovation leadership plays a critical role in facilitating these learning processes. Leaders foster environments that encourage knowledge sharing, open communication, and collaborative problem-solving (Aguinis et al., 2012; Kremer et al., 2019). Knowledge sharing has been identified as a key driver of creativity and innovation, as it allows employees to leverage accumulated organizational knowledge (Cabrera & Cabrera, 2005). Furthermore, knowledge sharing

contributes to improved performance outcomes by enabling teams to generate ideas, reduce inefficiencies, and enhance coordination (Collins & Smith 2006; Hansen, 2002; Mesmer-Magnus & DeChurch, 2009). The impact of knowledge generated by a gain-sharing productivity improvement program on organizational performance was studied by Arthur & Huntley (2005). From a social learning theory perspective, innovation leaders influence team members' behavior through role modeling, encouragement, and reinforcement, thereby shaping how individuals engage in learning. Innovation-oriented leaders create an environment that supports experimentation, flexibility, and the exploration of new ideas, core characteristics of exploratory learning (March, 1991). By promoting openness to change and tolerating uncertainty, such leaders encourage teams to move beyond routine practices and engage in knowledge exploration.

At the same time, innovation leadership also supports exploitative learning by reinforcing efficiency, refinement, and the application of existing knowledge. Through structured guidance, performance management systems, and the promotion of best practices, leaders enable teams to improve processes, enhance consistency, and optimize performance outcomes. Therefore, innovation leadership simultaneously facilitates both explorative and exploitative learning processes within teams.

Although prior research has examined leadership and learning separately, empirical evidence examining how innovation leadership simultaneously influences both explorative and exploitative team learning remains limited, particularly in complex service contexts such as aviation (Zaccaro et al., 2008; Koeslag-Kreunen et al., 2018).

Based on the above arguments, this study proposes that innovation leadership positively influences both types of team learning.

Hypothesis 1 (H1): Innovation leadership has a positive influence on team explorative learning

Hypothesis 1' (H1'): Innovation leadership has a positive influence on team exploitative learning.

3.3.2 Team explorative learning among team and employee innovation, team performance.

West & Farr (1990) define innovation as the deliberate introduction and application of new ideas, processes, products, or procedures within a role, group, or organization, with the aim of generating meaningful benefits for individuals, teams, or society. Building on this definition, team innovation can be understood as a team's ability not only to generate creative, original ideas but also to

effectively implement them to achieve beneficial outcomes(Zacher & Rosing, 2015).

In the aviation service industry, leaders such as airport station managers and flight crew supervisors are well-positioned to evaluate whether team members' ideas are truly novel and valuable. They also play a key role in fostering a supportive work environment that enables creativity and innovation to emerge (Shalley & Gilson, 2004). Given their professional training and practical experience, these leaders possess substantial domain knowledge, enabling them to assess and apply both internal and external sources, including customer feedback and evolving service demands (Crevani et al., 2011). By continuously integrating and updating diverse types of knowledge through learning activities (Kostopoulos & Bozionelos, 2011), leaders can act as innovation drivers, effectively addressing service-related challenges and enhancing customer satisfaction.

Teams are widely recognized as central units for learning and knowledge creation in contemporary organizations (Edmondson & Nembhard, 2009). Within team settings, Kostopoulos & Bozionelos (2011) distinguish between two types of learning processes: exploratory and exploitative learning. Team explorative learning refers to activities that enable teams to search for, experiment with, and develop new ideas and task-related capabilities, thereby continuously expanding and updating their knowledge base (Kostopoulos & Bozionelos, 2011).

Consistent with this perspective, Duc et al. (2020) found that teams characterized by high levels of exploratory learning tend to challenge existing routines and actively seek new knowledge from external sources. In service environments characterized by uncertainty, such as retail, leaders often emphasize the advantages of exploratory learning while being less concerned with its potential risks (Edmondson & Nembhard, 2009; Kostopoulos & Bozionelos, 2011). Leaders can leverage the knowledge gained through exploratory learning to better understand changing customer needs, thereby improving customer satisfaction, service efficiency, and revenue outcomes (Cho et al., 2011; (Ye et al., 2020). By broadening the team's knowledge base and encouraging experimentation, exploratory learning supports both the generation of innovative ideas and their practical implementation. At the individual level, team explorative learning provides employees with access to new knowledge and experiences, thereby enhancing their ability to generate and apply innovative ideas in their work. Furthermore, team explorative learning enhances team performance by improving adaptability, problem-solving, and responsiveness in dynamic, uncertain environments.

The objective of team learning is to promote innovation, a widely recognized key performance outcome in team-based work. Accordingly, as teams gain more

knowledge through explorative learning, their capacity for innovative performance in operations tends to increase.

Thus, I develop the hypothesis as follows:

Hypothesis 2 (H2): Team explorative learning has a positive effect on team innovation.

Hypothesis 3 (H3): Team explorative learning has a positive effect on employee innovation.

Hypothesis 6 (H6): Team explorative learning has a positive effect on team performance, with team innovation mediating the relationship between team explorative learning and team performance.

3.3.3 Team exploitative learning among team and employee innovation, employee performance.

From straightforward cross-training interventions designed to improve team members' understanding of each other's roles and consequently improve coordination (Blickensderfer et al., 1998); (Volpe et al., 1996) mentioning to training approaches such as crew resource management (CRM), which directly train team skills such as assertiveness, maintaining shared situation awareness, and communication (Salas et al., 2009), well-designed team training increases the quality of team processes and overall performance outcomes (Salas et al., 2008). Kostopoulos & Bozionelos (2011) define exploitative learning as activities through which teams refine, recombine, and apply their existing knowledge and skills. Through official training and unofficial information exchange, team members in the service sector can take advantage of the knowledge and skills that are readily available (Kostopoulos & Bozionelos, 2011).

In contrast to explorative learning, exploitative learning emphasizes efficiency, standardization, and the effective utilization of existing knowledge to improve operational performance. Leaders may leverage their knowledge, expertise, experience, and responsibility as frontline service professionals to provide optimal customer service. By using team-exploitative learning activities, leaders can improve team performance and reduce errors and delays in service delivery, thereby benefiting organizations.

Leadership theory suggests that team exploitative learning may predict team innovation (Rosing et al., 2011). As a result, teams with a higher percentage of recombined knowledge from exploitative learning are more likely to use it to improve the services they provide. As teams gain more information and

knowledge through exploitative learning, their operational improvements increase. At the individual level, exploitative learning enables employees to refine their skills, improve task execution, and apply existing knowledge more effectively, thereby supporting innovative work behaviors in a more incremental manner.

Therefore, I continue to develop these hypotheses as follows:

Hypothesis 2' (H2'): Team exploitative learning positively affects team innovation.

Hypothesis 3' (H3'): Team exploitative learning has a positive effect on employee innovation.

Hypothesis 6' (H6'): Team exploitative learning has a positive effect on employee performance, while team innovation mediates the relationship between team exploitative learning and employee performance

3.3.4 Team and employee innovation toward team and employee performance

Also, a successful organizational innovation links internal capabilities and external requirements (Bock et al., 2015). Creativity involves bringing something new to the organization, which might mean something unique, unusual, or original; a new point of view; thinking outside the box; and contributing something that was not there previously (Shrafat, 2018).

However, fostering innovation in teams remains a major challenge for team leaders. It makes sense that the balance of member contributions is positively related to team innovation: it is an important determinant because it ensures that all members have opportunities to share knowledge and contribute to decision-making (Hoegl & Gemuenden, 2001). The close relationships between the frequency of meetings and team performance have indicated a positive relationship between the frequency of meetings and the success of the team (Brewer & Kramer, 1986). The more the team meets, the more motivated and committed its members are to the team's mission, and hence the more they contribute to achieving the team's goals. This situation burdens teams to improve their performance rapidly and continuously.

These arguments suggest that both team innovation and employee innovation serve as critical mechanisms through which team learning is translated into performance outcomes. In other words, learning processes enhance innovation, which in turn improves both team and employee performance.

As summarized, I continue to develop the hypothesis as follows:

Hypothesis 4 (H4): Team innovation mediates the relationship between explorative learning and team performance.

Hypothesis 5 (H5): Employee innovation mediates the relationship between team explorative learning and team performance

Hypothesis 4' (H4'): Team innovation mediates the relationship between exploitative learning and employee performance.

Hypothesis 5' (H5'): Employee innovation mediates the relationship between exploitative learning and employee performance.

3.3.5 CRM practices as a moderator

Lin et al. (2010) argue that well-executed and efficient customer relationship management (CRM) practices are instrumental in strengthening firms' innovation capabilities and sustaining long-term competitive advantage. Consequently, organizations are increasingly differentiated by their ability to respond to changing market conditions and customer demands through the development of innovative products and services (Boon et al., 2002; Chalmers, 2006).

According to van Knippenberg (2017), the growing importance of team innovation is highlighted across organizational psychology, organizational behavior, and management practice. The review identifies two dominant perspectives in the study of team innovation: "the knowledge integration perspective and the team climate perspective. . Furthermore, it points out that the relationship between idea generation and implementation remains a critical yet underexamined issue in the literature.

Building on these arguments, CRM practices can be considered a critical contextual mechanism that enhances knowledge sharing, coordination, and responsiveness to customer needs, thereby strengthening the effect of team learning on innovation and performance outcomes.

Taken together, I would propose the hypothesis that:

Hypothesis 7 (H7): CRM practices will moderate the relationship between team explorative learning and team innovation (Hypothesis 2), such that the association is stronger when CRM is high.

Hypothesis 8 (H8): CRM practices will moderate the relationship between team explorative learning and employee innovation (Hypothesis 3), such that the association is stronger when CRM is high.

Hypothesis 9 (H9): CRM practices will moderate the relationship between team

explorative learning and team performance (Hypothesis 6), such that the association is stronger when CRM is high.

3.3.6 Social Media Usage as a moderator

Cao et al.(2016) argue that using multiple communication media with distinct capabilities enhances communication effectiveness and, in turn, improves task performance. In this regard, media synchronicity theory offers a relevant framework for understanding social media, as it integrates various communication channels rather than functioning as a single medium. Compared to traditional face-to-face interactions, social media enables more flexible and informal communication across temporal, spatial, and organizational boundaries. Consequently, the development and maintenance of professional relationships are no longer constrained by physical proximity but can be effectively supported through virtual communities, particularly in remote or geographically dispersed work settings. By connecting individuals who share similar interests or backgrounds, workplace social media use facilitates the formation of new ties, enhances professional networking, and reinforces interpersonal relationships among colleagues.

Valls et al (2016) also mentioned in teams with a high innovation team climate, actual attempts to develop and implement new and improved ways of doing things at work are fostered and supported. This requires the team's willingness to depart from conventional ways of thinking, worldviews, and perspectives. Thus, divergent ideas, novel approaches, and distinct alternatives that members with different educational levels can provide (Edmondson, 1999; (Talke et al., 2011) may be construed as an asset for the team. In other words, the pursuit of innovation in these teams may lead team members to perceive the value of diversity. When perceived as an informational resource beneficial to team functioning, diversity in educational levels may lead to elaboration rather than intergroup bias.

Building on these arguments, social media usage can be viewed as a contextual mechanism that enhances communication, knowledge sharing, and collaboration among employees, thereby strengthening the effect of team learning on innovation and performance outcomes.

Taken together, I would propose the hypothesis that:

Hypothesis 7' (H7'): Social media usage will moderate the relationship of team exploitative learning with team innovation (Hypothesis 2'), such that the association is stronger when social media usage is high.

Hypothesis 8' (H8'): Social media usage will moderate the relationship of team

exploitative learning with employee innovation (Hypothesis 3'), such that the association is stronger when social media usage is high.

Hypothesis 9' (H9'): Social media usage will moderate the relationship of team exploitative learning with employee performance (Hypothesis 6'), such that the association is strengthened when social media usage is high.

4. RESEARCH METHODOLOGY

4.1 Research approaches

This study discusses research approaches, including both deductive and inductive reasoning; however, the primary approach adopted is deductive.

Deduction research

Deduction owes much to what we believe about scientific research. It includes developing a hypothesis that is rigorously tested through several proposals. As such, this is the dominating method in social science research, particularly when testing theoretical relationships where rules provide the explanatory foundation for the prediction and explanation of phenomena (Saunders et al., 2019).

Induction research

An alternative approach to absenteeism theory for personnel is to survey employees and their managers about their work experience in the organization. The aim here was to experience what was going on so that the nature of the situation could be better understood. The investigator's duty would then be to understand your analysis of the information you have collected. This investigation resulted in the development of a theory typically described as a conceptual framework (Saunders et al., 2019).

In this study, although inductive reasoning is acknowledged in interpreting empirical findings, the research primarily follows a deductive approach by testing hypotheses derived from established theories using quantitative data analysis. This study's main goal is to investigate the relationships among individual performance in the aviation service, innovation leadership, team exploratory learning, and team exploitative learning. The author applies both research approaches to evaluate notions and patterns derived from theory, using fresh empirical evidence. This study's main goal is to investigate the relationships among individual performance in the aviation service, innovation leadership, team exploration, and team exploitative learning.

4.2 Research method

Research using mixed methods: a mixed-methods study involves gathering quantitative and qualitative data, combining the two, and employing diverse designs that may incorporate theoretical frameworks and philosophical assumptions. Quantitative and qualitative data are combined in this kind of inquiry, with the premise that their integration yields additional insight (Creswell & Creswell, 2017). Mixed-methods research is a subset of multiple-methods research that combines qualitative and quantitative data collection and analysis within a single research endeavor. Consequently, it is predicated on philosophical presuppositions that guide the collection and analysis of data, as well as the quantitative and qualitative data-collection techniques and analytical procedures (Molina-Azorin et al., 2017).

In this study, a mixed-methods approach is adopted, combining qualitative and quantitative methods to provide a more comprehensive understanding of the research problem. Specifically, qualitative methods are used in the initial stage to explore and refine constructs, while quantitative methods are employed to test the proposed hypotheses using survey data and structural equation modeling (SEM). This combination allows for both theory development and testing within a single research framework.

4.3 Research sampling

Stratified random sampling is a type of probability sampling method in which the chosen population is divided into two or more relevant and meaningful strata depending on one or more characteristics. The sampling frame is effectively partitioned into several subsets. From each stratum, a random sample (simple or systematic) is taken (Saunders et al., 2019).

The sample size is determined following Hair et al.(2017) recommendations because PLS-SEM is utilized in the thesis for data analysis and hypothesis testing. Hair et al. (2022) state that PLS-SEM performs well with small samples and complex models. As a result, it is suggested that the minimum sample size be ten times the number of structural paths most relevant when aimed at a particular structural model's construct (Hair et al., 2017; Ringle et al., 2014). Based on this rule, the minimum required sample size for this study is estimated to be 155 observations. Moreover, Comrey & Lee (1992) suggested that a sample size of 300 is considered good, 500 is very good, and 1000 or more is excellent. Similarly, Kline (2005) considers a sample size of 200 or more adequate for structural equation modeling (SEM)

The sample size is determined following (Hair et al. 2017) recommendations. PLS-SEM is utilized in the thesis for data analysis and hypothesis testing. Hair et al (2022) state that PLS-SEM performs well with small sample sizes and

sophisticated models. Therefore, it is suggested that the minimum sample size be ten times the number of structural routes most relevant when aimed at a specific structural model construct (Hair et al., 2017); Ringle et al., 2014).

Based on this rule, the minimum required sample size for this study is estimated to be 155 observations. Moreover, Comrey & Lee (1992) suggest that a sample size of 300 is considered good, 500 is very good, and 1000 or more is excellent. Similarly, Kline (2005) considers a sample size of 200 or more adequate for structural equation modeling (SEM). After carefully analyzing these scales for this investigation, the researcher determined that 360 respondents would provide a meaningful sample size.

In addition, Kock & Hadaya (2018) proposed the inverse-square-root method, which assesses the probability that the ratio of a path coefficient to its standard error exceeds the critical value at a given significance level. As a result, the minimum sample size depends on the smallest expected path coefficient rather than the most complex part of the model. This approach further confirms that the selected sample size is adequate for the PLS-SEM analysis conducted in this study.

$$\text{Significance level} = 5\% : n_{\min} > \left(\frac{2.486}{|p_{\min}|} \right)^2$$

Source: Hair et al. (2022)

For example, assuming a significance level of 5% and a minimum path coefficient of 0.2, the minimum sample size is given by

$$n_{\min} > \left(\frac{2.486}{0.2} \right)^2 = 154.505$$

This result needs to be rounded to the next integer, so the minimum sample size is 155.

Source: Hair et al. (2022)

Therefore, the required minimum sample size varies depending on the expected minimum path coefficient ($\beta_{\min}$) and the chosen significance level. When the expected $\beta_{\min}$ ranges from 0.05 to 0.10, a relatively large sample is needed, with

minimum sizes of approximately 1004, 619, and 451 observations for significance levels of 1%, 5%, and 10%, respectively.

In contrast, when the expected $\beta_{\min}$ falls within the range of 0.11 to 0.20, the required sample size is considerably smaller, with minimum thresholds of around 113, 155, and 251 observations for significance levels of 1%, 5%, and 10%, respectively (Hair et al., 2022).

Table 3: Minimum sample size

Minimum sample size for different levels of min (minimum) Path Coefficient $\beta_{\min}$ and significant levels			
$\beta_{\min}$	Significant level		
	10%	5 %	1%
0.05-0.1	451	619	1004
0.11-0.2	113	<u>155</u>	251
0.21-0.3	51	69	112
0.31-0.4	29	39	63
0.41-0.5	19	25	41

Source: Hair et al. (2022)

Stratified random sampling is chosen. Respondents will be selected by stratification. The interviewees are chosen from the personnel list. The author will contact the leaders of these firms via the information on their websites by email or phone to request assistance. Then, the author randomly picks correspondents from the list of candidates. Depending on their preferences, the questionnaires can be sent via email or social media. In this survey, the unit of analysis is a person. There will be an online survey. Those affected will be expected to respond. Participants in the poll are only those who work in the aviation sector, such as ground department staff, cargo department staff, and air traffic controllers. Outsourcing personnel is not included in this group. SEM requires a minimum of 200 samples for analysis (Hoogland et al., 1998). The sample size for this study will be 360. This study data will be collected with the following airlines or companies in Viet Nam and other foreign companies operating in Vietnam and in their countries: Pacific Airlines, Bamboo Airways, Vietjet Air, Vietravel Airlines, Vietnam Airlines, Eva Air, Air France, Qantas Group, Air Asia, Asiana Airlines, Cathay Pacific Airways, (TCS) Tan Son Nhat Cargo Services Joint

Stock Company, (SCSC) Saigon Cargo Service Corporation, (Viags) Ground Service Company in Tan Son Nhat International Airport, (ACV) Airport Corporations of Vietnam, (SAGS) Saigon Ground service, (VATM) Vietnam Air Traffic Management Corporation Vietnam, (VNCs) Airlines Caterers Co., LTD, (VAECO) Vietnam Airlines Engineering Company, Vietnam Air Petro Company Limited (SKYPEC), Vietravel, Saigon Tourist Co., Bluesky Travel, Hoan My Travel, Phuong Nam Travel, YTV Travel, Accord Group, Marriot Group, Rieveri Group.... These companies have talent teams of leaders, innovation leaders, and employees who are capable and creative in following the company's strategic directions and achieving goals.

Due to differences in company size, respondents will be 200 for airline carriers and 160 for Aviation and tourism organizations. Reducing common method variance is the goal of gathering data from two waves (Podsakoff et al., 2003). Questionnaires will be available in English, Vietnamese, or bilingual.

4.4 Qualitative Research

In my thesis, to establish the theoretical development, the qualitative technique has been used, with the potential to provide an efficient solution. It is more helpful to gain a clear view of innovative leadership, team innovation, and team learning in the industry, which may affect team and individual performance, and to identify the gap between academic research and commercial reality.

Researchers use qualitative methods to explore the meanings people or teams attribute to social or human situations. As part of the research process, the researcher develops questions and techniques and collects and analyzes data in the participant's environment. The structure of the final version is variable. It is based on an inductive method of inquiry that emphasizes the human meaning and the significance of describing the complexity of situations Creswell & Poth (2016). Qualitative techniques focus on understanding from the respondent/informant's perspective and are appropriate for researching companies, groups, and people (Corbin & Strauss, 1990).

The author interviews experts in this study to check the variables and items. Participants gave feedback on what is suitable for the aviation and tourism environment. All this feedback was included in the variable items; they just gave detailed comments.

In-depth interviews were undertaken during the qualitative phase approximately four months before the administration of the formal questionnaire survey. The primary objective was to integrate insights from existing literature with the proposed research framework and to validate its applicability within a real-world context.

These interviews followed a structured process, and the interviewer committed to using the information provided for research purposes and thesis completion only. The focus interviewees were selected non-randomly for in-depth interviews to ensure the study's quality. These interviewees include six top management (CEO/ Vice president/ Director of Airlines, Aviation, and Tourism Organizations), nine middle management (Head of the department, Director, and Managers), and six experts in the field of aviation organizations and tourism industry (Appendix 1)

Therefore, participant contributions may help the author identify the crucial challenges that are either not included in the model or have not been covered in previous studies. By assessing the recorded responses, this step also serves as an initial review of the questionnaire. The research results from the qualitative study aid in the author's better understanding of innovation and team learning, as well as the relationship between innovation leadership and team learning in businesses. In addition, the study's findings will be used to explain the impacts of team learning, team innovation, and employee performance.

As indicated in Table 7, the suggested assessment of constructs and the notion of variables, as stated in Table 2, served as the foundation for the structured interview procedure, which consists of relevant questions and probes in both Vietnamese and English. Interviewees will receive in-depth interviews in advance to use them as a guide and prepare for the interview; the procedure is detailed in Appendix 1b.

The interviews would take place in person but could also be conducted online via Microsoft Teams or Google Meet. Simultaneously, the interviewer assures the interviewee that the information will be used for research purposes only and that all data will be coded to protect the interviewee's privacy. Interviews may be conducted face-to-face, by telephone, or via video. Interviews can be recorded on audio or video files and transcribed and examined. The results of the qualitative investigation are used to assess the appropriateness of the model's constructs and related indicators.

Table 2- The Concept of Variables

Variables	Definition	Author
Innovation leadership	An important and helpful way to consider the process of innovation is an exercise in management”; “Innovation leadership covers the encouragement of individual initiatives to enhance company performance”; “It is as the dynamic capability of an	Kline & Rosenberg (2010), Carmeli et al. (2010) and

	innovative firm to seize new innovation opportunities”	Chassagnon & Haned (2015)
Exploration and exploitation learning	Exploration is experiment with radical new ideas or ways of doing things. Exploitation involves refining and leveraging existing knowledge and focus on efficiency of current practices.	Bierly & Daly (2007)
Team explorative learning	Explorative learning (acquiring knowledge aimed at changing the nature of existing practices and competencies)	March (1991), Smith et al. (2017) and
Team exploitative learning	Exploitative learning (acquiring knowledge that refines and rejuvenates existing competencies)	Uhl-Bein & Arena (2018).
Team innovation	“team innovation is defined as an outcome or product ‘of attempts to develop and introduce new and improved ways of doing things’, which implies that team innovation includes both idea generation as well as their implementation.	Anderson et al. (2014) and Rosing et al. (2018).
Employee innovation	(Ven et al., 2000)The idea may be a recombination of old ideas, a scheme that challenges the present order, or a formula or a unique approach that is perceived as new by the individuals involved.	Zaltman et al. (1973), Rogers (1982).
Team performance	Team performance or team effectiveness has been seen as a combination of task performance and team (or group) viability	McGrath (1984) and Sundstrom et al. (1990).
Employee performance	Definition of performance as scalable actions, behavior and outcomes that employees engage in or bring about that are linked with and contribute to organizational goals.	Viswesvaran & Ones (2000)
CRM practices	CRM is a holistic customer experience management strategy with internal and external customer-focused activities. “The effectiveness and efficiency of CRM are increasingly recognized as a means for developing innovation capability and providing a lasting competitive advantage”	van Bentum & Stone (2005) and Lin et al. (2010)
Social media usage	Social media usage refers to the use of social media tools (such as Facebook, Google, LinkedIn, Twitter and WeChat, etc.) to improve customer engagement,	Cao et al. (2016) and

	create value from customer interactions, and thus, enhance firm performance.	Trainor et al. (2014)
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Source: Author's work (based on literature review)

4.5 Quantitative Research:

4.5.1 Questionnaire and sampling

In this thesis, to ensure data validity in experimental research, quantitative research examines correlations among variables and includes controls (Saunders, Lewis, and Thornhill, 2019). Together, frequency analysis is used to assess respondents' demographic information and investigate the diversity of respondents across functional departments, companies, and the types of services they perform in their daily work, which will help examine the validity of the results.

Thanks to quantitative research, the supporting impact of innovative leadership and team learning factors on the work performance of departments and employees, the mediating role of the team and individual innovation, and the moderating role of CRM and SMU (Social Media Usage) in the relationship of team learning and team innovation will be examined in the context of the aviation and tourism industry.

For the data collection process, a questionnaire using a 7-point Likert scale, ranging from “not at all” (1) to “always” (7), was developed based on the findings from the qualitative phase. The survey was designed using Google Forms, allowing respondents to easily access and complete it via computers or mobile devices. It was distributed to individuals with at least two years of working experience in the aviation and tourism sectors, either in Vietnam or internationally, with support from senior and middle-level management.

The 7-Likert scale (in English and Vietnamese, details in Appendices 2a & 2b) will be pre-tested with 46 respondents who are employees in the aviation and tourism industry with working experience of at least 24 months to recognize any points that need improvement, as well as to evaluate the content quality and measure the validity before officially surveying large numbers. The official survey will be conducted after the author updates the questionnaires based on responses and feedback from the pre-test.

According to Hair et al. (2017), when data sets exceed 360, the results of PLS-SEM or CB-SEM (covariance-based structural equation modeling) are similar. Construct is measured using four or more appropriate indicator variables, with the target population comprising 10 local airlines, 10 tourism companies, and

10% of foreign airlines or tourism companies operating in the Vietnam market and in other countries.

4.5.2 Hypothesis Testing and Conceptual Model Evaluation

PLS-SEM is a variance-based, causal predictive analytical technique widely used to examine complex relationships among latent constructs and their observed indicators (Shmueli et al., 2019; Vinzi et al., 2010). It is particularly suitable for exploratory research aimed at theory development (Hair et al., 2017). As a path modeling approach, PLS-SEM allows variables to function simultaneously as both dependent and independent constructs within a hypothesized causal framework (Garson, 2016).

This method is especially appropriate for analyzing complex models with relatively small sample sizes and non-normally distributed data. In such cases, PLS-SEM provides robust estimation for reflective measurement models and helps overcome limitations associated with traditional covariance-based approaches (Hair et al., 2017; Shmueli et al., 2019).

Following the procedure suggested by Hair et al. (2017), the theoretical framework of this study is evaluated using both measurement and structural models. The structural model (inner model) examines the relationships among innovation leadership and team learning (explorative and exploitative), mediating variables (team and employee innovation), moderating variables (CRM culture and social media usage), and outcome variables (team and employee performance). These relationships are operationalized through measurement models using relevant indicators for each construct.

Reflective measurement models' s evaluation

The evaluation of reflective measurement models primarily focuses on key criteria, including internal consistency reliability, convergent validity, and discriminant validity, along with the corresponding indicators and recommended threshold values. These are displayed in Table 4.

Table 4: Reflective measurement models' s evaluation

Metrics	Indicators	Thresholds
Convergent validity	Loadings	≥ 0.708
	Average variance extracted – AVE	≥ 0.50
Internal consistency	Cronbach's alpha	0.60 - 0.95
	Composite reliability	0.60 - 0.95
	Rho-A	0.70 – 0.95
Discriminant validity	Heterotrait-monotrait - HTMT	< 0.90

Source: Hair et al. (2017, 2019)

Evaluation of reflective measurement models begins with assessing convergent validity. According to Hair et al. (2019), outer loadings should ideally be 0.70 or higher, indicating that the construct explains more than 50% of the variance in its indicators (as reflected by AVE). When outer loadings fall slightly below this threshold, the indicators may still be retained if they meet acceptable criteria overall. This step must be completed before proceeding with further evaluation of the reflective measurement model.

The second stage focuses on internal consistency reliability, which is assessed using Cronbach's alpha and composite reliability. Hair et al. (2019) suggest that, in exploratory research, Cronbach's alpha values should be at least 0.60 and should not exceed 0.95. Similarly, composite reliability should fall within the range of 0.60 to 0.95. In addition, rho_A is considered another reliability metric, and its values should also lie within this acceptable range to confirm the internal consistency of the constructs.

The final stage involves evaluating discriminant validity. Hair et al. (2017) recommend three main approaches for this purpose: cross-loadings, the Fornell-Larcker criterion, and the heterotrait-monotrait ratio (HTMT). However, subsequent studies (Henseler et al., 2014; Hair et al., 2019) highlight that HTMT provides a more reliable assessment. High HTMT values may indicate potential issues with discriminant validity; therefore, Hair et al. (2019) suggest that HTMT values should not exceed 0.90.

Structural Model Evaluation

There are six stages to the process of evaluating the structural model. Table 5 lists the essential key indicators.

Table 5: Structural Model Evaluation

Steps	Metrics	Thresholds
Collinearity Assessment	Root mean square residual covariance - RMS_{θ}	▪ < 0.12: a well-fitting model ▪ > 0.12: lack of fit
Structural Model Path Coefficients	Path coefficients (β)	▪ Close to +1: strong positive relationships ▪ Close to -1: strong negative relationships
Coefficient of Determination	R^2 value	▪ ≥ 0.75: substantial ▪ 0.5: moderate ▪ 0.25: weak
f^2 effect size	f^2 value	▪ >0.02: small effect sizes ▪ >0.15: medium effect sizes ▪ >0.35: large effect sizes
Blindfolding and predictive relevance	Predictive relevance - Q^2	▪ >0: small predictive relevance ▪ >0.25: medium predictive relevance ▪ >0.50: large predictive relevance
q^2 effect size	q^2 value	▪ >0.02: small predictive relevance ▪ >0.15: medium predictive relevance ▪ >0.35: large predictive relevance

Source: Hair et al. (2017, 2019)

Hair et al. (2019) recommend assessing model fit using the coefficient of determination stage, particularly through the RMS_{θ} index. A threshold of 0.12 is suggested: values below 0.12 indicate a well-fitting model, while values above it imply inadequate model fit.

The second step involves evaluating the structural model through path coefficients, which represent the hypothesized relationships among constructs. According to Hair et al. (2019), these coefficients should lie between -1 and +1. Values approaching -1 indicate strong negative relationships, whereas values close to +1 reflect strong positive relationships. Coefficients near zero suggest weak associations between constructs (Hair et al., 2017). Statistical significance is assessed using p-values; values below 0.05 indicate significance at the 5% level (Hair et al., 2019).

The third step focuses on the coefficient of determination (R^2), which measures the model's explanatory power. R^2 values range from 0 to 1, with higher values indicating stronger predictive capability (Hair et al., 2017). As a guideline, R^2 values of 0.75, 0.50, and 0.25 are considered substantial, moderate, and weak, respectively (Hair et al., 2017; 2019). However, values exceeding 0.90 may indicate potential overfitting.

In the fourth step, the effect size (f^2) is calculated to assess the contribution of each exogenous construct to an endogenous construct's R^2 value (Hair et al., 2010). Although this measure may overlap with path coefficient interpretation, it remains useful for evaluating the relative importance of predictors (Hair et al., 2012). The thresholds for f^2 are 0.02, 0.15, and 0.35, representing small, medium, and large effects, respectively. Cohen (1992) notes that a medium effect size is typically noticeable to a careful observer.

The final step involves assessing predictive relevance using the blindfolding procedure and the Q^2 statistic. This measure evaluates the model's out-of-sample predictive capability (Hair et al., 2012). Q^2 values greater than 0, 0.25, and 0.50 indicate small, medium, and large predictive relevance, respectively.

Overall, q^2 effect sizes are used to determine the extent to which an independent variable contributes to the predictive relevance of a dependent variable. According to Hair et al. (2021), q^2 values of 0.02, 0.15, and 0.35 correspond to small, medium, and large predictive contributions, respectively.

Analysis of Mediating Effect

According to Nitzl et al. (2016), mediation occurs when a third variable explains the relationship between an independent variable and a dependent variable. This indirect effect, also known as the mediating effect, can be calculated as the difference between the total effect and the direct effect:

$$\text{Indirect effect} = \text{Total effect} - \text{Direct effect}$$

Once the measurement model meets all required quality criteria, the mediation model can be evaluated (Hair et al., 2021). The significance of the indirect effect is typically assessed using a bootstrapping procedure (Cohen, 1996). In this study, it is proposed that team and employee innovation act as mediators in the relationship between team explorative and exploitative learning and employee performance. The analysis aims to determine both the presence and the nature of these mediating effects.

Analysis of Moderating Effects

A moderating effect occurs when an external variable influences the strength or direction of the relationship between two constructs within a model (Hair et al., 2012). In this research, CRM practices and social media usage are examined as moderating variables. Specifically, CRM practices are expected to influence the relationships between team explorative learning and team innovation, employee innovation, and team performance. Meanwhile, social media use is proposed to

moderate the relationships among team exploitative learning, team innovation, and employee performance.

Hair et al. (2017) classify moderating variables into two types: continuous and categorical. In this study, both CRM practices and social media usage are treated as continuous moderators. Following Hair et al. (2017), a moderator variable is incorporated into the model to directly interact with the hypothesized relationships. To assess moderating effects and evaluate the structural model, a two-stage approach is employed, as recommended by Ramayah et al. (2017) and Hair et al. (2017).

4.6 Data Collection Technique

This study initially reviewed the existing literature on innovation leadership, team exploratory and exploitative learning, team and employee innovation, team and employee performance, CRM culture, and Social media usage. Based on articles published in high-ranking journals in Scopus and Web of Science, the constructs are selected.

Data for the study were collected through a survey of Vietnamese and foreign aviation and tourism workers. Self-administered Likert-scale questionnaires were used to collect the data. This was separated into two parts.

This survey will be gathered online (by email or social media). During data collection, participants will be informed of their participation and asked to complete the questionnaire. A monetary or in-kind incentive is not being given. Samplings are stratified.

Table 6. The procedure of Research Design

Stage	Procedure	Objectives
1	Reviewing the current literature	To identify existing and unsolved issues and provide motivation and an aim for the research.
2	Qualitative: Interviewing experts in the field to check the variables and items.	To identify missing variables and connections in the model
3	Quantitative: Pilot test: 45 individuals The primary survey was conducted using a survey questionnaire.	To determine the precision with which the assertions describe the related structures Assessing the content quality and the reliability of measurements

4.7 Measurement

This study examines nine constructs. The definitions of these variables are presented in Table 2, while their corresponding measurement items are detailed in Table 7.

Table 7. The Measurement of the constructs.

Constructs	Items	Source
Innovation leadership	Top management team emphasizes teamwork.	(Lovelace et al., 2001)
	Top management team clarifies individual responsibility.	
	Top management team provides clear feedback to the employees	
	Top management team emphasizes task orientation.	
	Top management team encourages initiatives.	
	Top management team trusts the employees	
Team explorative learning	Members of team were systematically searching for new possibilities.	(Kostopoulos & Bozionelos, 2011)
	Members of team offered new ideas and solutions to complicated problems.	
	Members of team experimented with new and creative ways to accomplish work	
	Members of team evaluated diverse options.	
	The members of our team developed many new skills during the project	
Team exploitative learning	The team members recombined existing knowledge to accomplish work	(Kostopoulos & Bozionelos, 2011b)
	we primarily performed routine activities (in our team)	
	We implemented standardized methodologies and regular work practices	
	Members of team mainly used their current	

	knowledge and skills to perform their tasks	
	Members of team improved and refined their existing knowledge and expertise	
CRM practices	<i>“(LTP) Long-term partnership: The company actively stresses customer loyalty or retention programs.”</i> “The company is committed to improving the management of whatever customers suggest”. “Customers are trusted and willing to provide suggestions for products and services for our company”. “The company systematically provides customized products and services to our key customers”. “The company actively stresses on customer loyalty or retention programs.” “The company maintains interactive, two-way communication with customers”. “The company cares about long-term development and successes with customers.” <i>(IS) Information sharing: The company shares product demand information with customers.</i> “Company shares market information with customers (promotion information, flights schedule, new destinations...and competitive product information)”. “Company shares product demand information with customers”. “Company shares inventory information with customers”. “Company jointly makes production/service plans with customers”.	(Valmohammadi, 2017)

	“Customers warn us of events that may affect supplying to us”.	
	<i>“(CI) Customer involvement: Our key customers are involved with us regarding market evaluations”.</i> “Key customers are involved in NPD (New Product Development) activities with us”. “Key customers are involved in periodically reviewing operations with us.” “Key customers are involved with us in modifying products”. “Key customers are involved with us regarding market evaluations”. “Key customers are involved with us regarding processing technology”.	
	<i>“(JPS) Joint problem-solving: company is jointly responsible with our key customers for getting things done”.</i> “Key customers work with us to overcome difficulties (inventory management, delivery delay and logistics management):. “Company is jointly responsible with our key customers for getting things done”. “Company works with our key customers to help solve each other’s problems (funding, production, and management)”.	
	<i>“(TB) Technology-based CRM: company has the right software to serve our customers”.</i> “Company has the right software to serve our customers”. “Company has the right hardware to serve our customers”. “Company has the right technical personnel to provide technical support for the usage of computer technology in building customer relationship”.	

	“Company maintains a comprehensive database of our customers”. “Company constructed an integrated CRM performance evaluation system”.	
Social media usage	What is your frequency of usage of social media in the work?	(Kankanhalli et al., 2005)
	I often use social media to obtain work-related information and knowledge	
	I regularly use social media to maintain and strengthen communication with colleagues in my work	
Employee Innovation	I search out new technologies, processes, techniques, and/or product ideas.	(Scott & Bruce, 1994)
	I generate creative ideas.	
	I Promote and champion ideas to others.	
	I Investigate and secure funds needed to implement new ideas.	
	I develop adequate plans and schedule for the implementation of new ideas.	
	I am innovative.	
Team Innovation	We come up with new ideas	Welbourne et al. (1998)
	We work together to implement new ideas	
	We find improved ways to do things	
	We create better processes and routines	
Employee Performance	I set high goals for myself	(Thompson, 2005)
	I attain the goals I set	
	I spend my time effectively doing my work	
	I do more work than is required	
Team performance	How well do you think your work performance in team?	(Valls et al., 2016)
	How is the quality of the work carried out by your team	

The questionnaire was developed to collect data and fulfill the prospective research objectives. The three factors examined in this study are Innovation leadership, team exploratory and exploitative learning, team and employee innovation, team and employee performance, CRM culture, and Social media

usage. These items will be formulated as a seven- point Likert scale, “1” = "Strongly disagree" to “7” = "Strongly agree.”

The measurement of constructs is shown in Table 4, where the items for variables/constructs (01 independent, 04 dependents, 02 mediators, and 02 moderator variables) were used to assess scale reliability. Cronbach's Alpha gave the internal consistency of a set of items. The questionnaire contained 59 items.

4.8 Data analysis

Quantitative study

To analyze the data, Smart-PLS 4.0 is applied.

The following are the significant steps in data analysis:

Step 1: Descriptive Statistic Analysis

The goal of descriptive statistics is to describe the features of a sample and draw conclusions. There was a cross-tabulation of the demographic data, along with frequency, percent, mean, and standard deviation statistics, as seen in Table 9 - Demographic and Descriptive Information (Findings) and Table 10. Descriptive Analysis for Items.

Step 2: Reliability and Validity Measures

The following techniques, including internal consistency analysis (Cronbach's Alpha) and component analysis, are used to analyze construct dimensions and reliability. In addition to item-to-total correlation and alpha, Cronbach's alpha is used to assess internal consistency and reliability. It is possible to perform a factor analysis to validate each study concept's dimensionality, select questionnaire items with high factor loadings, and compare these selected items with theoretically proposed ones. In principal component factor analysis, the number of dimensions to be recovered is determined by the latent roots (Eigenvalues). According to Hair et al. (2006), the following criteria should be fulfilled: factor loading >0.6 ; Eigenvalue >1 , accumulated explained variance >0.6 (60%), Item-total correlation >0.3 , and coefficient alpha (α) > 0.7 . Questionnaire items that did not meet these criteria were excluded from further analyses.

Step 3: Common Method Variance Issue

Common method variance (CMV) refers to spurious covariance among variables arising from the use of a common measurement method rather than reflecting true relationships among constructs (Podsakoff et al., 2003). Such bias may inflate observed correlations and lead to misleading conclusions (Campbell & Fiske 1959). To assess CMV, Harman's single-factor test is applied using principal component analysis. The presence of a single dominant factor would indicate potential method bias (Podsakoff & Organ, 1986). In addition, discriminant validity is evaluated using the Fornell-Larcker criterion, whereby the square root

of the average variance extracted (AVE) for each construct should exceed its correlations with other constructs (Hair et al., 2017, 2019).

Step 4: Hypotheses Testing Techniques

According to Hair et al. (2011), PLS is appropriate in conditions:

- The goal of the study is to predict key-driven components or constructs.
- The structural model is very complex.
- The sample size is relatively small.
- The collected data are to some extent non-normal.
- The latent variable score will be used in the subsequent analysis.

Hair et al. (2014) emphasize that the primary criterion for PLS model assessment is the coefficient of determination (R^2), which represents the amount of variance explained by each endogenous latent variable. The second crucial global criterion was the goodness-of-fit (e.g., GoF index), defined as the geometric mean of the average commonality and the models' average R^2 values.

According to Schroer and Hertel (2009), an R^2 value of more than 0.672 is substantial; 0.33 is moderate, while 0.19 is weak. According to Vinzi et al. (2010), a goodness-of-fit index (GoF) greater than 0.36 is significant; 0.25 is described as medium, while 0.10 is described as minor. Additionally, Hair et al. (2011) note that the AVE is another criterion for assessing convergent validity, which should be greater than 0.5 to indicate that the latent variables explain more than half of the indicators' variance on average. Composite reliability (CR) should be greater than 0.6 to confirm that the variance shared among the indicators is robust (Hair et al., 2014). Using the above criteria, the reliability and validity of the measurement model can be verified.

5. FINDINGS AND RESULTS

5.1 Qualitative Research

The interviewees consisted of four aviation and tourism experts, six top management, and eight middle management. Eighteen interviewees were recruited from different airlines, tourism companies, and the Academy of Aviation and Tourism (as detailed in Table 8). They contributed fruitful ideas and consultation, offering sincere and clear explanations to develop the survey questionnaire. Positive discussions emerged from all interviewees acknowledging reciprocal connections among the proposed constructs, which significantly impacted the goal construct of employee and team performance. The qualitative outcome serves as the basis for designing the questionnaire and is a necessary step towards addressing the thesis's research questions once all relevant indicators and proposed constructs have been confirmed, with an agreement rate ranging from 85% to 100%.

Table 8: Interview outcomes - Feedback for the study 's qualitative

Scales and Items		Feedback			Total %
		Experts (4)	Top of Management (6)	Middle of Management (8)	
Innovation Leadership (IL)	IL1	95%	100%	95%	96.6%
	IL2	95%	95%	95%	95%
	IL3	95%	95%	95%	95%
	IL4	95%	95%	95%	95%
	IL5	95%	95%	95%	95%
	IL6	95%	95%	95%	95%
Team Explorative Learning (TEL)	TEL1	95%	90%	85%	90%
	TEL2	90%	85%	85%	86.6%
	TEL3	90%	85%	85%	86.6%
	TEL4	90%	90%	85%	86.6%
	TEL5	95%	90%	85%	90%
Team Exploitative Learning (TIL)	TIL1	95%	95%	85%	91.6%
	TIL2	95%	95%	85%	91.6%
	TIL3	90%	90%	85%	86.6%
	TIL4	95%	95%	85%	91.6%
	TIL5	90%	90%	85%	85%
CRM Practices	CRM-CI1	95%	100%	100%	98.3%
	CRM-CI2	100%	100%	100%	100%
	CRM-CI3	100%	100%	100%	100%
	CRM-CI4	95%	100%	100%	98.3%
	CRM-CI5	95%	100%	95%	96.6%
	CRM-JPS1	95%	100%	100%	98.3%
	CRM-JPS2	95%	100%	100%	98.3%
	CRM-JPS3	95%	100%	100%	98.3%
	CRM-IS1	95%	100%	93%	96.6%
	CRM-IS2	100%	95%	93%	96%
	CRM-IS3	100%	95%	95%	96.6%
	CRM-IS4	100%	100%	95%	98.3%
	CRM-IS5	95%	100%	95%	96.6%
	CRM-LTP1	100%	100%	95%	100%
	CRM-LTP2	100%	100%	95%	100%
	CRM-LTP3	100%	100%	95%	100%
	CRM-LTP4	100%	100%	95%	100%
	CRM-LTP5	100%	100%	95%	98.3%
	CRM-LTP6	100%	100%	95%	98.3%
	CRM-TB1	100%	100%	100%	100%
	CRM-TB2	100%	100%	100%	100%
	CRM-TB3	100%	100%	100%	100%

Scales and Items		Feedback			Total %
		Experts (4)	Top of Management (6)	Middle of Management (8)	
	CRM-TB4	100%	100%	100%	100%
	CRM-TB5	100%	100%	100%	100%
Team Innovation (TI)	TI1	100%	100%	95%	98.3%
	TI2	100%	100%	95%	98.3%
	TI3	100%	100%	95%	98.3%
	TI4	100%	100%	95%	98.3%
Employee Innovation (EI)	EI1	100%	100%	100%	100%
	EI2	100%	100%	100%	100%
	EI3	100%	100%	100%	100%
	EI4	100%	100%	100%	100%
	EI5	100%	100%	100%	100%
	EI6	100%	100%	100%	100%
Team Performance (TP)	TP1	100%	100%	100%	100%
	TP2	100%	100%	100%	100%
Employee Performance (EP)	EP1	100%	100%	100%	100%
	EP2	100%	100%	100%	100%
	EP3	100%	100%	100%	100%
	EP4	100%	100%	100%	100%
Social media usage (SMU)	SMU1	100%	100%	100%	100%
	SMU2	100%	100%	100%	100%
	SMU3	100%	100%	100%	100%
	SMU4	100%	100%	100%	100%

Source: works of the author

Qualitative research typically produces outstanding outcomes. Qualitative research typically has exceptional results. When combined, these findings give a critical understanding of the industry employees' work and behaviors in the organization's creativity and dynamic environment from the perspectives of experienced staff with average working years of more than 15 years (experts, top of management, middle of direction) in Vietnam and foreign organizations operating in Vietnam. A questionnaire detailed in (appendices 2a and 2b) compiles the results of this section. The questions in the following section are explained in terms of industry language and completed by employees through a quantitative research survey.

5.2 Quantitative research

5.2.1 Questionnaire Survey Results

To investigate the relationship between innovation leadership, team learning, team performance, and employee performance. The primary data were gathered through organized online surveys. The questionnaire was prepared in both English and Vietnamese. It was originally developed in English and then translated into Vietnamese for distribution.

The target respondents are employees of aviation and tourism organizations. The author plans to collect more than 360 samples (100 in tourism). The total number of respondents that can be obtained from the system is 430 (including 73 respondents from tourism companies).

Table 9, shown below, provides details on the respondents. Compared to the rate of females in the sample (48.83%), the percentage of males (51.16%) was much higher. Most respondents were in the age of 31- 40 years (37.2%), followed by the age of 41-50 years (27.2%). The experience of working years in the range of two to three years is (48.13%), and the major is (48.82%) in the range of fourteen to thirty-one years. The percentage of university-level education is greater than 70.93 %. The position and title of HOD/ Director and Manager level are 43.02%; the next is employee at 42.79%; CEO/ Founder at 7.9%; and supervisor or leader at 6.28%.

Table 9: Demographic and Descriptive Information (Respondents' background)

Items		Frequency	Percentage
Gender	Male	220	51.16%
	Female	210	48.83%
Age	20-30	81	18.83
	31-40	160	37.2%
	41-50	117	27.2%
	51-60	68	15.81%
	60+	4	0.93%
Experience (year of working)	2-7	108	25.11%
	8-13	99	23.02%
	14-19	67	15.58%
	20-25	81	18.83%
	26-31	62	14.41%
	32-37	10	2.32%
	37+	3	0.69%
Education	BDA/PhD	9	2.09%
	Master	76	17.67%
	University	305	70.93%
	College	31	7.20%

	High School	9	2.09%
Position/ Title	CEO	34	7.9%
	HOD/Director	100	23.25%
	Manager	85	19.77%
	Supervisor/ leader	27	6.28%
	Employee	184	42.79%
Nationality 15 nationalities	Vietnamese	402	93.4%
	Foreigner (14 nationalities)	28	6.6%

Source: The Author's works (based on Google statistics)

Regarding the statistics, 430 responses met the research requirements. Figures in table 10 demonstrate that with the Median of 5 to 6, almost all respondents agreed with the questionnaire; there is only the indicator TIL5 (*Team members improved and refined their existing knowledge and expertise*) with a median of 4, it shows that this questionnaire is a specifically because the operation in the aviation industry is specific, each employee is well trained to comply with safety and security levels when answering this question (TIL5), many of them will assume that compliance with knowledge and regulation in annual training requirements is a mandatory task to complete their job, so it will not be easy to improve or refine their knowledge. The standard deviation values, ranging from 0.945 to 1.641, indicate considerable variation around the mean and across respondents' answers. However, this measure does not reflect the relationships among the model's constructs or variables; therefore, more advanced analyses are needed to examine these associations.

Table 10: Descriptive of the model (Statistic descriptions (*Full framework*))

Items	Number of answers	Stand. Dev	Mean	Median	Obs. min	Obs. max
CRM- CI 1	430	1.554	4.593	5.000	1.000	7.000
CRM- CI 2	430	1.515	4.821	5.000	1.000	7.000
CRM- CI 3	430	1.530	4.640	5.000	1.000	7.000
CRM- CI 4	430	1.468	4.609	5.000	1.000	7.000
CRM- CI 5	430	1.562	4.549	5.000	1.000	7.000
CRM- JPS 1	430	1.492	4.726	5.000	1.000	7.000

CRM- JPS 2	430	1.406	5.023	5.000	1.000	7.000
CRM- JPS 3	430	1.394	5.023	5.000	1.000	7.000
CRM-IS 1	430	1.442	5.440	6.000	1.000	7.000
CRM-IS 2	430	1.411	5.365	6.000	1.000	7.000
CRM-IS 3	430	1.793	4.356	5.000	1.000	7.000
CRM-IS 4	430	1.648	4.756	5.000	1.000	7.000
CRM-IS 5	430	1.413	4.809	5.000	1.000	7.000
CRM-LTP 1	430	1.296	5.351	6.000	1.000	7.000
CRM-LTP 2	430	1.286	5.126	5.000	1.000	7.000
CRM-LTP 3	430	1.255	5.377	5.000	1.000	7.000
CRM-LTP 4	430	1.319	5.416	6.000	1.000	7.000
CRM-LTP 5	430	1.246	5.472	6.000	1.000	7.000
CRM-LTP 6	430	1.288	5.540	6.000	1.000	7.000
CRM-TB 1	430	1.362	5.160	5.000	1.000	7.000
CRM-TB 2	430	1.339	5.233	5.000	1.000	7.000
CRM-TB 3	430	1.388	5.191	5.000	1.000	7.000
CRM-TB 4	430	1.351	5.233	5.000	1.000	7.000
CRM-TB 5	430	1.528	4.895	5.000	1.000	7.000
EI 1	430	1.355	5.028	5.000	1.000	7.000
EI 2	430	1.331	4.935	5.000	1.000	7.000
EI 3	430	1.266	5.226	5.000	1.000	7.000
EI 4	430	1.461	5.049	5.000	1.000	7.000
EI 5	430	1.377	5.109	5.000	1.000	7.000
EI 6	430	1.371	4.923	5.000	1.000	7.000
EP 1	430	1.086	5.602	6.000	3.000	7.000
EP 2	430	0.945	5.258	5.000	3.000	7.000
EP 3	430	0.995	5.437	6.000	3.000	7.000
EP 4	430	1.166	5.453	6.000	1.000	7.000
IL1	430	1.348	5.656	6.000	1.000	7.000
IL2	430	1.259	5.691	6.000	1.000	7.000
IL3	430	1.242	5.637	6.000	1.000	7.000
IL4	430	1.407	5.235	5.000	1.000	7.000
IL5	430	1.443	5.528	6.000	1.000	7.000
IL6	430	1.366	5.270	5.000	1.000	7.000

SMU 1	430	1.455	5.388	6.000	1.000	7.000
SMU 2	430	1.513	5.267	6.000	1.000	7.000
SMU 3	430	1.393	5.444	6.000	1.000	7.000
TEL 1	430	1.330	5.081	5.000	1.000	7.000
TEL 2	430	1.256	5.156	5.000	2.000	7.000
TEL 3	430	1.338	5.093	5.000	1.000	7.000
TEL 4	430	1.256	5.247	5.000	2.000	7.000
TEL 5	430	1.305	5.188	5.000	1.000	7.000
TI 1	430	1.394	4.679	5.000	1.000	7.000
TI 2	430	1.449	4.960	5.000	1.000	7.000
TI 3	430	1.344	5.158	5.000	1.000	7.000
TI 4	430	1.388	5.051	5.000	1.000	7.000
TIL 1	430	1.176	5.470	6.000	2.000	7.000
TIL 2	430	1.120	5.498	6.000	2.000	7.000
TIL 3	430	1.101	5.693	6.000	2.000	7.000
TIL 4	430	1.164	5.656	6.000	1.000	7.000
TIL 5	430	1.641	4.286	4.000	1.000	7.000
TP1	430	1.116	5.263	5.000	2.000	7.000
TP2	430	1.114	5.272	5.000	1.000	7.000

Source: The Author's works (based on Smart PLS-SEM MV descriptives)

The results presented in Table 10a indicate that the majority of respondents agreed with the questionnaire items, as reflected in median values ranging from 5 to 6. The standard deviation values, ranging from 1.114 to 1.554, suggest a relatively high level of dispersion in responses, indicating noticeable differences among participants' answers. However, this measure alone does not provide insight into the relationships among constructs or the interconnections within the model. Therefore, more advanced analytical techniques are required to examine these relationships in greater detail.

Table 10 a: Descriptive statistics of the model (*CRM Moderator*)

Items	Mean	Median	Obs. min	Obs. max	Stand. Dev.	Number of answers
CRM- CI 1	4.593	5.000	1.000	7.000	1.554	430
CRM- CI 2	4.821	5.000	1.000	7.000	1.515	430
CRM- CI 3	4.640	5.000	1.000	7.000	1.530	430
CRM- CI 4	4.609	5.000	1.000	7.000	1.468	430
CRM- CI 5	4.549	5.000	1.000	7.000	1.562	430
CRM- JPS 1	4.726	5.000	1.000	7.000	1.492	430
CRM- JPS 2	5.023	5.000	1.000	7.000	1.406	430
CRM- JPS 3	5.023	5.000	1.000	7.000	1.394	430
CRM-IS 1	5.440	6.000	1.000	7.000	1.442	430
CRM-IS 2	5.365	6.000	1.000	7.000	1.411	430
CRM-IS 3	4.356	5.000	1.000	7.000	1.793	430
CRM-IS 4	4.756	5.000	1.000	7.000	1.648	430
CRM-IS 5	4.809	5.000	1.000	7.000	1.413	430
CRM-LTP 1	5.351	6.000	1.000	7.000	1.296	430
CRM-LTP 2	5.126	5.000	1.000	7.000	1.286	430
CRM-LTP 3	5.377	5.000	1.000	7.000	1.255	430
CRM-LTP 4	5.416	6.000	1.000	7.000	1.319	430
CRM-LTP 5	5.472	6.000	1.000	7.000	1.246	430
CRM-LTP 6	5.540	6.000	1.000	7.000	1.288	430
CRM-TB 1	5.160	5.000	1.000	7.000	1.362	430
CRM-TB 2	5.233	5.000	1.000	7.000	1.339	430
CRM-TB 3	5.191	5.000	1.000	7.000	1.388	430
CRM-TB 4	5.233	5.000	1.000	7.000	1.351	430
CRM-TB 5	4.895	5.000	1.000	7.000	1.528	430
EI 1	5.028	5.000	1.000	7.000	1.355	430
EI 2	4.935	5.000	1.000	7.000	1.331	430
EI 3	5.226	5.000	1.000	7.000	1.266	430
EI 4	5.049	5.000	1.000	7.000	1.461	430
EI 5	5.109	5.000	1.000	7.000	1.377	430
EI 6	4.923	5.000	1.000	7.000	1.371	430
IL1	5.656	6.000	1.000	7.000	1.348	430
IL2	5.691	6.000	1.000	7.000	1.259	430
IL3	5.637	6.000	1.000	7.000	1.242	430
IL4	5.235	5.000	1.000	7.000	1.407	430
IL5	5.528	6.000	1.000	7.000	1.443	430
IL6	5.270	5.000	1.000	7.000	1.366	430
TEL 1	5.081	5.000	1.000	7.000	1.330	430
TEL 2	5.156	5.000	2.000	7.000	1.256	430
TEL 3	5.093	5.000	1.000	7.000	1.338	430
TEL 4	5.247	5.000	2.000	7.000	1.256	430
TEL 5	5.188	5.000	1.000	7.000	1.305	430

TI 1	4.679	5.000	1.000	7.000	1.394	430
TI 2	4.960	5.000	1.000	7.000	1.449	430
TI 3	5.158	5.000	1.000	7.000	1.344	430
TI 4	5.051	5.000	1.000	7.000	1.388	430
TP1	5.263	5.000	2.000	7.000	1.116	430
TP2	5.272	5.000	1.000	7.000	1.114	430

Source: The Author's works (based on MV descriptive -Smart PLS 4.0)

Figures in Table 10b show that almost all respondents agreed with the questionnaire, with a median of 5-6. There is only the TIL5 indicator (*Team members refined and improved their existing knowledge and expertise*) with a median of 4, showing that this particular question is different because activities in the aviation industry are specific, each employee is well-trained to comply with safety and security when filling this question (TIL5), many of them will assume that compliance with the knowledge and regulations in annual training requirements is a mandatory task to complete your job, so it will not be necessary to improve or refine existing knowledge, because compliance with orders is one of the mandatory requirements to ensure security and safety for flights as well as the safety of passengers. The standard deviation values, ranging from 0.945 to 1.641, suggest substantial variability around the mean and across respondents' answers. However, this measure does not capture the relationships among constructs or variables within the model, indicating that more advanced analytical techniques are necessary to examine these associations.

Table 10b: Descriptive of the model (Statistic descriptions (SMU Moderator))

Items	Mean	Median	Obs. min	Obs. max	Stand. Dev.	Number of answers
EI 1	5.028	5.000	1.000	7.000	1.355	430
EI 2	4.935	5.000	1.000	7.000	1.331	430
EI 3	5.226	5.000	1.000	7.000	1.266	430
EI 4	5.049	5.000	1.000	7.000	1.461	430
EI 5	5.109	5.000	1.000	7.000	1.377	430
EI 6	4.923	5.000	1.000	7.000	1.371	430
EP 1	5.602	6.000	3.000	7.000	1.086	430
EP 2	5.258	5.000	3.000	7.000	0.945	430
EP 3	5.437	6.000	3.000	7.000	0.995	430
EP 4	5.453	6.000	1.000	7.000	1.166	430
IL1	5.656	6.000	1.000	7.000	1.348	430
IL2	5.691	6.000	1.000	7.000	1.259	430
IL3	5.637	6.000	1.000	7.000	1.242	430
IL4	5.235	5.000	1.000	7.000	1.407	430

IL5	5.528	6.000	1.000	7.000	1.443	430
IL6	5.270	5.000	1.000	7.000	1.366	430
SMU 1	5.388	6.000	1.000	7.000	1.455	430
SMU 2	5.267	6.000	1.000	7.000	1.513	430
SMU 3	5.444	6.000	1.000	7.000	1.393	430
TI 1	4.679	5.000	1.000	7.000	1.394	430
TI 2	4.960	5.000	1.000	7.000	1.449	430
TI 3	5.158	5.000	1.000	7.000	1.344	430
TI 4	5.051	5.000	1.000	7.000	1.388	430
TIL 1	5.470	6.000	2.000	7.000	1.176	430
TIL 2	5.498	6.000	2.000	7.000	1.120	430
TIL 3	5.693	6.000	2.000	7.000	1.101	430
TIL 4	5.656	6.000	1.000	7.000	1.164	430
TIL 5	4.286	4.000	1.000	7.000	1.641	430

Source: The Author's works (*based on MV descriptive -Smart PLS 4.0*)

5.2.2 Confirmatory Factor Analysis / Model fit

Confirmatory factor analysis (CFA) is utilized to evaluate the extent to which the observed variables obtained from the questionnaire reflect the underlying latent constructs proposed in the theoretical model. In addition, a series of CFA models are estimated to contrast the proposed baseline model with alternative specifications, enabling a rigorous assessment of discriminant validity. The baseline model encompasses all constructs specified in the theoretical framework, namely:

Innovation Leadership (IL), Team Exploitative Learning (TEL), Team Exploitative Learning (TIL), Team Innovation (TI), Employee Innovation (EI), Team Performance (TP), Employee Performance (EP), Customer Relationship Management (CRM) (Longterm Partnership (CRM-LTP); Customer Involment (CRM-CI); Information Sharing (CRM-IS); Joint- Problem Solving (CRM-JPS); Technology Based (CRM- TB). Alternative model specifications are developed by merging two or more latent constructs into a single factor. These models are then evaluated and compared using goodness-of-fit indices, including the Chi-square statistic, NFI, d_G, d_ULS, and the Standardized Root Mean Square Residual (SRMR) (see Tables 11, 11a, and 11b).

5.2.3 Data bias controlling

The standard-method bias could emerge, leading to common method variance (CMV). All data were collected using a single method, specifically an online questionnaire. Factors such as internet connection quality and the format of response options may influence participants' answers, particularly depending on their familiarity with online survey tools. This may also introduce response bias,

as some respondents tend to select middle-range options rather than extreme responses-a pattern observed in both recent and earlier empirical studies. Although Harman's single-factor test has traditionally been used to detect common method variance (CMV), its effectiveness has been debated (Jakobsen & Jensen, 2015). More recent research suggests that the CFA marker technique provides a more robust approach for assessing CMV (Schaller et al., 2015).

The latter approach was therefore used in this investigation, along with a marker variable in CFA, which should, in theory, have no relationship to any other latent variables and produce a decent match.

Table 11: Model fit (Full framework)

	Saturated model	Estimated model	Remarks
SRMR	0.050	0.100	Better model fit
d_ULS	2.090	8.196	Better model fit
d_G	2.899	1.091	Considered acceptable to fit
Chi-square	2,279.819	2,395.546	Considered acceptable to fit
NFI	0.848	0.841	Goodness of fit

Source: The Author's works (*based on quality criteria- model fit -Smart PLS 4.0*)

The best fit is illustrated by the original model fit with all factors as follows: Model 11(Figure 1a conceptual framework) with results of chi-sq =6,604.545, dG = 2.860, NFI = 0.737, value above is almost considered indicative of an acceptable fit, d-ULS = 6.325, SRMR = 0.060 indicates a better fit, and the implied covariance matrix is close to the observed covariance matrix in the data. It is a positive indicator of model fit.

Table 11a: Model fit (figure 1a- model A)

	(Sat.) Saturated model	(Est.) Estimated model	Remarks
SRMR	0.042	0.079	Better model fit
d_ULS	0.712	2.551	Better model fit
d_G	0.482	0.514	Considered acceptable to fit

Chi-square	1258.272	1185.209	Considered acceptable to fit
NFI	0.886	0.892	Goodness of fit

Source: The Author's works (*based on quality criteria- model fit -Smart PLS 4.0*)

Table 11b: Model fit (Figure 1b-Model B)

	Saturated model	Estimated model	Remarks
SRMR	0.054	0.114	Better model fit
d_ULS	1.204	5.292	Better model fit
d_G	0.513	0.651	Acceptable to fit
Chi-square	1292.977	1508.649	Acceptable to fit
NFI	0.862	0.839	Goodness of fit

Source: The Author's works (*based on quality criteria- model fit -Smart PLS 4.0*)

The best fit is illustrated by the original model fit with all factors as follows: Model 11a (Figure 1a conceptual framework) with results of chi-sq =1,258.272, dG = 0.482, NFI = 0.886, D-ULS = 0.712, SRMR = 0.042 indicates a better fit, and the implied covariance matrix is close to the observed covariance matrix in the data. It is a positive indicator of model fit.

Model 11b (Figure 1b conceptual framework) with results of chi-sq =1.292.977, dG = 0,513, NFI = 0.862, value above is almost considered indicative of an acceptable fit, d_ULS =1.204, SRMR = 0.054 indicates a better fit, and the implied covariance matrix is close to the observed covariance matrix in data. It indicates how well your structural equation model fits the data.

These results indicate that the constructs employed in the study are empirically distinct.

5.2.4 Correlations and Descriptive Statistics

Descriptive statistics and the complete correlation matrix are reported in Table 12 for future researchers to replicate the results.

Table 12: Correlation and Descriptive Statistics

	Mean	Median	Standard deviation	CRM	EI	EP	IL	SMU	TEL	TI	TIL	TP
CRM	0.000	0.069	1.000	1.000	0.569	0.494	0.634	0.427	0.608	0.606	0.597	0.559
EI	0.000	0.107	1.000	0.569	1.000	0.597	0.495	0.279	0.647	0.753	0.504	0.590
EP	0.000	0.090	1.000	0.494	0.597	1.000	0.431	0.307	0.523	0.536	0.575	0.681
IL	0.000	0.149	1.000	0.634	0.495	0.431	1.000	0.394	0.672	0.602	0.649	0.537
SMU	0.000	0.208	1.000	0.427	0.279	0.307	0.394	1.000	0.350	0.349	0.368	0.331
TEL	0.000	0.046	1.000	0.608	0.647	0.523	0.672	0.350	1.000	0.818	0.704	0.662
TI	0.000	0.032	1.000	0.606	0.753	0.536	0.602	0.349	0.818	1.000	0.627	0.657
TIL	0.000	0.108	1.000	0.597	0.504	0.575	0.649	0.368	0.704	0.627	1.000	0.694
TP	0.000	0.208	1.000	0.559	0.590	0.681	0.537	0.331	0.662	0.657	0.694	1.000

Source: The Author's works (*based on Smart PLS 4.0*)

5.2.5 Assessing the measurement model

Construct reliability and validity

As shown in Table 13a, the Average Variance Extracted (AVE) values for all constructs range from 0.590 to 0.921, which are significantly higher than the threshold of 0.50 (Hair et al., 2017; 2019). These results indicate that the constructs demonstrate adequate convergent validity. Furthermore, the findings suggest that the model's construct reliability and validity are reliable when Cronbach's alpha values are from 0.796 to 0.922, Composite reliability (rho_A) values from 0.861 to 0.936, and Composite reliability (rho-C) are within the stated criteria of 0.869 to 0.959, respectively (Hair et al., 2019). In summary, the composite reliability (rho_A), composite reliability (rho-C), and Cronbach's alpha values all fall within the acceptable-to-perfect range, indicating that the items in these constructs are reliable indicators of the underlying constructs. This implies that the measurement items are consistent, reliable, and appropriate for the study.

Table 13a: Construct reliability and validity (full framework)

Varriables	Cronbach's alpha	(Rho_A)	(Rho_C)	(AVE)
CRM	0.911	0.914	0.934	0.738
EI	0.922	0.922	0.939	0.719
EP	0.872	0.875	0.913	0.723
IL	0.918	0.919	0.936	0.711
SMU	0.869	0.891	0.919	0.790
TEL	0.931	0.932	0.948	0.784
TI	0.935	0.936	0.954	0.837
TIL	0.796	0.861	0.869	0.590
TP	0.915	0.916	0.959	0.921

Source: The Author's works (*based on quality criteria - Smart PLS 4.0*)

Additionally, the results demonstrate the model's internal consistency reliability when the Composite reliability (Rho-C) values, Cronbach's alpha, and rho-A fall between the specified range of 0.861 to 0.959, the index of the variable - Cronbach's Alpha also meets the requirements of systematic and reliability when it is in the range of 0.796 - 0.959, showing a excelent level of reliability and greater internal consistency. Finally, Rho_A results are also in high confidence.

Table 13a: Evaluating the internal consistency reliability of the variables in the study. The AVE, Composite Reliability Rho- C, Rho_A, and Cronbach's Alpha

indexes are all within the accepted measurement range to determine the reliability (reasonableness) of the measurement model, within the acceptable to excellent range, indicating that the items within the constructs are reliable measures. This suggests that all measurement items are consistent and appropriate for the research and that the data are reliable.

Convergent validity and Consistency reliability

The measurement model assesses how well the observed variables (indicators) reflect the latent constructs (factors) of the conceptual framework. Based on Table 13b, the internal consistency reliability for all indicators is very close to 1, indicating the index is very strongly correlated with the variable. Most of the loadings indices are above 0.7 (Hair et al., 2019), except indicator - TIL5 is at 0.298, which is quite weakly correlated with Team exploitative learning (TIL), the construct CRM-IS value within 0.561 to 0.690, indicating that the variable still contributes significantly to consistency, reliability, and validity. Besides, the Average variance extracted (AVE) (Table 13a) values for the constructs range from 0.564 to 0.921, which are well above the threshold of 0.5. (Hair et al.2017, 2019).

Table 13b: Convergent Validity - Outer loadings

Indicators and constructs	Outer loadings	Indicators and constructs	Outer loadings
CRM- CI <- CRM	0.860	SMU 1 <- SMU	0.864
CRM- JPS <- CRM	0.879	SMU 2 <- SMU	0.919
CRM-IS <- CRM	0.838	SMU 3 <- SMU	0.884
CRM-LTP <- CRM	0.872	TEL 1 <- TEL	0.867
CRM-TB <- CRM	0.845	TEL 2 <- TEL	0.896
EI 1 <- EI	0.865	TEL 3 <- TEL	0.901
EI 2 <- EI	0.893	TEL 4 <- TEL	0.874
EI 3 <- EI	0.807	TEL 5 <- TEL	0.887
EI 4 <- EI	0.818	TI 1 <- TI	0.910
EI 5 <- EI	0.855	TI 2 <- TI	0.912
EI 6 <- EI	0.849	TI 3 <- TI	0.926
EP 1 <- EP	0.858	TI 4 <- TI	0.911
EP 2 <- EP	0.877	TIL 1 <- TIL	0.860
EP 3 <- EP	0.859	TIL 2 <- TIL	0.806
EP 4 <- EP	0.805	TIL 3 <- TIL	0.851

IL1 <- IL	0.797	TIL 4 <- TIL	0.865
IL2 <- IL	0.846	TIL 5 <- TIL	0.298
IL3 <- IL	0.846	TP1 <- TP	0.962
IL4 <- IL	0.859	TP2 <- TP	0.958
IL5 <- IL	0.864	CRM x TEL -> CRM x TEL	1.000
IL6 <- IL	0.845	SMU x TIL -> SMU x TIL	1.000

Source: The Author's works (*based on outerloadings - Smart PLS 4.0*)

Table 13b: Evaluating the convergence validity of the variables in the study. The outer loadings determine the quality and reliability of the measurement model. All of the outer loadings are between 0.797 and 1, indicating a strong relationship between the observed variable and the latent construct. An outer loading greater than 0.7 suggests that the observed indicator strongly reflects the latent variable. This indicates a robust relationship, and the indicator is considered a good measure of the latent variable; most of the loading indices are above 0.7 according to Hair et al. (2019), except for indicator TIL5, which is 0.298 and is quite weakly correlated with Team exploitative learning (TIL). The AVE, Composite Reliability, Cronbach's Alpha, and Rho_A indexes are all within the acceptable-to-excellent range for assessing the reliability (reasonableness) of the measurement model. The value is large enough for the measurement variables to be consistent and reliable in the study (see all details in tables 13a and 13b above)

Discriminant validity (HTMT): The Heterotrait-Monotrait Ratio

The model's discriminant validity is evaluated using the Heterotrait-Monotrait Ratio (HTMT). All values reported in Table 14 are below the 0.85 threshold, confirming adequate discriminant validity of the measurement model (Hair et al., 2017). These results provide additional support for the robustness and validity of the measurement constructs. The measurement models have been verified as a result. It provides evidence that the constructs are distinct and exhibit discriminant validity.

Table 14: Discriminant validity (HTMT)

Table 14: Discriminant validity (HTMT)
Heterotrait-monotrait ratio (HTMT) - Matrix

	CRM	EI	EP	IL	SMU	TEL	TI	TIL	TP	CRM x TEL	SMU x TIL
CRM											
EI	0.621										
EP	0.537	0.665									
IL	0.68	0.538	0.481								
SMU	0.467	0.304	0.347	0.439							
TEL	0.649	0.697	0.579	0.727	0.386						
TI	0.648	0.811	0.593	0.648	0.382	0.875					
TIL	0.668	0.59	0.682	0.741	0.445	0.806	0.735				
TP	0.594	0.641	0.76	0.585	0.365	0.716	0.709	0.804			
CRM x TEL	0.07	0.164	0.073	0.152	0.111	0.25	0.241	0.174	0.193		
SMU x TIL	0.086	0.084	0.025	0.17	0.027	0.129	0.082	0.175	0.026	0.368	

Source: The Author's works (*based on quality criteria - Smart PLS 4*).

The following coverage can be used to interpret outer models: Alpha Cronbach's, Outer Collinearity Statistics (VIF), Composite reliability, Convergent validity, Discriminant validity, and Average variance extracted (AVE).

5.2.6 Structural Model and Hypothesis Testing Evaluation

The evaluation of the structural model and the testing of the research hypotheses are conducted based on the results presented in Table 5: Structural Model Evaluation.

Collinearity statistics (VIF)

For the multicollinearity test, the output shows the Collinearity Statistic: Variance Inflation Factor (VIF); the VIF value must be < 10 or < 5 .

VIF is calculated as a rule of thumb; we need a VIF of 5 or lower to avoid the collinearity problem (Hair et al., 2011). Looking at a statistic as shown in Table 15a, all the indicators' VIF values are lower than 5, which represents no multicollinearity due to the VIF criteria < 5 . The results show that most values below 3 indicate that the predicted coefficients are likely stable and reliable. This result indicates the model's stability.

Below is a statistic from VIF, which suggests that PLS theory excludes the Ordinal Least Squares (OLS) assumptions, such as normally distributed multivariate data and the absence of multicollinearity among exogenous variables. Below are the statistics from the VIF- outer model.

Table 15a: Collinearity statistics (VIF- Variance Inflation Factor) Outer model

Indicators	VIF	Indicators	VIF
CRM- CI	3.033	SMU 1	2.294
CRM- JPS	3.249	SMU 2	2.607
CRM-IS	2.311	SMU 3	2.098
CRM-LTP	2.693	TEL 1	2.797
CRM-TB	2.364	TEL 2	3.451
EI 1	3.138	TEL 3	3.544
EI 2	4.168	TEL 4	2.879
EI 3	2.161	TEL 5	3.156
EI 4	2.621	TI 1	3.536
EI 5	3.063	TI 2	3.561
EI 6	2.787	TI 3	4.108
EP 1	2.123	TI 4	3.633
EP 2	2.487	TIL 1	2.119
EP 3	2.281	TIL 2	2.061
EP 4	1.824	TIL 3	2.803
IL1	2.103	TIL 4	2.431
IL2	2.735	TIL 5	1.093
IL3	2.603	TP1	3.452
IL4	2.842	TP2	3.452

IL5	2.888	CRM x TEL	1.0
IL6	2.607	SMU x TIL	1.0

Source: author's work (based on quality criteria - Smart PLS 4.0)

Table 15a shows that all indicators have VIF values < 5 , indicating that there is no multicollinearity for each variable.

Table 15b illustrates the value of the collinearity statistic (VIF) of the inner model. See details in Table 15b.

Table 15b: Collinearity statistics (VIF- Variance Inflation Factor) - Inner model

	VIF		VIF
CRM -> EI	1.842	TEL -> TP	3.253
CRM -> TI	1.842	TI -> EP	2.886
CRM -> TP	1.756	TI -> TP	4.166
EI -> EP	2.319	TIL -> EI	2.196
EI -> TP	2.430	TIL -> EP	1.741
IL -> TEL	1.000	TIL -> TI	2.196
IL -> TIL	1.000	CRM x TEL -> EI	1.233
SMU -> EI	1.262	CRM x TEL -> TI	1.233
SMU -> EP	1.189	CRM x TEL -> TP	1.082
SMU -> TI	1.262	SMU x TIL -> EI	1.167
TEL -> EI	2.318	SMU x TIL -> EP	1.017
TEL -> TI	2.318	SMU x TIL -> TI	1.167

Source: author's work (based on quality criteria - Smart PLS 4.0)

An inner model or structural analysis is conducted to ensure the structural models are accurate and robust. Table 15b 's results with inner VIF values under 5 represent no multicollinearity due to the VIF criteria < 5 . Most values are less than 3, indicating positive results for the model's stability, and suggesting a high probability of stability and dependability for the estimated coefficients.

Structural Model Path coefficients - Bootstrapping results

As shown in Table 16a below, the T-Statistics are greater than 1.96, indicating that the outer model loadings are highly significant; the others are not significant.

Table 16a: Structural Model Path coefficients (Mean, STDEV, T values, P values)

	(O) Original sample	(M) Sample mean	STDEV	T statistics	P values	Remarks
CRM -> EI	0.289	0.287	0.051	5.623	0.000	Highly significant
CRM -> TI	0.161	0.158	0.042	3.832	0.000	Highly significant
CRM -> TP	0.161	0.167	0.056	2.878	0.004	Highly significant
EI -> EP	0.421	0.425	0.055	7.617	0.000	Highly significant
EI -> TP	0.157	0.156	0.058	2.705	0.007	Highly significant
IL -> TEL	0.672	0.673	0.043	15.526	0.000	Highly significant
IL -> TIL	0.649	0.651	0.040	16.149	0.000	Highly significant
SMU -> EI	-0.012	-0.011	0.040	0.290	0.772	Not significant
SMU -> EP	0.067	0.069	0.044	1.531	0.126	Not significant
SMU -> TI	0.023	0.022	0.034	0.665	0.506	Not significant
TEL -> EI	0.467	0.463	0.072	6.527	0.000	Highly significant
TEL -> TI	0.67	0.669	0.043	15.418	0.000	Highly significant
TEL -> TP	0.305	0.303	0.077	3.955	0.000	Highly significant
TI -> EP	-0.028	-0.031	0.070	0.396	0.692	Not significant
TI -> TP	0.184	0.184	0.084	2.196	0.028	Highly significant
TIL -> EI	0.007	0.013	0.066	0.101	0.919	

TIL -> EP	0.363	0.363	0.055	6.649	0.000	Highly significant
TIL -> TI	0.048	0.052	0.046	1.025	0.306	Not significant
CRM x TEL -> EI	-0.024	-0.023	0.036	0.661	0.509	Not significant
CRM x TEL -> TI	-0.053	-0.053	0.024	2.200	0.028	Highly significant
CRM x TEL -> TP	-0.026	-0.026	0.036	0.728	0.467	Not significant
SMU x TIL -> EI	0.013	0.011	0.039	0.326	0.745	Not significant
SMU x TIL -> EP	0.054	0.052	0.044	1.240	0.215	Not significant
SMU x TIL -> TI	0.043	0.043	0.028	1.542	0.123	Not significant

Source: author's work (based on path coefficients - Smart Pls 4.0)

By examining the T-statistic in “the final results- path coefficients”, the author can investigate the outer model after reviewing the path coefficient for the inner model. The fact that the T-Statistics in Table 16a are greater than 1.96 indicates that the outer model loadings are highly significant, whereas the others are not. These results should also consider the effect size and the practical importance of the estimated relationship. So, even if the result is not statistically significant, a large effect size may still be meaningful in certain contexts (see more details in tables 16a, 16b, and 16c). These results complete a basic analysis of PLS-SEM in the study; the significance of the total effect can be tested using the T-Statistics in the bootstrapping procedure.

Coefficient of determination- R^2 values

The coefficient of determination results obtained the R-squared value from 0.421 to 0.694. It can be explained by the construct of EI- Employee innovation, EP- Employee performance, TEL - Team explorative learning, TI-Team Innovation, TIL- Team exploitative learning, and TP- Team performance within 42.1 % to 69.4 %. See details in Table 16b below:

Table 16b: R-square metrics

Variables	R-square	R-square adjusted	Remarks
EI	0.471	0.463	Moderate
EP	0.465	0.459	Moderate
TEL	0.452	0.451	Moderate

TI	0.695	0.690	Almost substantial
TIL	0.421	0.419	Moderate
TP	0.510	0.504	Moderate

Source: author's work (based on quality criteria - Smart Pls 4.0)

An R^2 of 0.421 suggests that the independent variables in your model explain approximately 42.1% of the variance in the dependent variable. This means that the predictors account for a significant portion of the variability in the dependent variable. An R^2 of 0.695 suggests that the independent variables in your model explain approximately 69.5% of the variance in the dependent variable. This indicates that the model accounts for a substantial proportion of the variability in the dependent variable. To sum up, R-squared values between 0.421 and 0.695 indicate that the independent variables in your model can explain a sizable amount of the variability in the dependent variable. This is typically considered a moderate to good fit.

Effect size - f^2

Table 16c: f^2 metrics

	f-square	Remarks
CRM -> EI	0.085	Small effect
CRM -> TI	0.046	Small effect
CRM -> TP	0.030	Small effect
EI -> EP	0.143	Medium effect
EI -> TP	0.021	Small effect
IL -> TEL	0.826	Large effect
IL -> TIL	0.727	Large effect
SMU -> EI	0.000	Very Small effect
SMU -> EP	0.007	Very Small effect
SMU -> TI	0.001	Very Small effect
TEL -> EI	0.178	Medium effect
TEL -> TI	0.634	Large effect
TEL -> TP	0.058	Small effect
TI -> EP	0.000	Very Small effect
TI -> TP	0.017	Small effect
TIL -> EI	0.000	Very Small effect
TIL -> EP	0.142	Medium effect
TIL -> TI	0.003	Very Small effect
CRM x TEL -> EI	0.001	Very Small effect
CRM x TEL -> TI	0.012	Small effect

CRM x TEL -> TP	0.002	Very Small effect
SMU x TIL -> EI	0.000	Very Small effect
SMU x TIL -> EP	0.007	Very Small effect
SMU x TIL -> TI	0.006	Very Small effect

Source: author's work (based on Smart Pls 4.0)

In addition to examining collinearity, a thorough analysis of the model's f^2 effect size, which indicates the extent to which an exogenous latent variable influences the R^2 of an endogenous latent variable, can be conducted. To put it plainly, effect size evaluates the strength or amplitude of the association between the latent variables. Such a discussion can be important because the effect size helps researchers to assess the overall contribution of a research study. Chin, Marcolin, and Newsted (1996) clearly stated that researchers should not only indicate whether the relationship between variables is significant, but also report the effect size.

An effect size (f-square) needs to be calculated to assess the goodness of this research model. Based on Table 16c, the f^2 values indicate that most metrics fall from a small effect to a significant effect. The above results show the relationship between IL (Innovation leadership) and team learning (TEL/TIL) with values of 0.826 and 0.727, respectively. This indicates a strong positive relationship between these variables; in other words, we can confirm that IL has a strong positive impact on TEL and TIL. Similarly, the relationship between TEL and TI has a significant effect at the value = 0.634), indicating a strong positive relationship. Most of the other values are from very small to medium effect; they are all acceptable in the study.

Blindfolding and predictive relevance

Table 16d: Q2- Predictive relevance

	SSO	SSE	Q^2	Remarks
CRM	2150.000	2150000	0.000	Small predictive relevance
EI	2580.000	1722.269	0.332	Medium predictive relevance
EP	1720.000	1153.580	0.329	Medium predictive relevance
IL	2580.000	2580.000	0.000	Small predictive relevance
SMU	1290.000	1290.000	0.000	Small predictive relevance
TEL	2150.000	1394.052	0.352	Medium predictive relevance

TI	1720.000	732.931	0.574	Large predictive relevance
TIL	2150.000	1631.731	0.241	Medium predictive relevance
TP	860.000	464.328	0.460	Large predictive relevance

As a result, based on the thesis results, the estimated model is depicted in Figures 1a and 1b.

After estimating the regression coefficients for each model, the author obtained an estimated model consistent with the thesis findings. Figure 1a shows the results of the estimated model according to the conceptual framework, with the moderating variable of CRM (Customer Relationship Management), while Figure 1 b shows the estimated results for the model with the moderating variable of Social Media Usage.

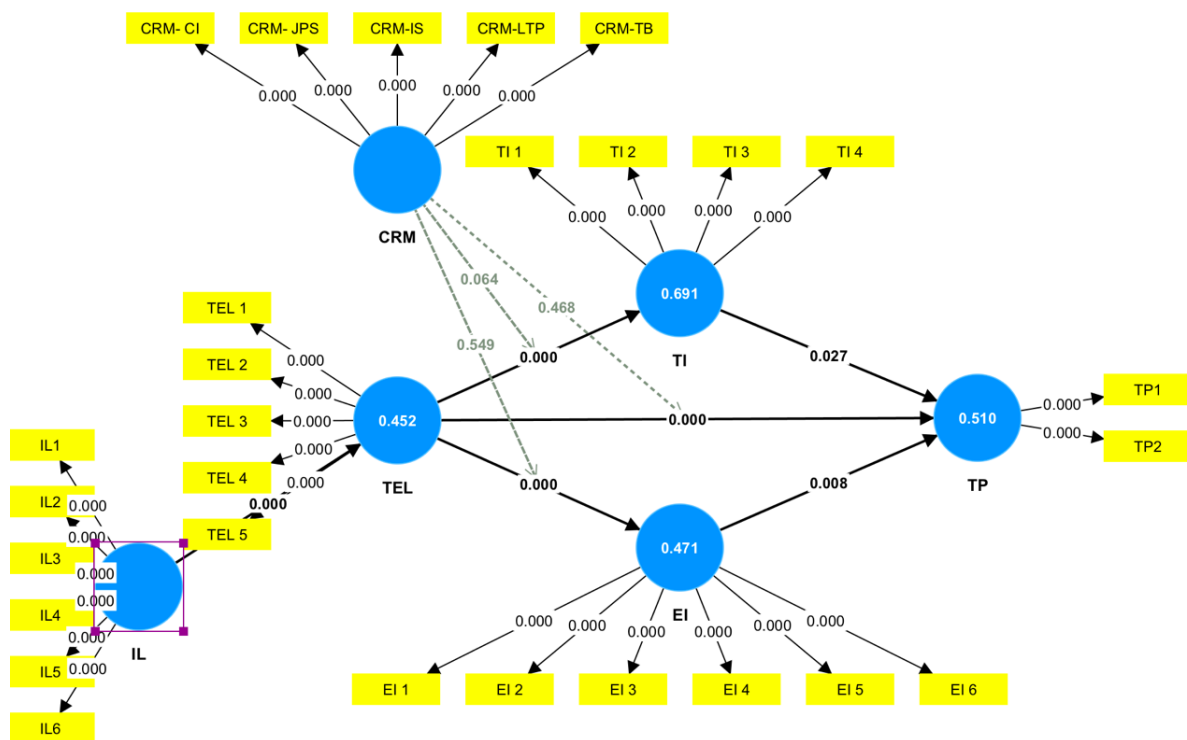


Figure 1a- Model A: The estimated model with moderator of CRM variable.

Source: Author's work (Smart - PLS 4.0)

The results of testing the hypotheses in the study using the bootstrapping approach to examine the relationships between variables are presented in Tables 17a and 17b. With model A (table 17a), nine of twelve relationships are statistically significant at the 95% reliable level and above; one relationship will be considered at the 92.5% confidence level.

Hypothesis Testing (Figure 1a and Figure 1b)

Table 17a: Summary of Hypothesis Testing Model A (figure 1a)

Hypothesis		Original sample (O)	Sample mean (M)	P values	f^2	Remarks
H8	CRM -> EI	0.286	0.288	0.000	0.098	Support
H7	CRM -> TI	0.178	0.178	0.000	0.065	Support
H9	CRM -> TP	0.161	0.167	0.000	0.030	Support
H1	IL -> TEL	0.673	0.673	0.000	0.826	Support
H3	TEL -> EI	0.472	0.471	0.000	0.250	Support
H2	TEL -> TI	0.699	0.700	0.000	0.947	Support
H6	TEL -> TP	0.305	0.303	0.000	0.058	Support
H8	CRM x TEL -> EI	-0.020	-0.019	0.549	0.001	Not support
H7	CRM x TEL -> TI	-0.041	-0.041	0.064	0.008	Support
H9	CRM x TEL -> TP	-0.026	-0.026	0.468	0.002	Not support

Source: author's work (based on calculating from Smart PLS)

In addition, the author can easily see the strong relationship between (H1) Innovation Leadership (IL) and Team exploratory learning (TEL) with $f^2 = 0.826$, this is a large effect. This means that hypothesis H1 is supported and shows that Innovation Leadership has a positive impact on Team Explorative Learning.

Similarly, the results also show a strong relationship of (H2) Team Explorative Learning to Team Innovation with $f^2 = 0.947$ also indicating that the Team Explorative Learning process has a significant impact on the Team's Innovation ability (H2). Besides, the Team Explorative Learning process has a positive impact on Employees' Innovation ability (H3) at the statistical significance level of $f^2 = 0.250$.

The results also show a relationship from Team Explorative Learning to Team Performance (H6) with $f^2 = 0.058$, with an effect. The P-value is very low (0.000), demonstrating that this relationship is statistically significant. This indicates that the Team Explorative Learning contributes significantly to Team Performance (H6). In the relationship of the moderating between CRM and Team Explorative Learning to

Team Innovation (H7) with $f^2 = 0.008$, the effect is small. The p-value of 0.064 still shows an influence, confidence, and support. While the effect is small, it suggests that the interaction of the moderating role of CRM as well as Team Explorative Learning can influence more strongly in a Team Innovation's ability (H7).

Finally, hypothesis H8 states that the interaction between CRM and Team Explorative Learning on Employee Innovation is insufficient to confirm the moderating influence; hypothesis 9 also fails to confirm it.

In summary, bootstrapping results in Smart PLS showing the relationships between variables (constructs) in the author's model, such as Innovation Leadership, Team Explorative Learning, Team Exploitative Learning, Team Innovation, and Employee Innovation, are all supported by data testing and have large or higher effects. These results show that Innovation Leadership and Team Explorative Learning (TEL) play an important role in the innovation and creativity process in aviation and tourism organizations. However, some relationships, such as Team Innovation, Team Performance, and the interaction between CRM and Team Explorative Learning to Employee Innovation, have a statistically significant effect with an effect of moderating (H7), and this states that CRM played an important role in the relationship between TEL and Team Innovation (TI). In other words, TEL has a strong impact on TI within an organization, and the application of CRM in businesses will further develop innovation and creativity in business sustainability, which is completely consistent with social learning theory and POS, as tested in practice in the aviation and tourism sectors.

In hypothesis 8 and hypothesis 9 the role of CRM moderating the relationship between TEL, EI and TP with the results are not supported, this may suggest that the impact of these factors be not as strong as other factors in the model but these results can be leading for further study in different or particular fields as well as indicating us the different individual creative 's ability (or individual 's talent) quite different with the team creative ' effectiveness.

The results in Table 17a can help better understand the relationships among variables in the author's research and provide important information for shaping management and development strategies in aviation and tourism organizations or service industries related to innovation and companies' performance.

Table 17b: Summary of Hypothesis Testing Model B (Figure 1b)

Hypothesis		Original sample (O)	Sample mean (M)	P values	f^2	Remark
H1'	IL -> TIL	0.649	0.652	0.000	0.728	Support
H8'	SMU -> EI	0.109	0.109	0.040	0.014	Support
H9'	SMU -> EP	0.067	0.069	0.127	0.007	Not support
H7'	SMU -> TI	0.137	0.135	0.008	0.028	Support

H3'	TIL -> EI	0.463	0.465	0.000	0.249	Support
H6'	TIL -> EP	0.362	0.361	0.000	0.140	Support
H2'	TIL -> TI	0.576	0.577	0.000	0.479	Support
H8'	SMU x TIL -> EI	-0.018	-0.019	0.692	0.001	Not support
H9'	SMU x TIL -> EP	0.055	0.053	0.212	0.007	Not support
H7'	SMU x TIL -> TI	-0.005	-0.004	0.915	0.000	Not support

Source: author's work (based on calculating from Smart PLS)

Next, the author performed with model B (table 17b), resulting in seven of twelve statistically significant relationships between 96 and 99% reliable level. Specifically, there is a strong relationship from Innovation Leadership to Team Exploitative Learning (H1') with $f^2 = 0.728$. This means that Innovation Leadership (IL) has a positive impact on the Team Exploitative Learning (H1'). Similarly, the relationship between Team Exploitative Learning and Team Innovation (H2') shows that Team Exploitative Learning has a positive impact on the Team's Innovation ability (H2'). Likewise, it also positively impacts Employee Innovation (H3').

Besides, the relationship from Team Exploitative Learning to Employee Performance (H6') is also statistically significant, so Hypothesis H6' is also supported in the meaning that the Team Exploitative Learning (TIL) contributes significantly to Employee Performance (EP) (H6').

Finally, the results also show that there is a relationship from the interaction between Social Media Usage (SMU) and Team Exploitative Learning (TIL) to Employee Innovation (EI) (H8') and Employee performance (EP) (H9'), although these effects are very small ($f^2 = 0.007$ and 0.001) and not supported by statistic data, they are also opening a demand for more analyses and studies in the different organizations or fields as well as the new look of deeper understanding the relationship of Team Learning (TIL) on Innovation and Social Media Usage in Aviation and Tourism organizations.

In summary, bootstrapping results provide a deeper look at the relationships between variables in author research models. The relationships are supported by data and have moderate to effects, contributing to an understanding of the mechanisms at work in innovation and individual performance. However, there are also some relationships that are not statistically supported, demonstrating the different complexity of the model as well as the particularity of the industry, where the compliance and implementation of regulations and orders are considered important daily tasks, thus it also requires further research to better understand these relationships. (See table 15b for details).

Table 18a: Hypothesis Testing Model A - Specific Indirect Effects

Specific Indirect effects	Original sample (O)	Sample mean (M)	T statistics	P values	Remarks
IL -> TEL -> TP	0.205	0.203	3.922	0.000	Support
IL -> TEL -> EI -> TP	0.049	0.049	2.547	0.011	Support
IL -> TEL -> TI -> TP	0.087	0.088	2.15	0.032	Support
IL -> TEL -> EI	0.316	0.316	7.792	0.000	Support
IL -> TEL -> TI	0.47	0.471	12.334	0.000	Support
TEL -> EI -> TP	0.073	0.072	2.624	0.009	Support
TEL -> TI -> TP	0.129	0.13	2.192	0.028	Support

Source: author's work (based on calculating from Smart PLS)

Table 18b: Hypothesis Testing Model B - Specific Indirect Effects

Specific indirect effects	Original sample (O)	Sample mean (M)	T statistics	P values	Remarks
IL -> TIL -> TI	0.374	0.377	8.751	0.000	Support
IL -> TIL -> EI	0.301	0.304	7.390	0.000	Support
IL -> TIL -> EI -> EP	0.127	0.129	5.412	0.000	Support
IL -> TIL -> EP	0.235	0.235	6.048	0.000	Support
TIL -> EI -> EP	0.195	0.198	5.966	0.000	Support
IL -> TIL -> TI -> EP	-0.01	-0.011	0.367	0.713	Not support
TIL -> TI -> EP	-0.015	-0.017	0.371	0.711	Not support

Source: author's work (based on calculating from Smart PLS)

Table 18a and Table 18b show the mediating effects through team and employee innovation (TI and EI), and the indirect influences of team learning (TEL and TIL) are all supported. Model A (Figure 1a- Table 18a), specific indirect effects are all confirmed. In the model B (Figure 1b- table 18b), specific indirect effects results have been almost supported; the mediating role of team innovation between TIL and EP (employee performance) has not been supported, the mediating role of employee innovation between TIL and EP (employee performance) significantly influences employee performance.

6. DISCUSSIONS

This study aims to develop an integrated model to examine how innovation leadership affects team learning, team performance, and employee performance, with team and employee innovation as mediators. The results are discussed in relation to five key research questions:

RQ1: To what extent does innovation leadership influence team learning (explorative and exploitative)?

RQ2: How does team explorative learning influence team performance, and how does team exploitative learning influence employee performance?

RQ3: How do team and employee innovation play distinct **mediating roles** in the relationships between team learning (explorative and exploitative) and performance outcomes?

RQ4: How do CRM practices **moderate** the relationships among team explorative learning, team, employee innovation, and team performance?

RQ5: How does social media usage **moderate** the relationships between team exploitative learning and both team and employee innovation, leading to employee performance?

The direct influence and role of innovation leadership and team learning (explorative and exploitative)

Hypothesis 1 (H1) and hypothesis 1' (H1') show that there is a strong effect of (IL) innovation leadership on team learning TEL/ TIL (explorative and exploitative), and the results significantly support these hypotheses. Hypotheses 1 and 1' posit that creative learning activities (TEL/TIL) and information sharing inside the organization are positively impacted by innovative leadership, with highly supportive results. It is very appropriate to state that innovation leaders promote widespread assistance for managers, supervisors, and staff across the company to enhance organizational performance with team learning activities. Creativity and innovation can only occur if knowledge is shared; this is consistent with previous studies (Kremer et al.,2019) and the literature on social exchange, where managers' and leaders' roles are essential to the organization. It shows that innovation leaders and managers must participate in actions and take measures. Interventions to promote knowledge sharing by leaders, in other words, innovative leadership, positively impact knowledge sharing through creative learning activities in the organization, in which team explorative and exploitative learning play critical roles in the field.

Previous studies have shown that other leadership styles and leaders promote the development of the organization's culture, and this has been linked to organizational learning culture (Gil & Mataveli, 2017). So, from these studies, the author can confirm that innovation leadership has been directly linked to team explorative

learning and team exploitative learning in the aviation and tourism companies, with significant support and strong effects on the results of the two hypotheses (H1 and H1'). Therefore, these findings are consistent with the literature's social exchange and social learning theories. The direct effect of IL (innovation leadership) on team explorative (TEL) and team exploitative (TIL) is proven by these substantial results. This is the first research, which investigate the practical market in Vietnam aviation 's business to test the relationship of (IL) innovation leadership and team learning (TEL and TIL) along with emphasizing the important and the key roles of team explorative learning and team exploitative learning in the organization determining the answer to the first research issue and close the research gap (H1 and H1') by exploring such effects.

The role of team explorative learning effects on team innovation, employee innovation, and team performance.

The relationship between team exploratory learning and team performance (H6) has been supported by the results above, which indicate a direct effect of team exploratory learning on team performance, confirming hypothesis 6.

The results showed positive direct effects on team innovation (H2) and (H3): employee innovation has a significant impact. These results demonstrate and confirm these positive relationships as well as meeting the expectation of Figure 1a - part A (model A). These are in line with prior studies about team learning and knowledge creation within organizations Edmondson and Nembhard (2009); (Kostopoulos & Bozionelos, 2011b) and (Duc et al., 2020). According to these studies, teams that exhibit high levels of team exploratory learning are more willing to break the routines by seeking novel knowledge, improvements, developing new ideas, and enhancing task-related abilities. In the context of aviation and tourism uncertainties, leaders and managers may focus on the benefits of exploratory learning to achieve better sustainable development for organizations.

Therefore, these results are in line with social learning theory and OAM theory, indicating the company's better performance as a function of the team's opportunity, ability, and motivation to work. It is verifying the model A (figure 1a) (Hypotheses: H2, H3, H6). Thus, these results firmly confirm the positive answer for the research question 2a: How is the relationship and direct effects of team learning (explorative on team and employee performance?

The role of team exploitative learning effects on team innovation, employee innovation, and team performance.

Similarly, the findings in model B (Figure 1 b) display that (H2') hypothesis 2' and (H3') hypothesis 3' have significant support from the results. It is confirmed that there is a positive relationship between team exploitative learning and team innovation, as well as between team exploitative learning and employee innovation (H2' and H3').

These findings provide significant evidence for aviation and tourism organizations to explore and leverage their resources through team-based learning, leveraging the advantages of team and employee innovation. This is also in accordance with prior studies (Kostopoulos & Bozionelos, 2011), which proved that the exploitative learning through official training and unofficial information exchange, team members in the service sector can take advantage of the knowledge and skills that are readily available, and leaders may leverage their knowledge, expertise, experience, and responsibility as frontline service professionals to provide optimal customer service. This is particularly true in the service industry, such as air transportation, where errors and delays in service delivery must be minimized as much as possible to benefit customers and enhance the organization's reputation through team exploitative learning exercises.

As a result, teams with a higher percentage of recombined knowledge from exploitative learning are more likely to use it to improve the services they provide. As a result, teams' operational improvements grow as they gain more information through exploitative learning (Rosing et al., 2011). These findings also give proof to extend the social learning and OAM theories by positing that employees with strong traits of teamwork and, exploration, exploitation will learn from their teams how to work more effectively (as a function of staff's ability, motivation and opportunity), which makes them more absorbed in their work (work engagement) and subsequently leads to innovative work behaviors, thus this study emphasizes on the aviation organizations where employees' performance and team learning are measured by the regulation of civil aviation authority and passengers' perceptions across the dynamic environment of continuous service innovation. So, these findings firmly support the positive answer for the research question 2b: How is the relationship and direct effects of team learning (exploitative) on team and employee performance?

The mediating influences of employee innovation and team innovation on team performance and employee performance

These results confirm the mediating roles of both employee and team innovation in the influence of team performance and employee performance. Although the effect is small in the relationship between (TI) team innovation and (TP) team performance (H4), it also shows that (TI) team innovation ability affects (TP) team performance (See table 18a, 18b). The relationship between (EI) employee innovation and (TP) team performance (H5) indicates that (EI) employee innovation ability also positively affects (TP) team performance (H5). The results also indicate that employee innovation (EI) ability has a positive impact on Employee performance (H5). Contrary to the author's expectation, team innovation (H4') has not supported employee performance (EP), but this result reveals that the ability of innovation in a team can not directly and immediately support individual performance, while employee

innovation ability can directly support employee performance. In fact, this relationship clearly shows differences in innovation capabilities within a team or company. It leads to further research on the effects of innovation capabilities and the roles of innovation leaders in aviation and service businesses.

Besides, the relationship from team exploitative learning (TIL) to (EP) employee performance (H6') is also statistically significant, so Hypothesis H6' is highly supported in the sense that the team exploitative learning (TIL) contributes significantly to (EP) employee performance (H6'). They are verifying the mediating role of team and employee innovation toward team and employee performance with acceptable statistics and support. The results determine the mediating role of both (TI) team innovation and (EI) employee innovation in the relationship of team learning toward team and employee performance (the full model -figure 1). Such effects have been investigated to address research gap 3 in the author's study and to provide a good answer to research question 3: How does team/employee innovation mediate the relationship between team learning (explorative and exploitative) and team/employee performance?

The moderating roles of CRM practices among team exploration learning towards team innovation and employee innovation

Findings in testing model A (figure 1a), showing that the moderating relationship between CRM and (TEL) team explorative learning to (TI) team innovation (H7), the effect is small. The p-value still shows influential confidence and support. While the effect is small, it suggests that the interaction of the moderating role of CRM toward the relationship of (TEL) team explorative learning can significantly influence a team's innovation ability (H7). Unexpectedly that the hypothesis H8 is stated that the moderating between CRM with team explorative learning (TEL) on (EI) employee innovation is not supportive to confirm the moderating influence, hypothesis 9 is also not supportive to confirm the moderating influence on the relationship of (TEL) team explorative learning and (TP) team performance.

In summary, the results also show that (IL) innovation leadership, team explorative learning (TEL) play an important role in the innovation and creativity process in aviation and tourism organizations. However, some relationships such as team innovation, team performance, and the interaction between CRM and team explorative learning to Employee Innovation has a statistically significant effect with an effect of moderating (H7), and this states that CRM plays an important role in the relationship of (TEL) team explorative learning and team innovation (TI). In other words, (TEL) team explorative learning has a strong impact on (TI) team innovation in an organization, plus the application of CRM in businesses will further develop innovation and creativity in business sustainability, which is completely consistent with social learning theory and POS theory, which is tested practically in the aviation

and tourism sectors. In the hypothesis 8 and hypothesis 9 the role of CRM moderating the relationship between TEL to EI and TEL to TP with the results are not supported, this may suggest that the impact of these factors be not as strong as other factors in the model but these results can be leading for further study in different or particular fields as well as indicating us the different individual creative 's ability (or individual 's talent) quite different with the team creative ' effectiveness.

The above results in testing figure (1a- model A) can help better understand the relationships between variables in the author's research and provide important information for shaping management and development strategies in aviation and tourism organizations or service industry related to innovation and companies' performance.

The moderating roles of social media usage among team exploitative learning towards team innovation and employee innovation

Next, findings in testing model B (figure 1b), showing that there is a relationship from the interaction between social media usage (SMU) toward team exploitative learning (TEL) to employee innovation (EI) (H8'), employee performance (EP) (H9'), and team innovation (H7') although these results have not supported by statistic data, they are also opening a demand for more analyses and studies in the different organizations or fields as well as the new look of deeper understanding the relationship of team learning on innovation capabilities and the moderating role of social media usage in aviation and tourism organizations.

In summary, bootstrapping results provide a deeper look at the relationships between variables in author research models. The relationships are supported by data and have moderate to strong effects, contributing to an understanding of the mechanisms underlying innovation and individual performance. However, there are also some relationships that are not statistically supported, demonstrating the different complexity of the model as well as the particularity of the industry, where the compliance and implementation of regulations and orders are considered important daily tasks, thus it also requires further research to better understand these relationships.

7. EXPECTED CONTRIBUTIONS OF THE STUDY

7.1 Theoretical implications

This work makes several important theoretical contributions. According to the current literature review, many studies have carried out innovation leadership. However, the existing literature on organizational innovation indicates that few researchers have examined how innovation leadership can promote employee performance. In

particular, I found few empirical studies on the mediating role of innovation teams in the relationship between employee performance and innovation leadership. Thus, this study can be valuable to the current theory by exploring such issues.

This study adds to the existing knowledge and literature by extending (1) Social exchange theory to verify the relationship between Innovation leadership and team learning (including explorative and exploitative) and team or employee performance, with highly significant results. Based on the SET (Social exchange) theory, this study explores the role of innovation leadership in boosting team learning (TEL and TIL) in contributing to the published studies from the empirical context of aviation. The author's findings complement the existing research and illuminate the connections between professional individual performance, team learning, and innovative leadership. SET theory is also the priority theory selected for this study, which is applied to explore the proposed conceptual framework, the role of team learning and employee performance in exchanging obligation and gratitude in the organization, analyzing the relationship of innovation leadership to team and employee performance through the indirect role of employee and team innovation together with team learning in the organization.

(2) To highlight the extending of the social learning theory, this study adds to the body of literature on team learning in organization, by exploring the direct effect of team learning with performance of team plus individual and the relationship of innovation leadership and team learning as mentioned with highly significant impact in statistic results as well as mediating effect of team and employee innovation that gives an initial theoretical suggestion to scholars working in Tourism and Aviation management by exploring more functions of TEL (team explorative learning) and TIL (team exploitative learning) in the particular industry. This results also contributes to posit the theory about employee with strong traits of team work and exploration will learn from others how to work more effectively, which makes them more absorbed in their work (work engagement) and subsequently leads to innovative work behaviors, thus this study emphasizes on the aviation organizations where employees' performance and team learning are measured by the civil aviation authority and passengers through the dynamic environment of continuous service innovation.

(3) By emphasizing the application of OAM theory, to investigate the CRM practices-team explorative learning and team innovation relationship which can lead to efficiency of team and employee performance, the finding in this study help to contribute to the literature by examining the effectiveness of human resource management in aviation organizations concerning employee performance, which is a function of an employee's ability, motivation, and opportunity to work. Furthermore, this applied theory can be used to explain evidence-based practice within the conceptual framework, where CRM practice and social media usage moderate the relationship between team learning (knowledge sharing and learning in the organization) and team and employee innovation, thereby influencing team and employee performance.

(4) This study also contributes to POS theory, contributes to literature knowledge, and explores the relationship between leadership and employee or team creativity (innovative). It also extends knowledge of team and employee innovation toward team and employee performance. Then, from a psychological perspective, employee innovation is a crucial consequence of POS because it signals to employees that they should become more engaged in creative activities. The theory suggests that POS between team managers and organizational employees demonstrates that they care more about their employees. Similarly, norms of reciprocity predict that employees will repay their organizations with desired behaviors if they feel valued and appreciated, promoting motivation to work more effectively and creatively. So, this study plays an important role to the theory in explaining the mediating role of team and employee innovation in the conceptual framework, along with the examination of the reciprocity norm where better team and individual work performance are achieved from investment in the learning and innovation environment of the organizations, especially in the Aviation and Tourism industry.

7.2 Practical implications

The aviation sector demonstrates how innovation has transformed air transportation. Technology, the free market, information technology, the internet, and new technologies automation are frequently the external forces driving this kind of innovation. Innovation is an essential instrument for generating value and maintaining competitive advantage. Innovation is considered a valuable tool for creating value and sustaining competitive advantage. Innovation leadership is necessary to boost employee outcomes (e.g., employee performance). Yet, by reviewing previous studies in the aviation industry, I found little empirical research on the role of innovation leadership in employee outcomes. Thus, this study can be valuable for current practical implications by exploring these issues.

According to the data, increasing employee innovation and performance suggests that leaders in the aviation sector should examine ways to improve employees' actions by fostering exploitative and team exploratory learning within the organization to enhance individual performance. Aviation personnel shall be encouraged to foster a spiritual environment that fosters innovation and supports colleagues in generating ideas and driving continuous improvements in the workplace, especially by implementing CRM technology and policies that help their businesses grow fast and sustainably in the chaotic, competitive business environment.

In practice, innovation leadership has been examined with a highly significant impact on team learning and individual performance, so this study suggests managers or leaders in the service industry should inspire or create an innovative learning environment in their workplaces, professional CRM practices well as, using Social Media to tie team relationship and shaping knowledge sharing among different

function teams and companies alliances, making this as a professional culture that retains team creativity and better employee performance

7.3 Managerial Implications

To help the managerial level (directors/managers) understand factors, processes, and mechanisms affecting innovation team learning activities in the organization, this research is the initial study in Viet nam aviation market for guiding further research to examine the relationship and impact of each management level in greater detail to overcome limitations and consolidate the results, this study helps researchers to find out more in culture's collectivistic nature makes it challenging to understand more about innovation capabilities, CRM and Social Media Usage in the service and hospitality industries.

The author suggests that organizations' human resources that want to improve the sustainability of the careers of their employees by supporting them to develop their current level of ability through motivation and opportunity to work in a professional environment with the investment of technology (CRM system), creating a network of knowledgeable atmosphere with team learning activities and innovation hub to inspire the labor forces to contributes more to the organization by their job' loving.

Furthermore, directors, managers, and professionals could encourage employees' job crafting, which will help them transform hindering job demands into challenging ones and motivate them to work where innovation and creativity are most inspired at the workplace.

7.4 Social Implications

The aviation and tourism sectors are characterized by economic and cultural integration, ethnic diversity in service operations, and globalization in terms of international regulations and personnel. This study offers solutions regarding the professional working environment and culture that crosses both locally and globally between destinations.

This study also contributes to innovation leadership and team learning roles, extending previous studies to organizations and other economic institutions. Developing team learning within the organization will foster greater understanding and knowledge among the labor force in exchanging labor across regional areas in a mutually beneficial, globalized environment.

It increases understanding of employees' performance in aviation and tourism organizations and the challenges they face in maintaining the quality of their work. Security and safety are the most important for transportation and traveling globally.

This study also contributes to further guidelines for understanding innovation and CRM culture in the business and economic sector

8. CONCLUSIONS AND LIMITATIONS

8.1 Conclusions

The study's primary purpose is to develop a comprehensive model to determine and analyze the relationships among (IL) innovation leadership, (TEL and TIL) team exploratory and exploitative learning, and individual performance in the aviation and tourism service, to fill gaps in the literature review. This research makes a significant contribution to the existing body of knowledge in the field. Also, in this study, innovation leadership is important to boost employee outcomes (e.g., employee performance), particularly in the aviation sector. The study reveals the relationship between innovation leadership and team learning in the aviation industry, particularly in the Vietnamese market. It also highlights the moderating roles of CRM practices and Social media use, and the mediating effects of team and employee innovation on team and employee performance.

This research has confirmed, in accordance with the above theories of SET, POS, AOM, and social learning, that this research verifies the development of a framework for scholars or researchers to have a deeper look at the relationship among innovation leadership, team exploratory or exploitative learning, and an individual's performance through the mediating role of team and employee innovation. The quantitative has chosen to test the hypothesis successfully. The thesis includes theoretical and empirical contributions as well as managerial implications and social implications. According to Smart PLS results, the relationships between variables (constructs) in the author's model, such as innovation leadership, team explorative learning, team exploitative learning, team innovation, and employee innovation, are all supported by data testing and have large or higher effects. These results show that innovation leadership, team explorative learning (TEL), and team exploitative learning play an important role in the innovation and creativity process in aviation and tourism organizations. Additionally, some relationships such as team innovation, team performance, and the interaction between CRM and team explorative learning to team innovation have a statistically significant effect with a moderating effect, and this states that CRM plays an important role in the relationship between TEL and team innovation (TI). In other words, TEL has a strong impact on TI within an organization, and the application of CRM in businesses will further foster innovation and creativity in business sustainability, which is entirely consistent with social learning theory and POS, as demonstrated in practice across the aviation and tourism sectors. Although some hypotheses (H8, H9; H7', H8', H9') have not supported, this may suggest the impact of these factors be not as strong as other factors in the model but these results

can be guiding for further study in different or particular fields as well as indicating us the different individual creative 's ability (or individual 's talent) quite different with the team creative ' effectiveness.

Next, the results also show that there is a relationship from the interaction between Social media usage (SMU) and Team exploitative learning (TIL) to employee innovation (EI) (H8') and employee performance (EP) (H9'), although these effects are very small ($f^2 = 0.007$ and 0.001) and not supported by statistic data, they are also opening a demand for more analyses and studies in the different organizations or fields as well as the new look of deeper understanding the relationship of team learning (TIL) on innovation and Social Media Usage in Aviation and Tourism organizations. In summary, bootstrapping results provide a deeper look at the relationships between variables in author research models. The relationships are supported by data and have moderate to effects, contributing to an understanding of the mechanisms at work in innovation and individual performance. However, there are also some relationships that are not statistically supported, demonstrating the different complexity of the model as well as the particularity of the industry, where the compliance and implementation of regulations and orders are considered important daily tasks, thus it also requires further research to better understand these relationships.

These results will contribute, both theoretically and practically, to the Vietnamese aviation market by advancing human resource management (HRM) and training quality, with a focus on the concepts of team learning (TEL and TIL) in the aviation, tourism, and service industries. The above results can help better understand the relationships among variables in the author's research and provide important information for shaping management and development strategies in aviation and tourism organizations, as well as in service industries related to innovation and companies' performance.

In conclusion, prior studies provide a critical foundation for clarifying the relationships examined in this research. Through a comprehensive review of existing literature and theoretical perspectives, the study identifies key research gaps and offers insights into enhancing employee performance and sustaining innovation within teams. Furthermore, the findings highlight the role of organizational practices, particularly customer relationship management (CRM) and organizational culture, in strengthening the linkage between team learning and both team and employee innovation, supported by statistically significant evidence. Although the results of the moderating role of Social Media Usage in the above relationships have not been confirmed, these results will also provide a guideline for the author to continue studying in specific functions or different organizations, as well as fields, for further findings.

8.2 Limitations And Further Studies

Although the study contributes to the literature by advancing understanding and values, it also has specific limitations. The conceptual framework does not describe the specific relationships and roles within an organization, nor their impacts on employees' innovation and satisfaction, and on employees' satisfaction at work. Future work would test a management mechanism and its constituents between innovation leadership and innovation capability in the organization.

In the research, the author aims to investigate a higher percentage of foreign organizations and employees (foreigners) working in the aviation market in Vietnam and in other countries operating in the Vietnamese market; however, due to time constraints, the number of participants in the study is lower than expected. The research has also not yet gathered sufficient information on employees from other service-handling organizations in the aviation industry, such as cargo handling, ground equipment handling, and technical support for ground, to provide a more diverse range of functions and a cross-cultural environment among employees. The study has been applied only in the Vietnamese aviation and tourism market; it needs further studies in the ASEAN, Asian, and global markets of aviation and tourism.

Future research shall examine the relationship and impact of each management level in greater detail, together with different aviation markets, to overcome this limitation and consolidate the results. Culture's collectivistic nature makes it challenging to understand CRM and Social Media Usage in terms of innovation capabilities, thereby requiring further study to help managerial-level (directors/managers) understand the factors, processes, and mechanisms that affect innovation team learning activities within the organization.

The conceptual model also suggests future studies. Future research in the domain of innovation leadership should seek to validate this conceptual framework through both qualitative and quantitative approaches, particularly within the aviation industry. Furthermore, the proposed model could be extended beyond individual organizations to include inter-organizational alliances.

9. APPENDICES

APPENDIX 1A. Expert interviewees

Phase 1: 12/12/2022 to 01/02.2023

Phase 2: 02/02/2023 to 28/02/2023

No	Participants (Code)	Gender	Age	Position and Company/ Institution	Notes
1	Name 1	Female	47	Vice President SAGS (Saigon Airport Ground Handling Company)	
2	Name 2	Male	44	Flight Operation Manager - Viet Jet Air - (DPE) Designated Pilot Examiner (Level 1)	
3	Name 3	Male	61	Quality Assurance Director - Viet star Airlines	
4	Name 4	Male	50	Technical Training Manager- Bamboo Airways	
5	Name 5	Male		Operation Training Manager- Viet Jet Air	
6	Name 6	Male	39	Passenger Service Manager- Cathay Pacific Airways	
7	Name 7	Male	57	Training Director - SCSC Saigon Cargo Service Company	
8	Name 8	Male	46	Technical Manager - Vietstar Aero Engineering	
9	Name 9	Female	34	Cabin Crew Training Manager - Vietstar Airlines	
10	Name 10	Female	52	Skyboss Manager- Viet Jet Air	
11	Name 11	Female	41	Vietnam Aviation Academy	
12	Name 12	Female	49	Vice Dean - Aviation Training Faculty- Nova College	
13	Name 13	Male	67	Former Deputy Director of Tourism Department of Ho Chi Minh City	

14	Name 14	Male	47	Operation Training Manager Saigon Tourist	
15	Name 15	Female	49	CEO- Founder Blue Sky Travel	
16	Name 16	Male	49	Ground Handling Director of Vietravel Airlines	
17	Name 17	Female	41	Director of World Trade Center Binh Duong New City	
18	Name 18	Male	43	Operation Director in Vietnam - Cargo Lux Airlines	

APPENDIX 1B: Interview process

1. Introduction

Before the interview, participants are informed of the study's purpose and the interview procedure. The researcher adheres to the following ethical principles: maintaining confidentiality of all information provided (audio recordings will be deleted after transcription), obtaining informed consent prior to data publication, and ensuring that no harm is caused to any individual or organization.

2. Introductory statement and research guidelines

The selection criteria (experience, position, age, nationality, in relation to the study topic, and aims) for interviewees

- Guidelines for answering the questions
- Important comments and input to be included in the study for future learning, shared with your company, or used for improvement (if needed or requested)

3. Interview process

A structured interview protocol containing questions in both Vietnamese and English will be shared with participants in advance to facilitate preparation and serve as a reference. Participants must confirm their availability before the scheduled interview.

How to conduct an interview:

- It will take a maximum of 1 to 2 hours. The interviews will be conducted in Vietnamese.

- Data will be collected through three formats: face-to-face interviews, online interviews (via Google Meet or Zalo), and telephone interviews.
- Recording: Interviews will be audio- or video-recorded and subsequently transcribed using electronic devices. All recordings will be securely deleted upon completion of the study.

4. Questionnaire

4.1 Interviewees' background

Interviewee name and your nationality are...

Please indicate your current position and the company or department you work for..

How long have you been employed in the airlines/ tourism industry?

How many companies have you been working for (if any) in the industry?

What is your highest degree?

Your awards/ achievements and contributions in the industry (if any)

4.2 Question about innovation leadership

Please share your opinion on innovation and innovation leadership in your company or department. Is there any reward policy for creativity, as well as encouraging innovation in the company?

Does your Director/MD/CEO usually communicate with and receive feedback from employees?

How do employees perceive that their leaders trust them? For example: sharing business strategies, assigning important tasks

Is there anything else in your system/ company? Kindly provide it.

4.3 Question about Team learning (Explorative and Exploitative learning)

The author defines each, then gives an example of wording for the industry, for example: some subjects must be trained annually with 100% compliance and application requirements. Then, ask for interview opinions.

In your opinion, how are team learning and training conducted and implemented in your company or department?

Please provide specific learning or training activities in your department/ company.

How does your company continuously update the training and learning to meet CAAV and industry trends?

Is there any policy or training system in place at your company?

How does your organization/ department improve the training curriculum?

Is there anything else in your system/ company? Kindly provide it.

4.4 Question about team and employee innovation

How is the creativity in your team or your department?

How does the company encourage creativity?

Please share some of your achievements or your team's achievements (if any) during your time at work.

Have you ever promoted or championed ideas to others?

Please share more information about innovation and patents (if any).

If there is anything else in your system/ company, kindly provide it.

4.5 Question about CRM Practices:

Has your organization/company been part of an industry alliance?

Does your company actively stress customer loyalty or retention programs?

Does your company share product demand information with customers?

Key customers of your company are involved with your company in regard to market evaluation.

Your company has been using technology-based CRM.

Are these structured CRM questions relevant and easy to answer?

Is there anything else in your system/ company? Kindly provide it.

4.6 Question about team and employee performance

In your opinion, please share more information related to team and company performance.

How well do you think your work team performs?

Please give some criteria to evaluate team performance in your systems (if any)

What is the good quality of the work carried out by your team over the last 3 years?

Have your team members do more work than required?

If there is anything else, kindly provide it.

4.7 Question about Social Media Usage (SMU)

The author defines social media usage and provides information about SMU within the company, such as Zalo, Viber, Website, Facebook, LinkedIn, Meet...

Please list out some social networks that are using in your work

What is your frequency of usage of social media at work?

How often do you use social media to obtain work-related information and knowledge?

If there is anything else in your department, kindly provide it.

I would like to express my gratitude to you for your support and participation in this interview.

APPENDIX 1C

QUESTIONNAIRES

Dear Sir/Madam, my name is Ly Thi My Hanh. I am currently conducting research on Human Resource Management and Training in the Aviation Industry. Below is the survey questionnaire for the beginning of my research.

Please help to complete this survey by giving your comments and advice to fill out the comments/response ideas columns. All information provided is completely confidential and used only for my research. For further discussion and queries, please feel free to contact me at my email address: tracylymyhanh@gmail.com.

Thank you very much!

I. General information

Your full name:

Gender: ☐Male ☐Female

Nationality:

Company & Department:

Position/Tilte:

☐Employee ☐Supervisor/ Leader ☐Manager ☐HOD/Director

Age:

Background: ☐High school ☐College ☐University ☐Master of Arts ☐MBA/Ph.D or above

Aviation or Tourism working experience:.....(years)

Salary per month: ☐Less than 425 USD ☐ $425 \leq x \leq 1000$ USD ☐ $1000 \text{ USD} \leq x \leq 2000 \text{ USD}$

☐ $2000 \leq x \leq 3000 \text{ USD}$ ☐More than 3000 USD

II. Survey information

1 2 3 4 5 6 7

1.Not at all 2.Rarely 3.Sometimes 4.Often 5.Very often 6.Usually7.Always

1. Innovation leadership

Top of management team emphasizes teamwork.

Top of management team clarifies individual responsibility.

Top of management team emphasizes task orientation.

Top of management team provides clear feedback to the employees.

Top of management team encourages initiatives.

Top of management team trusts the employees.

2. Team explorative learning: *acquiring knowledge aimed at changing the nature of existing practices and competencies to perform tasks.*

Members of team were systematically searching for new possibilities.

Members of team offered new ideas and solutions to complicated problems/irregular situations.

Members of team experimented with new and creative ways for accomplishing work.

Members of team evaluated diverse options.

The members of our team developed many new skills during the project.

3.Team exploitative learning: *acquiring knowledge that refines and rejuvenates existing competencies to perform tasks*

Team members recombined existing knowledge for accomplishing work.

In our team, we primarily performed routine activities.

Our team implemented standardized methodologies and regular work practices.

Members of team mainly used their current knowledge and skills for performing their tasks.

Members of team improved and refined their existing knowledge and expertise during their work.

4.Team innovation

We often coming up with new ideas.

We often working to implement new ideas.

We often finding improved ways to do things.

We often create better processes and routines.

5.Employee innovation

I often search out new technologies, processes, techniques, and/or product ideas.

I often generate creative ideas.

I often promote and champion ideas to others.

I often investigate and secure funds needed to implement new ideas.

I often develop adequate plans and schedule for the implementation of new ideas.

I am innovative.

6.Team performance

How well do you think your work team performs?

What is the good quality of the work carried out by your team?

7.Employee performance

Do you often set high goals for yourself at work?

How often do you attain the goals they set?

Do you often spend your time effectively in doing your work?

You do more work than is required.

8.CRM Practice (Customer Relationship Management)

8.1 Long-term partnership: *Our company actively stresses customer loyalty or retention programs.*

Our company is committed to improving the management of whatever customers suggest.

Our customers are trusted and willing to provide suggestions for products and services

Our company systematically provides customized products and services to our key customers.

Our company actively stresses on customer loyalty or retention programs.

Our company maintains interactive, two-way communication with customers.

Our company cares about long-term development and successes with customers.

8.2 Information sharing: *Our company shares product demand information with customers.*

Our company shares market information with customers (*promotion information, flights schedule, new destinations...and competitive product information*).

Our company shares product demand information with customers.

Our company shares inventory information with customers.

Our company jointly makes production/service plans with customers.

Our customers warn us of events that may affect supplying to us.

8.3 Customer involvement: *Our key customers are involved with us regarding market evaluations.*

Our key customers are involved in NPD (New Product Development) activities with us.

Our key customers are involved in periodically reviewing operations with us.

Our key customers are involved with us in modifying products.

Our key customers are involved with us regarding market evaluations.

Our key customers are involved with us regarding processing technology.

8.4 Joint problem-solving: *Our company is jointly responsible with our key customers for getting things done.*

Our key customers work with us to overcome difficulties (inventory management,

delivery delay and logistics management)

Our company is jointly responsible with our key customers for getting things done.

Our company works with our key customers to help solve each other's problems (funding, production, and management).

8.5 Technology-based CRM: *Our company has the right software to serve our customers.*

Our company has the right software to serve our customers.

Our company has the right hardware to serve our customers.

Our company has the right technical personnel to provide technical support for the usage of computer technology in building customer relationship.

Our company maintains a comprehensive database of our customers.

Our company constructed an integrated CRM performance evaluation system.

9.Social media usage: Linked, Zalo, Facebook, Web, Zoom, Meet, Viber...

What is your frequency of usage of social media in the work? not at all to frequently?

I often use social media to obtain work-related information and knowledge.

I regularly use social media to maintain and strengthen communication with colleges in my work.

Thank you for your information!

Have a nice day!

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- [2] Duc Sinh Hoang; **Hanh Thi My Ly**; Phat Pham Tien; Zuzana Tučková. (2025) Nonlinear impact of information technologies on the development of the aviation industry in Vietnam. Heliyon. DOI: [10.1016/j.heliyon.2025.e42331](https://doi.org/10.1016/j.heliyon.2025.e42331)
- [3] **Ly Thi My Hanh**, Vu Manh Quynh, Nguyen Thi Anh Van, Pham Tan Nhat (2026) Linking Team Exploitative Learning to Employee Performance in Aviation: The Mediating Role of Innovation and the Moderating Role of Social Media Usage. (Accepted to publication). Journal for International Business and Entrepreneurship Development (JIBED)
- [4] **Ly Thi My Hanh**, Zuzana Tučková, Pham Tan Nhat, Nguyen Thi Anh Van (2026).

Explorative Team Learning as a Catalyst for Innovation and Performance: Evidence from Vietnam's Aviation Sector. Plos One. (*Peer review stage*)

[5] Nguyen Thi Anh Van, Khac Hieu Nguyen, **Ly Thi My Hanh (2026)**
Social media influencers and their effects on the attitude, intention, and behavior of customers in tourism. (**Major Revision**) Journal for Global Business Advancement (JGBA)

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The relationship between innovation leadership, team learning, and individual performance: An empirical study in the aviation service

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