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**ASSESSING THE IMPACT OF AUTHENTIC LEADERSHIP
AND THE CONFLICT MANAGEMENT ON THE
PERFORMANCE OF REMOTE-WORKING EMPLOYEES: THE
EXAMPLE OF SOFTWARE/ONLINE PLATFORM
DEVELOPMENT COMPANIES**

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I hereby declare that I have compiled the paper independently and all works, important standpoints and data by other authors has been properly referenced and the same paper has not been previously presented for grading.
The document length is 12583 words from the introduction to the end of conclusion.

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ABSTRACT

Recently, COVID 19 pandemic has forced companies to continue to work remotely. In Estonia, many software /online platform development companies started to offer remote working options to their employees. The remote-working employees' performance can be negatively affected by the conflict that remote working can cause, while, the authentic leadership style along with the appropriate conflict management might enable the organization with remote-working employees to resolve the conflict among employees and enhance the work performance. So far, there have been few quantitative analyses of the impact of authentic leadership and conflict management style on the job performance of remote-working/half-remote-working employees in the software /online platform development sector.

Therefore, the aim of this thesis is twofold. Firstly, to examine the impact of authentic leadership and conflict management on the performance of half/fully remote working employees. Secondly to compare the impact of authentic leadership and conflict management on job performance of fully remote-working and half remote working employees in selected software/online platform development companies in Estonia. To answer the research questions, the author conducted an online survey-based study. The data was gathered from volunteer employees of two online software/platform developer companies using questionnaires and analyzed using quantitative techniques. The results indicate that remote workers' job performance is significantly affected by authentic leadership, conflict management and their interaction. The findings contribute to the management literature by shedding more light on the influential factors on job performance in remote-working conditions and open new avenues for future research.

Keywords:

Authentic leadership, conflict management, job performance, remote-working

INTRODUCTION

Remote working has become a norm in modern companies with the advent of new technologies and recently the COVID19 pandemic (Gigol & Sypniewska, 2019; Daraba et al. 2021). In Estonia, given the strong IT infrastructure, many software /online platform development companies started to give remote-working options to their employees. Remote-working culture has been growing rapidly in the computer/information technology industry in Estonia while the strong push for remote-working in such companies during the COVID19 pandemic has been one of the greatest challenges for software development companies. Several pieces of evidence have shown that working remotely has some advantages such as a decrease in organizational costs and increase in financial efficiency, higher satisfaction of employees, greater work/life balance, and a great sense of flexibility (e.g., Janza, 2020), whereas, it might increase the conflict among employees and negatively impact the employee's performance (Runde & Flanagan, 2010).

The performance of employees is a key aspect of every company as the company's overall performance is largely impacted by the performance of its employees (Janza, 2020). However, attaining a high level of remote-working employees' performance has proved to be challenging for software companies. This is because of many challenges that remote-working employees and their leaders might encounter which adversely affect their performance. Despite remote-working increases, the feeling of loneliness and isolation (Daraba et al. 2021), the most obvious and frequent problem is the lack of adequate and sometimes effective communication between employees themselves and their leaders. lack of casual and face-to-face communication usually arises conflicts when people typically receive 55% of their communication through body language (Thompson, 2011).

Although remote-working employees work from a different location, hold their motives, have different interests, but they still are a member of a team and poor communication might arise several conflicts among them (Peter-Simon & Solomon, 2019; Gigol & Sypniewska, 2019). The conflict that arose from the lack of strong communication might affect the remote-working employees' performance and overall effectiveness of organizational operation (Zoonen et al. 2021).

The research problem of this thesis is the decrease in employees' performance when they work remotely which has become the main concern of many managers leading the remote-working personnel in software/online platform development companies. The managers of these companies feel that if nothing is done to enhance the remote working employees' performance, companies might lose their competitive advantages in the marketplace. Although companies have made an effort in enhancing the remote-working employees' performance through appropriate leadership style and conflict management, these companies still suffer from the low level of performance of remote working employees.

A growing body of literature recognizes the impact of leadership style on the employees' behaviour in the workplace (González-Cruz et al. 2019; Boukis et al. 2020; He & Hu, 2021). The authentic leadership style has been introduced as a “young” and emerging but one of the most complete leadership styles among others. It has fast become a key instrument for decreasing the conflict and increasing the employees well being and performance in traditional work conditions (Darvish & Rezaei, 2011; Javaid et al. 2015; Laschinger et al. 2015; Meng et al. 2016; Hahm, 2017; Zhu et al. 2018; Daraba et al. 2021). Thus, given the popularity of authentic leadership style and its positive impact on employees' behaviour and work attitude, the author selected the authentic leadership style for this study.

Many researchers agree that a leader's adoption of a proper leadership style and conflict management is vital as leaders can support employees during remote work (Dirani et al. 2020). As such, many software/online platform development companies started to change the traditional leadership and conflict management style to more effective ones to enhance the remote-working employees' performance. However, few studies have examined the impact of authentic leadership and conflict management and their interactive impacts on remote-working employees' performance, and this is less understood how much authentic leadership and conflict management impact the off-site employees in these companies. Based on the gap in the current literature, the recent evidence, and the challenges that the author has experienced as a remote worker, she became interested in choosing this topic and intent to examine how much authentic leadership and conflict management impact the remote-working/half-remote-working job performance in the software /online platform development sector.

The aim of this thesis is twofold. Firstly, to examine the impact of authentic leadership and conflict management on the performance of half/fully remote working employees. Secondly to compare

the impact of authentic leadership and conflict management on job performance of fully remote-working and half remote working employees in selected software/online platform development companies in Estonia. Therefore, the completion of this thesis will make a contribution towards findings appropriate leadership style and conflict management in software development companies to enhance the performance of remote working employees. The author further developed the main research question followed by three sub-questions which she intends to answer conducting her research in two software /online platform development companies:

Main RQ: How much do authentic leadership style and conflict management impact the remote worker's performance and half remote-working employee's, in software/online platform development companies

- How much does the authentic leadership style impact the remote-working/half remote-working employee's performance?
- How much does conflict management impact the remote-working/half remote-working employee's performance?
- How much does authentic leadership and conflict management interaction impact the remote-working/half remote-working employee's performance?
- How different is the impact of authentic leadership on job performance on the fully remote-working employees and half-remote working employees?
- How different is the impact of conflict management on job performance on the fully remote-working employees and half-remote working employees?
- How different is the interactive impact of authentic leadership and conflict management on the remote-working/half-remote-working employee's performance?
- How different is the job performance between the fully remote-working employees and half remote working employees?

Following research assignments have been set by the author to achieve the aim of this study:

1. Conducting a profound literature review related to the subject and relevant concepts.
2. Preparing the research instrument (questionnaire) based on standard questionnaires related to research constructs
3. Select two software/online platforms development in Estonia where several employees work remotely.
4. Distributing the questionnaires among remote-working and half-remote working employees to gain their opinion on leadership and conflict management style in their organization and their performance.
5. Organizing and analysis of the quantitative data using statistical software.
6. Presenting findings and managerial implications for decreasing the conflict among- and improvement of remote-working employee's performance.

The finding of this thesis might be of interest to companies with remote-working employees seeking to enhance their employees' performance by adopting the proper leadership style and conflict management. This study will also serve as a reference helping the managers in making an informed decision about effective leadership style and conflict management.

The overall structure thesis is composed of three chapters: The first chapter of this thesis presents the theoretical framework, definition of key concepts, and major findings of previous research conducted on remote-working and its major influential factors. The second chapter is concerned with the methodology used for answering the research questions, where the data is collected and analyzed by a quantitative approach. In the quantitative approach, the data is collected by online questionnaire survey and from remote-working and half-remote working employees of two software/online platform development companies in Estonia. The third chapter presents the results of the analysis and suggestions based on findings. The conclusion of this thesis is followed by the limitation and avenues for future research, references & appendices at the end.

1. LITERATURE REVIEW

This chapter establishes the solid theoretical basis for the current study by giving a comprehensive overview of previous studies on the subject and relevant concepts. To gain a better understanding of the context in which this thesis is conducted, the author describes the challenges and benefits of remote working in modern companies, the role of authentic leadership in the remote working environment, the importance of employees' performance for software development companies, conflict management as a determinant of remote worker's performance where the author has found opportunities to contribute to the current literature. This theoretical discussion forms the basis for which the empirical part of this study is accomplished. In the end, a summary of the literature review is presented to briefly explain the problem, necessity, and aim of conducting current research.

1.1. Remote working challenges and benefits in modern companies

The sophisticated advancements of modern communication and information technology opening more doors for (Gajendran & Harrison, 2014; Wang et al. 2020) the increasing number of employees working outside of a traditional office setting. As such, software/online platform development companies have shown an increasing interest in remote-working by the advent of new technology, high-speed internet, and recently the Covid-19 pandemic (Kniffin et al. 2020). Remote-working employees can work independently or in a team (Dingel & Neiman, 2020). Four types of remote working have been introduced in previous research including pure remote-work without any central office, a small fraction of a team' employees working remotely (hybrid on-site and remote working), distributed working /functional teams working remotely from different locations, and a big number of employees working remotely for a central team. (Coffey & Wolf, 2018).

Several tangible and intangible benefits of remote working have been reported by both employees and organizations such as flexible working hours, saving cost, decrease in commuting expenses/time, higher autonomy of employees, better work/life balance, lower rates of job burnout, and higher job satisfaction (Kniffin et al. 2020; Antonacopoulou & Georgiadou, 2020; Patrizio, 2021).

Remote working, however, has been accompanied by well-identified setbacks (Fletcher & Griffiths, 2020) such as lower productivity (Wang et al. 2020), marginalization, lack of group cohesion, employees' disconnection (Stinton, 2013; Barrios & Pitt, 2021), higher stress and distraction, loneliness (Barrios & Pitt, 2021), and lower motivation and creativity (Delwer & Boe, 2020).

Therefore, distance still matters regardless of the emergence of new technologies (Olson & Olson, 2014; Bick et al. 2020; Gottlieb et al. 2021). One of the main challenges of remote working for such companies, above others, has been a high level of conflict among employees due to the insufficient and non-functional communication among them (Lee & Tipoe, 2020) which leads to procrastination in their performance. In other words, during pure and hybrid remote-working, employee interactions are mediated by ICT technologies (Chang et al. 2012; Raghuram et al. 2019). Loss of the shared physical space such as the office might negatively affect the employees and their leaders' interaction and exacerbate the conflict among them which can adversely impact the employees' performance (Bloom et al. 2013; Bloom et al. 2015; Lee & Tipoe, 2020). More specifically, employees can easily misinterpret virtual communication because of a severe reduction in commuting time during remote-working. According to Maruping and Agarwal (2004), "individuals who are members of virtual teams that are in the early stages of development may be subject to misinterpreting constructive criticism as disparaging" (Maruping & Agarwal, 2004).

Therefore, it has become necessary for software/online platform development companies to think about how to transform the leadership style suitable for leading the remote working employee and adopt effective conflict resolution to improve off-site workers' performance (Purvanova & Bono, 2009; Wang et al. 2020). They recognized that traditional styles of leadership such as monitoring and workload measurement might not be suitable for the remote working environment, highlighting the difference between managing at a distance than leading a collocated team. (Quora 2014; Valdellon 2015; Simons 2017). Collectively, these studies outline a critical role of leadership style and conflict management in improving remote-working employees' performance, which the author discusses in detail in the following sections.

1.2. Role of authentic leadership in the work environment

Leading employees, as human capital, at the workplace is an integral part of the management process in every organization. Leadership simply has been defined as the process of impacting a group of people to make changes and shared organizational goals achievement (Yukl, 2010). An effective leader usually makes a work environment where information and resources can be easily accessed and shared, employees are supported equally, and learning and growth opportunities are provided so that it supports the achievement of a shared goal and boosts employee effectiveness (Zhou et al. 2018). Therefore, a suitable leadership style has been identified as an essential part of management that has a positive outcome in an organization (Laschinger & Fida, 2014), teams (Hughes et al. 2018), processes (e.g., workers' performance), and employees' behaviour (e.g., well-being; Haslam et al. 2011).

Software development companies, similarly, have invested in factors that promote the employees' performance such as leadership style. They have discovered that leadership plays an important role in enhancing the employees' performance outcomes (Zhou et al. 2018). In addition, they have adopted various types of leadership styles, such as transformational leadership (Seyal, 2015), entrepreneurial leadership (Bagheri & Harrison, 2020), servant leadership (Cai et al. 2018), empowering leadership (Kim & Beehr, 2018), spiritual leadership (Oh & Wang, 2020), and authentic leadership (Tijani & Okunbanjo, 2020). These findings show that certain leadership styles might have a stronger positive impact on employees by forming the quality of their work environment, and as a result increase their satisfaction and commitment (Ding & Yu, 2020). One of the leadership styles that positively impact the employees and organizations, is the authentic leadership style (Tijani & Okunbanjo, 2020) through promoting both positive psychological capacities and a positive ethical climate in an organization (Walumbwa et al. 2008).

It is estimated that the reason why researchers have shown an increased interest in form of ethical leadership "Authentic leadership" (AL) which foster a positive climate in the work environment and uses the positive climate to achieve the organizational goals (Gardner et al. 2011; Jex & Britt, 2014; Ayça, 2019). As Avolio et al (2004) stated, authentic leaders are those "Who are deeply aware of how they think and behave and are perceived by others as being aware of their own and others values/moral perspectives, knowledge, and strengths; aware of the context in which they operate; and who are confident, hopeful, optimistic, resilient, and of high moral character" (p.4).

They further define authentic leadership as “ A pattern of leader behaviour that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development” (p. 94). Data from several studies suggest that authentic leadership style exhibited by leaders in invoking higher subordinate trust in management, high-level of group effort and performance, higher employees creativity, engagement, and commitment(Walumbwa et al. 2011; Rego et al. 2012; Iqbal et al. 2018; Farid et al. 2020; Duarte et al. 2021) and these serve as the powerful predictor of employee performance (Peterson et al. 2012; Banks et al. 2016; Lyubovnikova et al. 2017).

In the initial model of authentic leadership development presented by Luthans & Avolio in 2003 in which they emphasize the forming of authentic leadership components based on positive psychological capacities and positive organizational context that leads to positive self-development and authentic leader characteristics development. Avolio et al (2004) developed the authentic leadership development model by introducing the mediating role of positive emotions, hope and trust into authentic leadership theory and linking authentic leadership to subordinates' behaviours and work attitude.

In 2005, however, Gardner and his colleagues revised the previous models focused more on the development of authentic leaders and the performance of their subordinates. In this model, authentic leadership is well-distinct from psychological capital and transformational leadership, and the developmental process of authenticity is bound with self-awareness and self-regulating behaviours of both leaders and their subordinates. The model also indicates that the development of authentic leadership and authentic subordinates can be impacted by their personal history, life trigger events, and organizational climate. Finally, the subordinates' outcomes and performance are determined by these factors.

Despite some differences in authentic leadership features and models, four common dimensions of authentic leadership have been identified in the literature. According to Walumbwa et al (2008), authentic leaders promote greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency in an organization which enhances positive self-development at the workplace.

Self-awareness refers to demonstrating an understanding and gaining insight about/into multifaceted nature of themselves, own values and emotions, own strengths and weaknesses, being conscious of how to own self-image is viewed by others' perspectives, and how one can impact or influence others (Kernis, 2003; Ayça, 2018). Simply, self-awareness is related to self-reflection as a primary key that the leader can gain an understanding of their core value and clarity about internal criteria (Gardner et al. 2005).

Relational transparency refers to openly sharing one's authentic self (as opposed to fake or inappropriate emotions), their true beliefs, feelings, thoughts, and information to others which foster trust and cooperation among colleagues (Kernis, 2003; Shamir & Eilam, 2005; Gill & Caza, 2018). Relational transparency calls for leaders to be honest with themselves and eager to hold on to yourself open to feedback.

Balanced processing refers to leaders who unbiasedly and carefully analyze all relevant data and gain accurate information in the decision-making process, including opinions different from one's own. Such leaders do not change, over-stress or discount the positive and negative information (Gardner et al. 2005; Oh et al. 2018).

Internalized moral perspective refers to the leaders who move with self-regulation dictated by internalized moral standards and values instead of allowing other morals, institutions, or social pressures to handle or control them resulting in behaviours that coincide with these internalized values, ethical norms, and actions (Ryan & Deci, 2003). Internalizes the moral point of view, resulted in the balanced distribution of information, increases transparency in the communication with the followers in the workplace, and contributes to positive self-development (Oh et al. 2018; Ayça, 2019).

Overall, leaders are authentic when they reflect these four components, optimistically and confidently make a decision, take action, manage organizational processes with awareness (Akdemir & Ayça, 2018). Most importantly, they have a great ability to listen to those who disagree with their opinions and do not impose their ideas on others. Authentic leaders have sincere relationships with their followers and strong ability of self-reflection by openly expressing their feelings and motivations, contributing to building trust, increasing the employees' engagement and cooperation, increasing the quality and sincere communication, and decreasing the destructive

conflict in the workplace (Datta, 2015; Azanza et al. 2015; Ayça, 2019; Martínez et al. 2020). Such behaviour is also predicted to enhance the employee's performance and positive attitudes through the creation of a positive organizational climate characterized by trust, and high level of communication, and open information sharing (Wong & Laschinger, 2012; Wang et al. 2014; Iqbal et al. 2020). This trust, progressively, increases security in communication, which in turn, decreases destructive conflict in the traditional work environment (Molero et al. 2019).

In remote workplaces, building sustainable communication and trust is difficult due to diminishing physical contact and mediated role of virtual channels of communication (Sobel Lojeski & Reilly, 2020; Tanpipat et al. 2021). Therefore, with moving more towards remote work, modern companies decided to take authentic leadership style as a new leadership practice that contributes to fostering effective and innovative communication to promote the transmission of information among employees and within the companies (Gajendran & Joshi, 2012; Antonacopoulou & Georgiadou, 2020). However, little research exists into investigating how much authentic leadership impacts remote-working employees' performance and half-remote working employees, which is the focus of this thesis.

1.3. Importance of employees' performance in software development companies

In the fast-booming software industry, attaining a sustainable competitive advantage and maintaining their position in the market has been the main goal of every company. Estonia as a "global hub" for the development of software, has become a leading (Invest in Estonia, 2021). As the number of companies increases in Estonia, the competition in the market reaches the highest level. Therefore, companies seek to improve the factors impacting their organizational performance.

Employees as a vital part of an organization play a pivotal role in organizational growth and performance (Markos & Sridevi, 2010; Kurniawati & MeilianaIntani, 2016). Similarly, in software development companies, the importance of employee performance is well-recognized. Due to the dynamic environment and increasing competition in the market, these companies not only need to increase the quality of their product/software but also need a performant workforce to grow and sustain the competitive advantages.

According to Sultana et al. (2012), performance is “the accomplishment of specific targets measured against preset standards or expected level of accuracy and completeness”. In organizational settings, employee performance simply means the skill, knowledge, and ability of employees contributed towards the achievement of organizational goals (Parmenter, 2015). Efficiency (quantity of work), effectiveness (quality of work), and speed (timeline of work) have been introduced as the main dimensions of employee performance (Kuruppu, et al. 2021). To achieve the optimal level of employee performance, increasing effort must be made by leaders of organizations to amplify the facilitators/enablers of employee’s performance while simultaneously reducing any factors that negatively impact the employee performance (Gruman & Saks, 2011; Stannack, 2016; Hermina & Yosepha, 2019). However, as discussed in the previous section, increasing the employees' performance has been difficult when they work from home or different locations due to miscommunication and the arising conflict among them. Therefore, depending on the situation, suitable leadership and conflict resolution should be adopted by leaders to enhance the performance of remote working employees.

1.4. Conflict management as a determinant of remote-working employees’ performance

In the field of management, various definitions of conflict are found. In this thesis, the author relies on the conflict definition from Rahim (2001) point of view as “intense image or severe differences between two or three parties each depends on the others, on basis of inconsistencies in needs, desires, values, beliefs, and attitudes” (p.19). It is now well established from a variety of studies, that in the group working conflict is an inevitable fact, an integral part of the process of change, and natural phenomenon mostly due to the miscommunication, clash of ideas, misinterpretation, and individual goals (Tjosvold, 2008; Ahmed, 2015). A classification of conflict in terms of the number of involved parties can be four types of intra-personal conflict (experienced by an individual), inter-personal conflict (between two groups), intergroup (among groups of people), and international conflict (among different organizations) (Fujana, 1997).

Studies over the past two decades have established two other types of conflict, in terms of positivity and negativity of outcome, that exist in an organization: task conflict and relationship/communicational conflict (Flanagan & Ruden, 2008). Task conflict is related to

different viewpoints and opinions (positive type) while relationship conflict is mainly caused by misunderstanding and disagreements of values or norms (unhealthy form). Therefore, depending on how conflict is handled, it can be negative or positive (Kelly, 1970). Sometimes conflicts play as the catalyst of positive changes, growth, improved decision-making, and creativity, if they are constructive and functional (Rahim, 2001). However, the negative conflict adversely impacts the employee's health, well-being, productivity, cooperation, employees' performance and commitment, and the success of an organization. Figure 1 presents the effect of conflict and level of organizational performance.

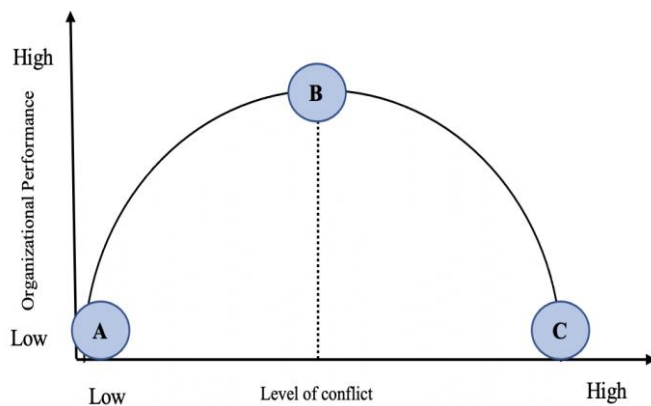


Figure 1. The relationship between conflict and organizational performance

Source: Jones, George (2003)

As figure 1 indicates, some level of conflict is needed for improving the organizational performance and an organization without conflict has the lowest level of performance (Point A). By encouraging the constructive conflict to a middle level, the organizational performance increases to an optimal level (Point B), however constant increase in the level of conflict decreases the organizational performance to the third level, in which the level of performance decreases to the point C. Thus, a level of conflict is essential for an organization to reach the optimum point of performance.

Robinson (2010) further identified the steps that an effective team leader generally takes to resolve the conflict. The first step is developing a set of basic rules and principles for how employees govern their behaviour and engage each other in a company. The second step is to enlist a third person (facilitator) who can assist and mediate the process of conflict resolution between two involved parties. Next, share all details and data related to the issue and its resolution so that all

parties get involved. Leaders, further, need to make sure involved parties understand each other's needs and desires and parties mutually agree on a solution. In addition, other alternative solutions should be introduced if the agreed solution goes wrong.

Besides the general steps of conflict resolution, different conflict management style and their outcomes have been introduced in the literature (Runde & Flanagan, 2010). Based on the desires of own and others/people/relationships, five different conflict management have been presented. Figure 2, demonstrates the different taxonomy of five conflict management styles.

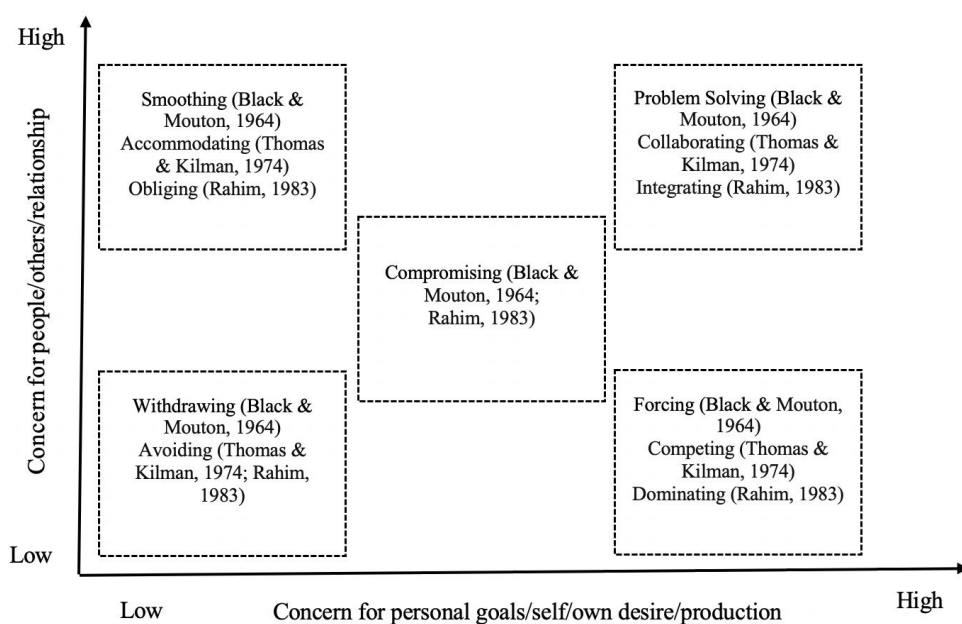


Figure 2. An integrated version of conflict management style

Source: the author according to Rahim (1983), Thomas and Kilman (1974), and Blake and Mouton (1964)

Forcing/competing/dominating styles arise when parties are highly concerned about their own goals and desires and slightly concerned for people and relationships. More specifically, taking this style, one party uses power or force others to obey the party's solution for the conflict at all costs and never back down from the own beliefs. When forcing/competing/dominating style is used, one party usually wins and another party loses by defeating the opposing side. This conflict

management style is beneficial when quick decisions should be taken (Rahim & Bonoma, 1979; Runde & Flanagan, 2010; Lussier, 2010). The advantage of Forcing/competing/dominating styles is the enhancement in organizational decisions while the setback is aggression, anger, breed resentment of other parties and decreased team performance (Cohen & Bailey, 1997).

Withdrawing/avoiding styles are used when one party shows low concern for self /own goals and others/people, avoids confronting the others, refuses to respond, ignores the communication, denies acknowledging the conflict all together in public (Rahim et al. 2001). Simply, adopting withdrawing/avoiding styles parties ignore issues and allow others to fulfill their demands. The avoiding/ withdrawing styles negatively impact the employee's commitment and result in a temporary fix, however, is beneficial when group harmony is needed, more time is needed in an ambiguous situation, and the negative effect of confronting the others exceeds the potential benefits (Huang, 1999; Tjosvold, 2008).

Smoothing/accommodating/obliging take place when there is a low concern for personal goal and a high concern for people/ others. More specifically, these conflict management styles occur when one party is not assertive but cooperative, makes concessions, avoids disagreements, and “gives in” in a conflict situation to the people to make them happy and the other party's concern is satisfied (Runde & Flanagan, 2010). Taking these styles is beneficial when maintaining the relationship is critical (Rahim, 2002) and a high level of cooperation is needed while resulting in developing a temporary fix for the issue.

Integrating/collaborating/problem-solving styles are used when misunderstandings raise the complexity of issues and parties try to arrive at a win-win solution that is mutually beneficial (Runde & Flanagan, 2010). These styles are bound with information sharing, openness, and mutually developing alternative solutions. The main goal of this style is to find the best solution agreeable through open, frank, and neutral communication to permanently solve a conflict so that the next conflict is not a repeat. The integrating/collaborating/problem-solving styles are suitable when synthesis of ideas to find the best and long-lasting option while takes longer time and more effort than other styles to find a solution that satisfies all parties.

Compromising style is bound with “give-and-take” or sharing through which all parties forsake something after discussion to make a mutually agreed decision. It leads to I-win and I-lose section to reach compromise. Compromise results in finding a middle ground between diverse' parties'

interests. While the yield resolution might not meet the full desires of all parties, it will be preferred to continue the discussion. In other words, parties reconsider their argument because they found adequate reasons to do so or to avoid continued confrontation (Reich et al. 2007). While it might cause parties to ask several times to get fulfil their requirements, this style is beneficial when the issue is complex, parties have opposite desires, and possess equal power thus reaching consensus is difficult in a short time (Rahim, 1979).

In a remote working environment, miscommunication and misinterpreting one's words or value has become more frequent which might raise communicational conflict among workers/or with leaders. Since remote-working employees' communication through online channels is mediated by technologies, poor and inappropriate communicated information triggers a conflict among parties. For instance, email/non-verbal rather than face-to-face delegations are conflict-prone communication.

Based on the above discussion and the importance of employees' performance, leaders should understand the type of conflict and use suitable conflict management depending on the situation to alleviate the adverse impact of destructive conflict on remote-working employees and enhance the relationship among employees (Runde & Flanagan, 2010). Besides conflict management, the leadership style has been identified as one of the main factors that can positively or negatively the employee's performance which the remote-working employees' are not exempted from.

Attaining the high level of performance of remote-working/half-remote-working employees was identified as an important challenge for software/online platform development companies. Lack of functional communication and arising conflict which are bound with the remote-working have negatively impacted the performance of employees in these companies. As a remedy, they start taking a new leadership practice such as authentic leadership style and various conflict management styles to have more performant remote working employees. Concerning authentic leaders' characteristics, the author expected that such leaders to be available for all employees, increase employee engagement, increase group harmony and cohesion, and create a positive work climate in which team dynamics positively improve and employees collaborate and communicate openly thus enhancing the remote-working employees' performance in software/online platform development companies. In addition, the style of leadership could interact with conflict management (Toku, 2014). Authentic leadership is predicated on the idea that no organization exists without conflict, and through balanced processing, others' perspectives should be actively

listened to even if it is in opposition to one's opinion view and foster group cohesion (Garcia-Guiu Lopez et al. 2015). The relational transparency entailing openly sharing one's authentic self, building trust might, and informing others on where he/she stands on controversial issues influence individuals' approach to constructively resolving the conflict.

Authentic leaders can foster certain dynamics in an organization that motivates employees to take specific conflict management styles in the workplace. There could be some form of conflict resolution that could best be handled by adopting an authentic leadership style (Crevani, et al., 2010). Also, the real attitude of authentic leaders might be exposed by their characteristics in conflict-facing situations and chaotic conditions. However, no previous study has investigated how much the interaction of authentic leadership components and conflict management impacts the remote-working employees' performance. Although there are many studies on authentic leadership and conflict management, the majority of them focus on onsite organizational settings. Little written has explicitly linked authentic leadership style, conflict management (Crevani, et al., 2010), and remote-working employees' performance. Thus far, research has linked authentic leadership and conflict management to higher performance of employees in the traditional workplace, but it is logical to expect that authentic leadership and effective conflict management and interaction between them may influence employees' performance when they work half/remotely.

Therefore, the author aims to evaluate the effects of authentic leadership style as well as the interactive impact of leadership and conflict management on remote working employees' performance and half-remote working employees, in two software/online platform development companies in Estonia. Thus, this thesis is believed to fill this gap in the literature by examining how much authentic leadership components and conflict management, and their interaction of impacting the remote working employee and half-remote working employees in such companies.

2. METHODOLOGY

The methodology of the current research, including its dimensions and related topics, are explained in this chapter. According to the questions and objectives of the research, the population, research sample, data collection methods and tools, and analysis techniques are introduced.

2.1. Research design and philosophical foundations

In this thesis, the author examines the impact of authentic leadership, conflict management on job performance, from the positivism research philosophy perspective. Positivism involves working with an observable phenomenon and it allows for value-free research (Saunders et al. 2009). Several scholars have taken this philosophical approach as they believe it promises accurate and unbiased knowledge untouched by human interpretation.

The author has taken the deductive approach because the present thesis was formulated based on the existing theory. Then, the quantitative research method has been considered accordingly. The quantitative research method allows the author to gather the observable data and analyze it with statistical techniques. Through the quantitative approach, the large sample can be made and analyzed by the author to increase the generalizability of findings. The current thesis falls under applied research. Applied research is research that applies basic research theories and techniques to actual issues.

For this study, a survey-based case study design was selected by the author. The survey technique is often correlated with quantitative analysis, and it is used to address the research question with "What?". According to (Yi 1990), a survey reflects "the systematic study of a small or large population to understand and be able to predict some characteristics or behaviour of the population" (p. 159). In business and management research, the survey approach is a well-known strategy. The survey-based design enables the author to obtain a large amount of data from a large population cost-effectively. Through the survey, researchers can acquire the respondent's opinions and evaluate the data shared by them by asking them a set of questions (Ibojo & Olawepo 2013). It helps to predict and understand some of the characters as well as the behaviour of the research population (Saunders et al. 2009).

As a result, the author decided on a survey-based study research methodology as the best way to collect data for this study and answer the research questions. In terms of the research time horizon, this thesis is classified as cross-sectional research, which is described as the study of a specific phenomenon at a specific time. The cross-sectional studies when researchers use the survey strategy (Edvardsoon et al. 2014).

2.2. Sample and data collection

To gain the desired insight, it is necessary to have an appropriate sample of respondents from the target population, in this study the statistical scope is the employees of two software /online platform development companies with a population size of 400. These two software/ online companies have more than 7 offices across the world which most of their employees have remote-working options to work. Both of them managed their own companies for more than 10 years.

Since participation in this study is completely free and it is not mandatory to complete the questionnaires, therefore, the voluntary sampling method is used and, in such cases, accurate calculation of sample size using special methods like Cochran's formula or Morgan table is not relevant.

Like available sampling, voluntary or self-selection sampling is predicted on easy access to the sample. Individuals freely enter the study rather than the researcher selecting and talking with them. Volunteer respondent samples are always skewed and their selection is biased in voluntary sampling. This is since certain people are more naturally inclined to volunteer. 49 of the respondents were male (58.3%) and 35 (41.7%) were female. The majority of respondents had a university education (56%) and over 31% of them had 5–10 years work experience. The details of demographics and history of consumption are presented in appendix 2.

Before surveying the participants, the consent and confidentiality of respondents were maintained throughout this study by not revealing their names once analyzing and presenting study findings. Burns and Bush (2014, p. 224) advise that data collected from a respondent should not have his or her name or any distinctive designation related to his or her responses. Additionally, they indicated

that, despite the researcher knowing the respondent's name, such data should not be being divulged to third parties.

2.3. Research instrument

In quantitative research, a reliable survey instrument is essential as the content and structure of questionnaires remarkably impact the answering behaviour of participants (Churchill & Iacobucci 2006). A questionnaire contains an online set of questions to record the respondents' answers. A good questionnaire should be clear, coherent, and easy to understand. It should be interactive and structured in a way that the respondents feel as if the researcher is talking to them (Kumar et al. 2021). To develop a coherent and adequate questionnaire, the author used the standard questionnaire introduced in the literature for measuring authentic leadership, conflict management, and job performance.

Authentic leadership was measured using the measurement scale introduced by Kim et al. (2019). This scale includes the 13 reflective items and intends to capture authentic leadership. The conflict management was assessed by the 15 items adapted from Jung et al. (2018) measurement scale. The job performance, however, was measured based on the measurement scale developed by Ramos-Villagrasa et al. (2019) along with 14 reflective items. Altogether the research questionnaire presents 42 items to survey the respondents on their opinion of authentic leadership, conflict management and job performance (see table 1). The questionnaire has been made in an online google survey, the author contacted the human resource department (HR) of both companies at first to request cooperation, then she sent the link of the questionnaire to the HR of both companies. On 06.11.2021 the questionnaire has been distributed and the result has been collected on 09.11.2021. From 400 employees working on these two companies, 84 volunteers have answered the questionnaire. (n=84)

Table 1. Research instrument interfaces

Type of Variables	Constuct	Number of Qusetions	Source
Indipendent	Authentic ledearship	13	Kim et al. (2019)
Indipendent	Conflict management	15	Jung et al. (2018)
Dependent	Jon performance	14	Ramos-Villagrasa et al. (2019)

Source: author's illustration

The first part of the questionnaire was designed to familiarize the respondent with the context and the object of research and collect the respondent's demographic data followed by the 42 questions. In the first section also the respondents were asked about their working conditions. If they work entirely remotely or in an office, or if they have the option to work half-remotely. The author asked the subjects to rate their level of agreement or disagreement with each statement written in the questionnaire based on five-point Likert-type scales on a spectrum from “strongly disagree” (1) to “strongly agree” (5). The questionnaire is presented in appendix 1.

2.4. The measurement properties

The validity and reliability of the research standard instrument were then assessed by experts and the Cronbach's alpha test in SPSS, respectively. In this analysis, the Cronbach alpha tests were conducted on the answers of 84 samples. The result of Cronbach's alpha is presented in table 2.

Table 2. Test of questionnaire reliability

Questionnaire	Numbers	Cronbach's alpha	The result of the Reliability test
Authentic leadership	13	0.860	Acceptable
Conflict management	15	0.891	Acceptable
Job performance	14	0.862	Acceptable

Source: Author's calculation presented in appendix 4

The results of calculating Cronbach's alpha in table 2 indicate that all questionnaires in this analysis have adequate reliability since all measured Cronbach's alpha is greater than 0.7. According to statistical theories and the questionnaire's reliability index, if the Cronbach's alpha measured for the questionnaire is greater than 0.7, the questionnaire is reliable, and the closer the reliability number is to 1, the stronger the questionnaire's reliability. As a result of interpreting the results of the Cronbach's alpha calculation for the research questionnaire, it can be concluded that it has high and good reliability.

2.5. Data analysis method

Statistical tests and descriptive statistics techniques using SPSS 24 software, as well as inferential statistics and quantitative techniques, are commonly used to interpret data from descriptive research obtained through a questionnaire. The data received from the questionnaires completed by the volunteer sample from the statistical population is analyzed using the two-way ANOVA test in this study. ANOVA (analysis of variance) is a statistical method. The two-way or factor analysis of variance is a more comprehensive variant of the one-way or one-component analysis of variance. Two or more independent variables can be utilized in this type of test.

In experimental research, two-way analysis of variance is widely utilized, in which each factor's research consists of one pair and is matched with the pairings of other factors. This helps the researcher in examining each of the factors as well as evaluating their impact on one another. Invoices or the number of invoice levels are commonly used to name factor models.

The effect of two independent factors on a dependent variable can be tested using a two-way analysis of variance. Two-way analysis of variance has the advantage of allowing us to evaluate the principal effect for each independent variable as well as the probability of the interaction effect. When the effect of one independent variable on the dependent variable is dependent on the level of the second independent variable. The main effects, or the overall influence of each independent variable, are also tested using this method. Two types of two-way ANOVA exist where groups differ, two-way intergroup analysis and repeated measurement analysis are used (Yue et al. 2019). The two-way analysis of variance between groups is studied in this study. In a two-way analysis of variance between groups which there are three variables.

A two-way ANOVA test is, in general, an expansion of a one-way ANOVA test. The phrase two-way ANOVA refers to the fact that there are two independent variables in the test. There are various assumptions linked to two-way analysis of variance, including normal data distribution, uniformity of variance, uniform sample size, and so on. The main reason for using this method is that while correlation test can be utilized to test variables, ANOVA is the only way to test the interaction effect of two independent variables on the dependent variables; therefore, if the author wants to see an integrated result, she had to only use a single method.

3. ANALYSIS AND RESULTS

This chapter presents the data analysis and respective results of this study. The author indicates the process of analysis, selection of quantitative techniques, and the driven results to answer research questions. Results of analysis research develop a deeper understanding to the author about the impact of authentic leadership and conflict management on the performance of remote-working and half-remote working employees of software/online platform development companies. The data gathered using the research questionnaire and quantitative approach analyzed below reveal some interesting aspects of job performance in the IT sector.

The author first, analyzed the data gathered from the research respondent and calculated the mean and standard deviations for each component of the research model. The results for analysis on the authentic leadership component based on the responses of 84 people show the mean of 3.79 and a standard deviation of 0.70 for 13 items of the authentic leadership questionnaire. Given that the scoring for these questions is done on a five-point Likert scale. The scale ranges from totally disagreeing with a score of 1 to completely agreeing with a score of 5. The results for the conflict management component and its total 15 questions indicated a mean of 3.67 and a standard deviation of 0.84. For the Job performance items, the total number of questions in this variable is 14, with a mean of 4 and a standard deviation of 0.66.

3.1. Test of Normality

The purpose of this section is to investigate the data distribution because the normality of the data is used as a default when choosing a statistical test. The author is interested in applying parametric statistical methods like the t-test and two-way ANOVA to analyze the data, answer the questions, and assess the effect of independent variables on the dependent, as described.

There are various methods for determining the normality of data; however, because the data for this study was collected via a questionnaire and Likert scale, the skewness and Kurtosis method or the mean, mode and median, or the study of normality through figures and the relationship between standard deviation and mean is the most appropriate method for determining the

normality of the data. The author attempted to assess the data gathered using all three approaches in this study, and the findings of all three methods are shown in appendix 4.

Skewness is a measure of a distribution function's symmetry or asymmetry. The skewness value is 0 for a perfectly symmetric distribution, positive for an asymmetric distribution with skewness towards higher values, and negative for an asymmetric distribution with skewness towards smaller values. The height of a distribution is indicated by Kurtosis. In other words, Kurtosis is a measurement of the curve's height at its maximum point, and for a normal distribution, the amount of Kurtosis is approximately 3. Positive Kurtosis indicates that the intended distribution peak is higher than the usual distribution, while negative Kurtosis denotes that the peak is lower. The results obtained for the variables in this study are within the normal range, particularly for the dependent variable, which is the most important variable, and its data are completely normal.

In terms of Skewness and Kurtosis, data related to authentic leadership and job performance are completely within the normal distribution range because they fall between -3 and +3, however, conflict management results for Kurtosis are extremely little outside the range. It is on the normal distribution's perimeter, or on the edge of the normal distribution.

The distribution will be normal if the mean, median, and mode values in a data set are equal, according to statistics basics. Job performance statistics contain equal mean, median, and mode values and follow a perfectly normal distribution, as shown in appendix 4. When it comes to authentic leadership data, the mean, median, and mode values are all quite close to each other, therefore the distribution can be assumed to be normal. However, in the case of conflict management mean, median, and mode values, the mean and median values are nearly identical, but the mode value differs slightly.

The standard deviation of a set of numbers is a measure of how scattered the data is. Normally encounter three states when assessing standard deviation in properly distributed data: 68% of the values are within one standard deviation of the average, while 95% of the values are within two standard deviations of the average. And 99.7% of the results are within three standard deviations of the average.

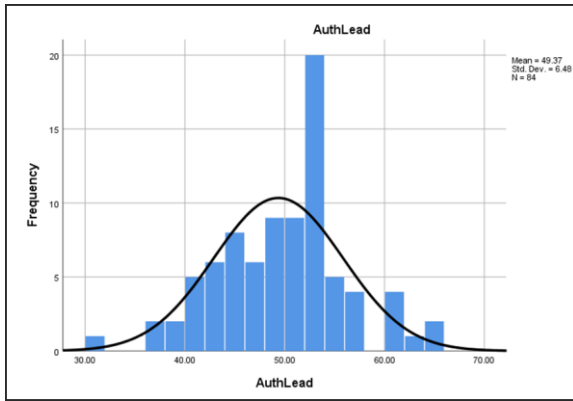


Figure 3. Authentic leadership variable

Source: Author's calculation according to appendix 5

The average is 49.37, the standard deviation is 6.48, the largest data is 65, and the smallest data is 31 in authentic leadership data. As a result, as previously stated, 100 percent of the data falls within three standard deviations of the average, indicating that the data follows a normal distribution.

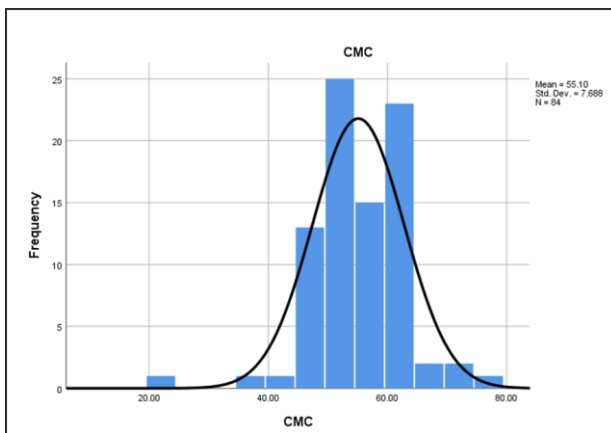


Figure 4. Conflict management variable

Source: Author's calculation according to appendix 5

The mean for conflict management is 55.10, the standard deviation is 7.688, the greatest data point is 75, and the smallest data point is 22. And are within three standard deviations of the mean, and just one of the data points with a value of 22 is beyond the range of three standard deviations, as indicated in the figure. Because the results of answering the questionnaire are based on a voluntary sample from the statistical population and are influenced by the participant's moods and mood at

the time of answering, such events are expected in the data collected from the questionnaire. As a result, it is reasonable to conclude that the results are fully normal.

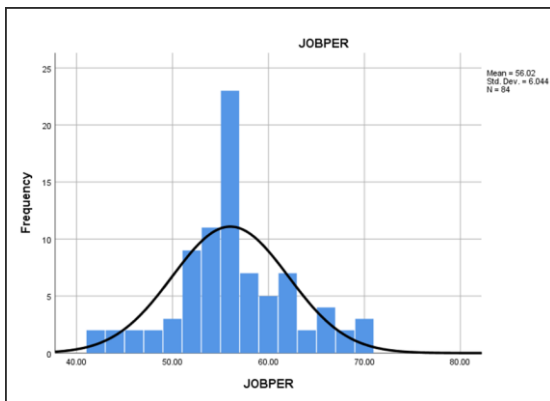


Figure 5. Job performance variable

Source: Author’s calculation according to appendix 5

The average is 56.02, the standard deviation is 6.044, the largest data is 70, and the smallest data is 42, according to job performance data. As a result of the previous explanation, 100 percent of the data are within three standard deviations of the average, and it can be stated that the data follow a normal distribution.

Table 3. Result of Skewness and Kurtosis Test

Variables	Number of Questions	Skewness	Kurtosis
Authentic leadership	13	0.002	0.337
Conflict management	15	-0.792	3.838
Job performance	14	0.138	0.383

Source: Author’s calculation according appendix 5

After examining the data using various approaches, it can be concluded that the data acquired in this study have a normal distribution, allowing the author to analyze the data and respond to research questions posed by tests. The author used parametric tests like the t-test and two-way ANOVA, which are going through in the next section.

3.2. Examination of the statistical population's status for each variable

The T-test is a statistical test that is used to determine the status of each variable in a statistical population. To determine whether the results of our study are significantly different from the average of the answers, the values obtained for each variable are compared to the situation in which all of the questionnaire questions were given an intermediate choice on the Likert scale (3 points) for all of the questions. This test examines whether the observed average is different from a given value (usually the average that can be determined and changed by the researcher). In this test, a hypothetical number (theoretical average) is compared with the average of the sample population. In other words, when the researcher is interested in seeing if the mean of a sample is significantly different from the mean of a given population, he/she uses the t-test for a given value, and also when the mean error value of the mean is unknown and the value is estimated from the data obtained from the sample group, this test can be used.

The t-test is a method for determining the difference between the sample mean and the population mean in terms of the unit error standard, which is calculated using data from the sample group. T-test should only be used if the scores are randomly selected from the target population and the distribution of scores in the population is normal (symmetrically shaped).

3.2.1. Investigating the status of variables in the statistical population

In the statistical population, the t-test is used to examine the status of authentic leadership, conflict management and job performance. Table 4 summarizes the result of the t-test. As illustrated in the table, there were 13 authentic leadership questions, the average score of the authentic leadership questionnaire is 39, 15 conflict management questions with an average score of 45, and 14 job performance questions with an average score of 42 and we apply the t-test results. If all of the answers are the middle choice of the Likert scale (3), the total score of authentic leadership, conflict management and job performance questionnaire, are 39, 45 and 42 respectively. The author compares this number to the data gathered from the statistical population to see if there's a significant difference between them.

Table 4. Summary of descriptive statistics of variables in the statistical population

One – Sample Statistics

	N	Mean	Std.Deviation	Std.Error Mean
AuthLead	84	49.3690	6.48033	.70706
CMC	84	55.0952	7.68760	.83879
JOBPER	84	56.0238	6.04397	.65945

Source: Author’s calculation according to appendix 6

The t-test findings revealed that the values of $t = 14.665$ and $sig = 0.000$ for authentic leadership, $t = 12.036$ and $sig = 0.000$ were obtained to evaluate the state of conflict management, and the values of $t = 21.266$ and $sig = 0.000$ to check the status of job performance indicating that there is a significant difference at the level of 99% for authentic leadership, conflict management and job performance between the results obtained from the statistical population with the average score.

3.3. Answers to research questions

In this section, the author answers the research sub-questions which conjunctly enables her to answer the main research question. The author used the two-way analysis of variance (ANOVA) to answer the first three research questions:

The first research question of this thesis was “How much does the authentic leadership style impact the remote-working/half remote-working employee's performance?”

The goal of a two-way analysis of variance is to look at the main effect of the authentic leadership variable on job performance. As evidenced in appendix 7, the main effect of the authentic leadership variable ($F = 3.981$ and $p = 0.000$) on job performance is obtained by two-way analysis of variance, and the significance level is less than 0.01, indicating that the main effect of the authentic leadership on job performance is confirmed at a 99% confidence level, and thus the first question of this study is answered. The result shows that authentic leadership in a remote-working condition significantly impacts the employees’ job performance.

The second research question of this thesis was “How much does conflict management impact the remote-working/half remote-working employee's performance?”

To answer this question, the author similarly ran the two-way analysis of variance on the data gathered from the research questionnaire and the research respondents. In this analysis, the goal of two-way ANOVA was to examine the main effect of the conflict management variable on remote-working/half remote-working employee's performance. As indicated in appendix 7, the main effect of conflict management variable on job performance ($F = 2.333$ and $p = 0.004$) is obtained by two-way analysis of variance, and the significance level is less than 0.01, confirming that the main effect of the conflict management variable on job performance is approved at a 99% confidence level. This result indicates that conflict management has a significant impact on the remote/half-remote working employees' job performance.

The third research question of this thesis was “How much does authentic leadership and conflict management interaction impact the remote-working/half remote-working employee's performance?”

The interactive effect of authentic leadership and conflict management on employees' job performance was investigated using a two-way analysis of variance. The outcome of a two-way analysis of variance demonstrates that authentic leadership and conflict management have an interaction influence on job performance ($F = 6.783$ and $p = 0.000$), with a significance threshold of less than 0.01, indicating that this result is significant. At a 99% confidence level, the interactive impact (the interactive effect of authentic leadership and conflict management on Job performance) is validated. Based on the presented result, the interaction of authentic leadership and conflict management significantly impact the remote-working/half remote-working employee's performance.

In the next section the two-way ANOVA test was employed independently to assess the effect of authentic leadership, conflict management, the interactive impact of these variables on the job performance across employees who were entirely remote and those who had previous remote working experience or worked as part-time remote workers. In the end, using t-test, the author compares the job performance between two groups of fully-remote working and half-remote working employees.

The fourth research question of this thesis was “How different is the impact of authentic leadership on job performance on the fully remote-working employees and half-remote working employees?”

The results of a two-way analysis of variance in appendix 8 show that the main effect of the authentic leadership variable on job performance in fully-remote workers ($F = 3.923$ and $p = 0.000$) is obtained in the remote employees, with a significance level of less than 0.01. As a result, the effect of the main authentic leadership variable on job performance in remote workers is confirmed at a 99 % confidence level. The main effect of the authentic leadership variable on job performance in half-remote employees has confirmed a 99 % confidence level, according to the results of two-way analysis of variance ($F = 3.982$ and $p = 0.006$) in the half-remote employees. The significance level is less than 0.01 and as a result, the main effect of authentic leadership variable on job performance in half-remote employees is obtained. This result shows that the job performance of both groups of fully remote-working employees and half-remote working employees is significantly impacted by authentic leadership.

The fifth research question of this thesis was “How different is the impact of conflict management on job performance on the fully remote-working employees and half-remote working employees?”

According to appendix 8, the main effect of the conflict management variable ($F = 1.642$ and $p = 0/105$) is achieved in the fully-remote employees, and the significance threshold is more than 0.05, thus impact of the conflict management variable on remote work job performance has not been validated. Result demonstrates that the major effect of conflict management ($F = 1.304$ and $p = 0.311$) is obtained in the half-remote employees, and the significance threshold is more than 0.05, implying that the impact of the conflict management variable on half-remote workers job performance has not been validated. Although the results indicate that conflict management has no significant effect on job performance in both remote and half-remote populations, based on the obtained values, it can be concluded that conflict management in fully-remote employees has a greater impact on job performance than conflict management in half-remote employees with the degree of certainty of 90 %.

The sixth research question of this thesis was “How different is the interactive impact of authentic leadership and conflict management on the remote-working/half-remote-working employee's performance?”

The results of the two-way analysis of variance in appendix 8 reveal that authentic leadership and conflict management have an interaction influence on work performance in the remote population ($F = 5.267$ and $p = 0.004$), with a significance threshold of less than 0.01. As a result, the interactive effect of authentic leadership and conflict management on remote working job performance has been confirmed with a 99 % confidence level. The interactive effect of authentic leadership and conflict management on work performance was found in the half-remote population ($F = 232.87$ and $p = 0.000$), with a significance level of less than 0.01. As a result, the interaction effect of authentic leadership and conflict management on job performance in half-remote working workers has been confirmed with a confidence level of 99 %. Although statistical analysis shows that the interactive effect of authentic leadership and conflict management on job performance is confirmed at a 99% confidence level in both remote and half-remote communities, the F values show that the interactive effect among the half-remote population is significantly greater.

The seventh research question of this thesis was “How different is the job performance between the fully remote-working employees and half remote working employees?”

The independent samples t-test was used to determine if employees who work entirely remotely differ significantly from those who are working half remote.

Table 5. Statistical information of the studied groups

	Factor	N	Mean	Std.Deviation	Std.Error Mean
Job Performance	Remote p	52	55.6154	5.19862	.72092
	Half-remot p	32	56.6875	7.25320	1.28220

Table 5 reveals that entirely remote employees had an average job performance score of 55.61, whereas employees who worked half remote had an average job performance score of 56.68,

demonstrating that being in the workplace, as half-remote working, leads to higher job performance which is compatible with the assumptions presented in the literature. However, is this difference in job performance substantial? The independent t-test, which results are shown in the table below, provides an answer to the above question.

Table 6. Independent samples test

		Levene's Test for Equality of Variance		t-test for Equality of Means						
		F	Sig.	t	df	Sig.	Mean difference	Std. Error Difference	95% Confidence Interval of the difference	
									Lower	Upper
JP	Equal variances assumed	4.290	.041	-.788	82	.433	-1.07212	1.36107	-3.77972	1.63549
	Equal variances not assumed			-.729	50.623	.469	-1.07212	1.47097	-4.02574	1.88151

The results of the independent t-test are shown in table 6. Before deciding on a statistical difference, it's wise to note that the variances of remote and half-remote employees' data are equal. If the number sig is greater than 0.05, the variance of the two variables is equal, and if it is less than 0.05, the variance of the two variables is not equal, according to Levin test results. The value of Sig. is equal to 0.041 in table 6, indicating that the variances of the two variables are not equal, thus the result in the second row of the t-test output table should be the reference for the analysis which is based on inequality of variance. Based on the findings, the t-test value is 0.729, and the significance level is 0.469, indicating that there is no significant difference in job performance between remote working and half-remote working individuals, in other words, they are very close.

3.4. Discussion and suggestions to managers

The quantitative analysis conducted in the current thesis aimed to firstly, examine the impact of authentic leadership and conflict management on the performance of remote-working/half employees. Secondly to compare the impact of authentic leadership and conflict management on job performance of fully remote-working and half remote working employees in selected software/online platform development companies in Estonia. To answer the research questions defined in the introduction chapter, the author summarized the fundamental findings related to the research questions and discussed them further to in the following paragraph.

First, the author discusses the result of the demographic statics of participants. The author adopted the voluntary sampling strategy in this investigation. According to the results of the completed questionnaire, the majority of those who took part in this survey have a bachelor's degree or higher education, particularly employees with master's and PhD degrees. They took a greater interest in filling out the questionnaires, and as a result, statistical tests covered the majority of the features of highly educated employees.

According to the results of the survey, approximately 80% of the respondents were in full or partial remote working situations, and 20% of the respondents were currently employed but had previously experience remote-working, indicating that the participants in this study understood the questionnaire's questions and provided appropriate and accurate responses. The majority of the participants in this survey (about 82%) lived in Estonia, whereas less than 18% lived outside of Estonia, in Australia, Canada, and the United States, and the research's findings have been influenced by the qualities and attitudes of these employees.

Next, the author presents and discusses the results obtained from the study of each variable in the statistical populations. The resulted values for the responses of a total of 84 remote/half-remote working employees to authentic leadership, conflict management, and job performance questions show that the status of each variable is higher than average in the statistical population. Thus, to determine whether the result obtained from the questionnaire is significantly different from the mean value, the t-test was used. The result of the t-test, in the 99% confidence level, confirms the significant difference and shows that in the remote/half-remote population the authentic leadership

and conflict management have similar status and job performance has higher status compared to two other variables as evidenced by the average score of over 4 out of 5.

To answer the first research question, the author used the two-way analysis of variance. The result shows that the main effect of authentic leadership on job performance is significant at the level of 99 %, with values ($F = 3.981$ and $p = 0.000$). This study support evidence from previous observations that reflect the impact of authentic leadership and conflict management on job performance (e.g Azanz et al. 2015; Rego et al. 2015). A possible explanation for this might be that when leaders and managers of organizations interact and communicate with the real self and transparency, instead of using artificial faces and continuous control, they foster such a positive work climate were to facilitate the communication between the remote-working employees and as a result, enhance their job performance.

With regards to the second research question, the result of two-way ANOVA confirmed that the main effect of conflict management on job performance is significant at the level of 99 %, with values ($F = 2.333$ and $p = 0.004$). This result answers the second research question. This finding is consistent with that of earlier findings by scholars (e.g Runde & Flanagan, 2010) that show the appropriate conflict management is important for the job performance of remote-working employees. This result may be explained by the fact that effective conflict management boosts constructive conflict and decrease destructive conflict, enhance the communication between employees and help them to share their opinion easily. Thus, effective conflict management in remote-working conditions when the performance might be negatively impacted by the lack of enough communication can help increase job performance.

The third research question was defined to assess the interactive effect of authentic leadership and conflict management on job performance. The result of two-way ANOVA shows the values ($F = 6.783$ and $p = 0.000$) are significant at a 99% confidence level, thus answering the third question. According to a review of existing research, no study has been done on the interaction between conflict management and leadership styles, thus this study looked into this research gap for the first time and discovered that authentic leadership and conflict management interact to impact the job performance in the remote-working condition. The findings of this study showed that not only do conflict management and authentic leadership have a substantial effect on job performance in remote situations, but that their interaction and overlap can also have a significant effect on job

performance. This impact may partly be explained by the fact that leadership style is one of the main determinants of leaders' reaction to conflict and conflict resolution (Garcia-Guiu Lopez et al. 2015). Thus, authentic leadership style and conflict management can interact to impact job performance in remote-working conditions.

Next, the author presents the impact of authentic leadership, conflict management, their interactions on job performance in fully remote working and half-remote-working employees using the two-way ANOVA. Thereafter, she ran a t-test to compare the job performance between two groups of fully-remote working and half-remote-working employees.

The result of two-way ANOVA for the impact of authentic leadership on job performance in the fully-remote workers ($F = 3.923$ and $p = 0.000$) and half-remote-working employees ($F = 3.982$ and $p = 0.006$) shows in both groups the authentic leadership has a significant impact on the job performance. What is surprising is that the impact of conflict management was not significant on job performance of fully-remote workers ($F = 1.642$ and $p = 0.105$) and half-remote-working employees ($F = 1.304$ and $p = 0.311$), while based on the obtained values, the conflict management in remote populations had a greater impact on job performance than half-remote populations. While, the interactive impact of authentic leadership and conflict management on job performance showed significant in both fully-remote workers ($F = 5.267$ and $p = 0.004$) and half-remote-working employees ($F = 232.87$ and $p = 0.000$), comparing the F values shows that the interactive effect among the half-remote population was greater. In general, therefore, it seems that authentic leadership style and conflict management has a tangible impact on the fully-remote-working and half-remote-working employees' job performance thus be suggested for enhancing the employees' performance when they work remotely/half remotely.

To answer the last question, the author ran the t-test. The result of the analysis showed that the fully-remote working employees had an average job performance score of 55.61, whereas employees who worked half-remote had an average job performance score of 56.68, suggesting that being partially in the workplace had a positive impact on job performance which is compatible with the assumptions presented in the literature (e.g Wang et al. 2020). Contrary to expectations, this research did not find a significant difference between job performance of fully-remote working and half-remote working individuals.

From a practical and managerial perspective, the findings of the current thesis were intended to help the leaders and managers to enhance the half/fully-remote working employees' performance by adopting the appropriate leadership and conflict management style. In general, the findings of this study indicate that authentic leadership and conflict management plays an important role in technology-based firms' employee's job performance in remote situations. Based on the discussions above, the author provides some suggestions to managers of companies with half/fully remote working employees in general, and perform in the software/online platform development sector, in particular.

The findings of the research show that authentic leaders with their specific characteristics play an important role in enhancing the performance of employees who work half/fully remotely. Displaying self-awareness, demonstrating a good understanding of themselves, their values, strengths, and weaknesses, and how their self-image is viewed from employees' perspective can improve the remote-working employees' performance. With relational transparency, leaders should openly share their own true beliefs, thoughts, and information with employees to foster trust and cooperation among employees. Remote working is bound with miscommunication which might decrease trust among them. Authentic leaders can establish a high level of trust in the workplace with relational transparency and as the result impact the employees' performance. Thus, managers can ensure a high level of employee performance through an authentic leadership style that built trust among employees and enhance the employees' performance when they work remotely.

The findings also suggest managers carefully gain accurate information and opinions different from one's own for the decision-making process. This might help them to enhance the remote working employees' performance when employees can easily share their options and ideas with leaders and others. In addition, the findings show that authentic leaders with their internalized moral perspective, encourage the balanced distribution of information, increase transparency in the communication, and make a work environment where the employees can communicate freely. Thus, recommend the leaders to be aware of their significant impact on the employees' performance when they work remotely.

The impact of conflict management on the half/fully remote-working employees shows the managers how critical is the appropriate conflict management style for leading the remote-working employees and enhancing their job performance. The findings recommend that managers pay extra attention to the conflict management style. More specifically, they should be aware of the

sensitivity of conflict topics when employees work remotely. The remote-working is bound with conflict and disagreement because of the lack of adequate communication among employees which might negatively impact the employee's performance. Thus, to enforce the employees' performance, managers should take the appropriate conflict management style to avoid misunderstandings, uncomfortable communication, and destructive conflicts and therefore foster the work climate where employees' conflict is resolved smoothly and effectively. More specifically, conflict management combined with authentic leadership which creates a conducive, spiritual, and motivational environment for employees might increase the employees' willingness for open communication and feedback which helps with conflict resolution and better performance.

The findings also reflect that not only do conflict management and authentic leadership affect work performance separately, but also when these factors are combined and executed at the same time, they have an interactive effect on the job performance of half/fully remote-working employees. This gives the managers a better understanding of how the combination of effective leadership with conflict management style can create synergy and significantly impact the employees' performance. If a manager can improve the characteristics of authentic leadership in himself/herself and take appropriate conflict management style, he/she will ensure success in achieving a high level of job performance. The driven insight from the research findings can be used in the training sessions and workshops for managers who intend to foster the job performance of employees when they work remotely.

CONCLUSION

The present thesis was designed to first determine the impact of authentic leadership and conflict management on the performance of half/fully remote-working employees. Secondly to compare the impact of authentic leadership and conflict management on job performance of fully remote-working and half remote-working employees in selected software/online platform development companies in Estonia. Thus, provide suggestions to managers for enhancing the job performance when the employees work remotely. Previous research has established that effective communication is lacking in the remote-working condition which raises the conflict among employees and negatively impacts the employee's performance. Similarly, several companies with remote working employees are faced with a decrease in employees' performance and as the result lose their competitive advantages in the marketplace.

On the other hand, a growing body of literature recognizes the important role of authentic leadership style and conflict management in improving the employee's performance. The evidence on the positive impact of authentic leadership and conflict management on work performance as well as the author personal experience as a remote worker encouraged her to examine the impact of authentic leadership and conflict management on the job performance of employees in the software/online platform development companies where several people working half of fully remotely.

The findings of this quantitative research, confirm the significant impact of authentic leadership and conflict management on half/fully remote-working employees' performance. The result indicates that the appropriate leadership is critical when employees work remotely as it is one of the main drivers for influencing employee behaviour and performance. Specially. Authentic leadership with its unique characteristics can foster a work climate that establishes trust, effective communication, and enhance the employees' performance. The findings also show that conflict management is extremely important for employees to perform their duties. Conflict management can boost constructive conflict while decreasing the destructive one among the employees. Thus, employees can easily communicate and share their opinions and feedback and ultimately leading to improved performance.

Comparing the impact of authentic leadership and conflict management on job performance of fully remote-working and half remote-working employees and their performance, the author

achieved the unexpected result. While authentic leadership has a significant impact on both fully-remote workers and half-remote working employees, conflict management does not have a significant impact on any of fully remote and half-remote workers job performance. It should be mentioned that conflict management in remote populations had a greater impact on job performance than conflict management in half-remote employees. The findings also indicate that authentic leadership and conflict management have an interaction influence on both full and half remote-working employees while the interactive effect among the half-remote population was significantly greater. Unlike the previous research, the findings suggested that there is no significant difference between job performance of fully-remote working and half-remote working individuals.

Overall, this thesis strengthens the idea that authentic leadership style and conflict management play an important role in employees' performance when they work remotely. This thesis has provided a deeper insight into influential factors on the employees' performance in remote-working condition thus shedding more light on the role of leaders in fostering the work climate which encourage productivity and high performance in remote-working condition.

The major limitation of this study could be the lack of long-term research on remote working settings. It is unknown how the long period of remote-working impacts the employees' job performance. Another limitation of this study was the difficulty of comparing organizations based on study variables due to a lack of access to personnel from various companies. Furthermore, the small sample size and the voluntary sampling method limit the generalizability of findings of this study to other companies. Also, due to the cross-sectional nature of the study, the validity of findings may change over time. By analyzing the interactive effect of conflict management and authentic leadership on job performance, this study created a new window in managerial research, however, there are several questions that still remain to be answered.

The author suggests three topics on which there is a need for further research. First, future research might examine the primary and interaction effects of other leadership styles such as transformational leadership and conflict resolution strategies on employee job performance. More broadly, research is also needed to determine the impact of authentic leadership style on remote-working employees' behaviour such as commitment and loyalty. Also, examining the main and interactive effects of psychological empowerment on remote-working employees' job performance would be a fruitful area for further work.

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APPENDICES

Appendix 1. The research questionnaire

Greetings and Regard

I'm a Master student of International Business Administration, Tallinn University of Technology. The following questionnaire has been prepared in order to investigate “Assessing the impact of authentic leadership and the conflict management strategies on the performance of remote-working employees: an example from software/online platform development companies”. Therefore, by allocating your valuable time, complete it carefully. It is worth mentioning that this information is considered completely confidential and will be used only to achieve the objectives of the research in general. Information will affect the outcome of the research; So please answer the questions carefully and without orientation

Thank you in advance for your sincere cooperation.

Age	Under 30	30-40	40-50	Above 50		
Education	Diploma and lower	Associated level	Bachelor	Master	PhD	
Gender	Male	Female	Other			
Work experience	Lower than 1 yr	1-5 yr	5-10 yr	10-20 yr		
Department	Community Management	IT	sale	HR	Customer support	Other
Country	US	Canada	Estonia	Australia		
Work condition	In office	Remote	Half remote			

Independent variable questionnaire:

Authentic Leadership

Our leader....	Strongly Agree	Agree	Uncertain	Disagree	Strongly disagree
(Kim et al (2019)	5	4	3	2	1
1. . . describes accurately the way that others view his/her abilities					
2. . . shows that he/she understand his/her strengths and weaknesses					

3 . . . is clearly aware of the impact he/she has on others					
4 . . . clearly states what he/she means					
5 . . . openly shares information with others					
6 . . . expresses his/her ideas and thoughts clearly to others					
7 . . . shows consistency between his/her beliefs and actions					
8 . . . uses his/her core beliefs to make decisions					
9 . . . resists pressures on him/her to do things contrary to his/her beliefs					
10 . . . asks for ideas that challenge his/her core beliefs					
11 . . . encourages others to voice opposing points of view					
12 . . . objectively analyzes relevant data before making decisions					
13 . . . carefully listens to alternative perspectives					

Conflict Management Climate

In case of conflict occur, our leader...	Strongly Agree	Agree	Uncertain	Disagree	Strongly disagree
(Jung et al (2018))	5	4	3	2	1
1. . . encourages me to work with the other person for a proper understanding of a problem					
2...helps me to integrate my ideas with the other person to come up with a decision jointly					
3...helps me to play down our differences to reach a compromise					
4...shows me how to exchange accurate information with others to solve a problem together					
5... teaches me how to collaborate with the other person to come up with decisions acceptable					

6... investigate an issue with others to find a solution acceptable to us					
7...tries to show others the logic and benefits of our position					
8....helps me to use my expertise to make a decision in my favor					
9... usually holds on to my solution to a problem					
10... generally helps me to avoid an argument					
11.... usually encourages me to avoid open discussion of my differences with the other person					
12...teaches me how to keep my disagreement with others to myself in order to avoid hard feelings					
13...teaches me it is good to accommodate the wishes of others					
14...teaches me try to satisfy the needs of the other person					
15...encourages me to go along with the suggestions of other					

Individual Job performance

Job performance	Strongly Agree	Agree	Uncertain	Disagree	Strongly disagree
(Ramos-Villagrasa et al (2019)	5	4	3	2	1
1. I managed to plan my work so that I finished it on time					
2. I kept in mind the work result I needed to achieve					
3. I was able to set priorities					
4. I was able to carry out my work efficiently					
5. . I managed my time wel					
6. On my own initiative, I started new task when my old tasks were completed					
7. I took on challenging tasks when they were available					

8. I worked on keeping my job-related knowledge up-to-date					
9. I worked on keeping my work skills up-to-date					
10. I came up with creative solutions for new problems					
11. I took on extra responsibilities					
12. I continually sought new challenges in my work					
13. I actively participated in meetings and/or consultations					
14. I complained about minor work-related issues at work					

Appendix 2. The demographic data of respondents

DEMOGRAPHIC VARIEBLES	N	DISTRIBUTION
Gender		
Male	49	58.3%
Female	35	41.7%
Years of experience		
Below 1 year	6	7.1%
1-5 years	28	33.3%
5-10 years	26	31%
10-20 years	24	28.6%
Level of education		
Diploma	4	4.8%
Associated level	4	4.8%
Bachelor	18	21.3%
Master	47	56%
PhD	11	13.1%
Work condition		
In officce	17	20.2%
Remote	51	60.7%
Half remote	16	19.1%
Country		
Estonia	69	82.1%
US	3	3.6%
Canada	3	3.6%
Australia	9	10.7%

Appendix 3. Result of the questionnaire

Greetings and Regard

I'm a Master student of International Business Administration, Tallinn University of Technology. The following questionnaire has been prepared in order to investigate "Assessing the impact of authentic leadership and the conflict management strategies on the performance of remote-working employees: an example from software/online platform development companies". Therefore, by allocating your valuable time, complete it carefully. It is worth mentioning that this information is considered completely confidential and will be used only to achieve the objectives of the research in general. Information will affect the outcome of the research; So please answer the questions carefully and without orientation

Thank you in advance for your sincere cooperation.

Age	Under 30	30-40	40-50	Above 50		
	-	-	-	-		
Education	Diploma and lower	Associated level	Bachelor	Master	PhD	
	4.8%	4.8%	21.3%	56%	13.1%	
Gender	Male	Female	Other			
	58.3%	41.7%				
Work experience	Lower than 1 yr	1-5 yr	5-10 yr	10-20 yr		
	7.1%	33.3%	31%	28.6%		
Department	Community Management	IT	sale	HR	Customer support	Other
	-	-	-	-	-	-
Country	US	Canada	Estonia	Australia		
	3.6%	3.6%	82.1%	10.7%		
Work condition	In office	Remote	Half remote			
	20.2%	60.7%	19.1%			

Authentic Leadership

Our leader....	Strongly Agree	Agree	Uncertain	Disagree	Strongly disagree
	5	4	3	2	1
1 . . . describes accurately the way that others view his/her abilities	14.3%	64.3%	16.7%	4.8%	-
2 . . . shows that he/she understand his/her strengths and weaknesses	17.9%	69%	8.3%	3.6%	1.2%
3 . . . is clearly aware of the impact he/she has on others	23.8%	47.6%	20.2%	8.3%	-
4 . . . clearly states what he/she means	21.4%	57.1%	16.7%	4.8%	-
5 . . . openly shares information with others	25%	51.2%	13.1%	10.7%	-
6 . . . expresses his/her ideas and thoughts clearly to others	19%	54.8%	16.7%	8.3%	1.2%
7 . . . shows consistency between his/her beliefs and actions	15.5%	52.4%	23.8%	7.1%	1.2%
8 . . . uses his/her core beliefs to make decisions	11.9%	59.5%	20.2%	8.3%	-
9 . . . resists pressures on him/her to do things contrary to his/her beliefs	8.3%	50%	26.2%	11.9%	3.6%
10 . . . asks for ideas that challenge his/her core beliefs	8.3%	54.8%	27.4%	9.5%	-
11 . . . encourages others to voice opposing points of view	14.3%	48.8%	25%	9.5%	2.4%
12 . . . objectively analyzes relevant data before making decisions	15.5%	59.5%	19%	6%	-
13 . . . carefully listens to alternative perspectives	15.5%	61.9%	19%	3.6%	-

Conflict Management Climate

In case of conflict occure, our leader...	Strongly Agree	Agree	Uncertain	Disagree	Strongly disagree
	5	4	3	2	1
1 . . . encourages me to work with the other person for a proper understanding of a problem	17.9	64.3%	13.1%	4.8%	-

2...helps me to integrate my ideas with the other person to come up with a decision jointly	14.3%	63.1%	19%	2.4%	1.2%
3...helps me to play down our differences to reach a compromise	13.1%	57.1%	26.2%	2.4%	1.2%
4...shows me how to exchange accurate information with others to solve a problem together	9.5%	64.3%	19%	6%	1.2%
5... teaches me how to collaborate with the other person to come up with decisions acceptable	13.1%	57.1%	21.4%	7.1%	1.2%
6... investigate an issue with others to find a solution acceptable to us	10.7%	67.9%	13.1%	7.1%	1.2%
7...tries to show others the logic and benefits of our position	14.3%	63.1%	19%	1.2%	2.4%
8...helps me to use my expertise to make a decision in my favor	19%	56%	20.2%	4.8%	-
9... usually holds on to my solution to a problem	10.7%	48.8%	32.1%	8.3%	-
10... generally helps me to avoid an argument	13.1%	52.4%	28.6%	4.8%	1.2%
11.... usually encourages me to avoid open discussion of my differences with the other person	6%	50%	26.2%	16.7%	1.2%
12...teaches me how to keep my disagreement with others to myself in order to avoid hard feelings	7.1%	41.7%	31%	15.5%	4.8%
13...teaches me it is good to accommodate the wishes of others	9.5%	46.4%	31%	11.9%	1.2%
14...teaches me try to satisfy the needs of the other person	4.8%	53.6%	21.4%	15.5%	4.8%
15...encourages me to go along with the suggestions of other	7.1%	44%	41.7%	4.8%	2.4%

Individual Job performance

Job performance	Strongly Agree	Agree	Uncertain	Disagree	Strongly disagree
	5	4	3	2	1
1. I managed to plan my work so that I finished it on time	25%	65.5%	8.3%	1.2%	-

2. I kept in mind the work result I needed to achieve	28.6%	64.3%	7.1%	-	-
3. I was able to set priorities	38.1%	48.8%	13.1%	-	-
4. I was able to carry out my work efficiently	28.6%	63.1%	8.3%	-	-
5. . I managed my time wel	15.5%	65.5%	16.7%	1.2%	1.2%
6. On my own initiative, I started new task when my old tasks were completed	20.2%	60.7%	16.7%	2.4%	-
7. I took on challenging tasks when they were available	25%	56%	16.7%	2.4%	-
8. I worked on keeping my job-related knowledge up-to-date	31%	54.8%	11.9%	2.4%	-
9. I worked on keeping my work skills up-to-date	28.6%	58.3%	10.7%	2.4%	-
10. I came up with creative solutions for new problems	2.6%	60.7%	15.5%	-	1.2%
11. I took on extra responsibilities	19%	54.8%	21.4%	3.6%	1.2%
12. I continually sought new challenges in my work	15.5%	56%	26.2%	2.4%	-
13. I actively participated in meetings and/or consultations	22.6	58.3%	13.1%	4.8%	1.2%
14. I complained about minor work-related issues at work	8.3%	42.9%	20.2%	25%	3.6%

Appendix 4. Test of Reliability

Authentic Leadership Cronbach's alpha

Scale: ALL VARIABLES

Case Processing Summary			
		N	%
Cases	Valid	84	100.0
	Excluded ^a	0	.0
	Total	84	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics	
Cronbach's Alpha	N of Items
.860	13

Item Statistics			
	Mean	Std. Deviation	N
AL1	3.8810	.70120	84
AL2	3.9881	.71967	84
AL3	3.8690	.87509	84
AL4	3.9524	.75896	84
AL5	3.9048	.90005	84
AL6	3.8214	.88032	84
AL7	3.7381	.85192	84
AL8	3.7500	.77421	84
AL9	3.4762	.93752	84
AL10	3.6190	.77467	84
AL11	3.6310	.92853	84
AL12	3.8452	.75241	84
AL13	3.8929	.69452	84

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
AL1	45.4881	36.663	.570	.848
AL2	45.3810	36.962	.516	.851
AL3	45.5000	35.795	.519	.851
AL4	45.4167	36.945	.485	.852
AL5	45.4643	35.312	.549	.849

AL6	45.5476	35.311	.565	.848
AL7	45.6310	35.898	.526	.850
AL8	45.6190	37.251	.439	.855
AL9	45.8929	38.531	.222	.871
AL10	45.7500	35.780	.606	.845
AL11	45.7381	33.690	.691	.839
AL12	45.5238	36.301	.566	.848
AL13	45.4762	36.156	.641	.844

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
49.3690	41.995	6.48033	13

Conflict management Cronbach's alpha

Case Processing Summary

		N	%
Cases	Valid	84	100.0
	Excluded ^a	0	.0
	Total	84	100.0

Reliability Statistics

Cronbach's Alpha	N of Items
.891	15

Item Statistics

	Mean	Std. Deviation	N
CMC1	3.9524	.70974	84
CMC2	3.8690	.72444	84
CMC3	3.7857	.74561	84
CMC4	3.7500	.75849	84
CMC5	3.7381	.82314	84
CMC6	3.7976	.77272	84
CMC7	3.8571	.76273	84
CMC8	3.8929	.76075	84
CMC9	3.6190	.79007	84
CMC10	3.7143	.80017	84
CMC11	3.4286	.88203	84
CMC12	3.3095	.98147	84
CMC13	3.5119	.87114	84
CMC14	3.3810	.96823	84
CMC15	3.4881	.79901	84

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CMC1	51.1429	54.437	.397	.890
CMC2	51.2262	52.563	.572	.884
CMC3	51.3095	52.433	.566	.884
CMC4	51.3452	51.289	.666	.880

CMC5	51.3571	51.148	.618	.882
CMC6	51.2976	53.344	.457	.888
CMC7	51.2381	53.413	.458	.888
CMC8	51.2024	52.621	.535	.885
CMC9	51.4762	51.963	.572	.884
CMC10	51.3810	51.588	.598	.883
CMC11	51.6667	51.068	.575	.884
CMC12	51.7857	50.122	.577	.884
CMC13	51.5833	50.921	.597	.883
CMC14	51.7143	49.797	.612	.882
CMC15	51.6071	51.519	.605	.883

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
55.0952	59.099	7.68760	15

Job performance Cronbach's alpha

Case Processing Summary

		N	%
Cases	Valid	84	100.0
	Excluded ^a	0	.0
	Total	84	100.0

Reliability Statistics

Cronbach's Alpha	N of Items
.862	14

Item Statistics

	Mean	Std. Deviation	N
JP1	4.1429	.60406	84
JP2	4.2143	.56123	84
JP3	4.2500	.67440	84
JP4	4.2024	.57623	84
JP5	3.9286	.69048	84
JP6	3.9881	.68537	84
JP7	4.0357	.71888	84
JP8	4.1429	.71377	84
JP9	4.1310	.69038	84
JP10	4.0357	.70192	84
JP11	3.8690	.80330	84
JP12	3.8452	.70273	84
JP13	3.9643	.81324	84
JP14	3.2738	1.04537	84

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
JP1	51.8810	32.781	.489	.854
JP2	51.8095	32.084	.650	.847
JP3	51.7738	31.936	.543	.851
JP4	51.8214	31.570	.715	.844

JP5	52.0952	32.955	.391	.859
JP6	52.0357	32.059	.515	.852
JP7	51.9881	31.554	.552	.850
JP8	51.8810	30.371	.718	.841
JP9	51.8929	30.940	.666	.844
JP10	51.9881	32.277	.471	.855
JP11	52.1548	32.012	.426	.858
JP12	52.1786	31.691	.549	.851
JP13	52.0595	30.490	.599	.847
JP14	52.7500	32.937	.208	.879

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
56.0238	36.530	6.04397	14

Source: Author's calculation

Appendix 5. Data on the distribution of data in variables

	AuthenticLead	CMC	JOBPER
N	Valid 84	84	84
	Missing 0	0	0
Mean	49.3690	55.0952	56.0238
Std.Error of Mean	.70706	.83879	.65945
Median	50.0000	55.5000	56.0000
Mode	52.00	60.00	56.00
Std.Deviation	6.48033	7.68760	6.04397
Variance	41.995	59.099	36.530
Skewness	.002	-.792	.138
Std.Error of Skewness	.263	.263	.263
Kurtosis	.337	3.838	.383
Std.Error of Kurtosis	.520	.520	.520
Range	34.00	53.00	28.00
Minimum	31.00	22.00	42.00
Maximum	65.00	75.00	70.00
Sum	4147.00	4628.00	4706.00

Source: Author's calculation

Appendix 6. The result of t-test to evaluate the status of variables in the statistical population

One-Sample Statistics	t	df	Sig.(2-tailed)	Mean Difference)	Diffrence	
					Lower	Upper
AuthLead Test value = 39	14.665	83	.000	10.36905	8.9627	11.7754
CMC Test value = 45	12.036	83	.000	10.09524	8.4269	11.7636
JOBPER Test value = 42	21.266	83	.000	14.02381	12.7122	15.3354

Appendix 7. Tests of Between-Subjects Effects

Dependent Variable: JOBPER

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1874.419 ^a	24	78.101	3.981	.000
Intercept	176270.489	1	176270.489	8984.587	.000
Authentic leadership	1874.419	24	78.101	3.981	.000
Error	1157.533	59	19.619		
Total	266680.000	84			
Corrected Total	3031.952	84			
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1563.046 ^a	26	60.117	2.333	.004
Intercept	148461.926	1	148461.928	5760.972	.000
Conflict management	1563.046	26	60.117	2.333	.004
Error	1468.907	57	25.770		
Total	266680.00	84			
Corrected Total	3031.925	83			
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2913.029 ^a	65	44.816	6.783	.000

Intercept	220762.141	1	220762.14144.816	33414.192	.000
Conflict management* Authentic leadership	2913.029	65	6.607	6.783	.000
Error	118.923	18			
Total	266680.000	84			
Corrected Total	3031.952	83			

Source: Author's calculation

Appendix 8. Test of Between-Subjects Effects

Test results to examine the impact of authentic leadership on job performance in the remote employees

Dependent Variable: JPR

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1031.674 ^a	22	46.894	3.923	.000
Intercept	110994.690	1	110994.690	9286.026	.000
ALR	1031.674	22	46.894	3.923	.000
Error	346.633	29	11.953		
Total	162218.000	52			
Corrected Total	1378.308	51			

Test result to examine the impact of authentic leadership on job performance in the half-remote employees

Dependent Variable: JPO

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1351.375 ^a	17	79.493	3.982	.006
Intercept	81042.019	1	81042.019	4059.350	.000
ALO	1351.375	17	79.493	3.982	.006
Error	279.500	14	19.964		
Total	104462.000	32			
Corrected Total	1630.875	31			

Investigating the effect of conflict management on job performance in remote and half-remote employees

Dependent Variable: JPR

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	764.641 ^a	22	34.756	1.642	.105
Intercept	106531.699	1	106531.699	5034.361	.000

CMCR	764.641	22	34.756	1.642	.105
Error	613.667	29	21.161		
Total	162218.000	52			
Corrected Total	1378.308	51			

Test results to investigate the impact of conflict management on job performance in the half-remote employees

Dependent Variable: JPO

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	999.542 ^a	17	58.797	1.304	.311
Intercept	74400.031	1	74400.031	1649.842	.000
CMCO	999.542	17	58.797	1.304	.311
Error	631.333	14	45.095		
Total	104462.000	32			
Corrected Total	1630.875	31			

The result of the interactive test of authentic leadership and conflict management on job performance in the remote employees

Dependent Variable: JPR

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1317.308 ^a	41	32.129	5.267	.004
Intercept	135811.645	1	135811.645	22264.204	.000
ALR * CMCR	1317.308	41	32.129	5.267	.004
Error	61.000	10	6.100		
Total	162218.000	52			
Corrected Total	1378.308	51			

The result of the test of the interactive effect of authentic leadership and conflict management on job performance in the half-remote employees

Dependent Variable: JPO

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1630.125 ^a	28	58.219	232.875	.000
Intercept	95992.409	1	95992.409	383969.637	.000
ALO * CMCO	1630.125	28	58.219	232.875	.000
Error	.750	3	.250		
Total	104462.000	32			
Corrected Total	1630.875	31			

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