

TALLINN UNIVERSITY OF TECHNOLOGY

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**THE INFLUENCE OF LEADERSHIP STYLE ON  
MULTICULTURAL TEAMS QUALITY AND OUTCOMES**

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## **ABSTRACT**

Cultural diversity in the workplace has become a common feature in almost every organisation. While this is attributed to factors such as globalisation, technological advancement, and the need to employ competency over cultural bias, organisations really need a diverse workforce to gain entry to different new markets. However, the effectiveness of a diverse workforce in achieving organisational goals depends largely on the predominant leadership approach adopted in the organisation. Thus, justifying the impact of leadership on organisational development. This study focuses on the influence of leadership style on the performance of teams in multiculturally diverse organisations. The study specifically focuses on team quality in the light of teamwork quality and team outcomes. The study adopted a quantitative method through a questionnaire-based survey to sample the opinion of a selected Nordic Startup Company that specialises in the production of portable electronics devices. 111 responses were gathered from the survey, Teamwork Quality (TWQ), Team Outcome (TO) model and the Multifactor Leaders Questionnaire (MLQ) model were used as measuring metrics to measure team outcomes and leadership styles respectively. The correlation between the two dimensions of the survey were observed in regression analysis to determine the influence of leadership styles on multicultural team outcomes. While the MLQ measured only 2 models of leadership- transactional and transformational leadership, the TWQ in the study explored 5 components - communication, coordination within the team, mutual support, team effort and cohesion, while TO explored, team effectiveness and efficiency. The findings from the study suggest that transformational leadership is more effective in ensuring positive team outcomes. The study recommends the adoption of transformational leadership style in multicultural diverse teams.

Keywords: Team Diversity, Leadership styles, Teamwork Quality, Team outcome Multi-factor Leadership.

## **INTRODUCTION**

Every organisation is staffed with individuals who are different in terms of their values and beliefs premised on their cultural background. These people and their differences must be appropriately managed to meet organisational objectives (Ayanda, 2015). Saxena (2014), affirms that every organisation is constituted of diverse individuals who are structured into operational groups to improve organisational performance. It stands to reason that culture and cultural perspective is an intrinsic part of business operations and as such culture in business contexts must be given adequate attention both in business and academics. This study will focus on how leadership styles in multicultural organisations affect team quality and its outcome.

Generally, the primary objective of leadership in the organisational context is to improve performance (CIPD, 2016). Leaders therefore employ different strategies to improve performance of their teams or units and consequently contribute to the performance of their organisations. Team strategies are premised on factors such as the kind of organisation, structure of the team, the task to be carried out, and the objective of the organisation (ibid). Nonetheless, Van der Haar et al. (2017), assert that the effectiveness of team strategies and the consequent performance of the team relies on the actions and behaviour of the team leader. Behavioural pattern of the team leaders will either get a positive or negative reaction from team members which ultimately determines the overall performance of the team ( Rico et al., 2021). This shows the influence of leadership on the team performance.

In addition, the liberalisation and globalisation of economy has paved the way for dynamic changes in business processes. According to Othman et al. (2012), businesses are now driven by the need for efficiency, productivity, and innovation that can improve business performance. The prioritisation of productivity, efficiency, and innovation have made diversity and inclusion a megatrend in all sectors of the global economy. To meet the demands of the competitive global market, organisations require innovative and strategic decisions from their leaders, hence there is an emphasis on effective leadership in modern business practice (ibid). As stated by Klingbord et

al. (2006), an effective leader in organisational context must possess insights, self-awareness, organisational skills, effective communication skills, and successful manpower management.

Further, leadership and the style of leadership in organisations are core to the development and growth of large, medium and small-scale businesses. O'Donovan (2018) affirms that effective leadership evident through transformative styles is a core competency needed in a multicultural organisation. Also, the diverse culture of employees has an influence on the performance and development of the business or otherwise (Cherian et al., 2020). As noted by CIPD (2016), the employee's cultural background is relevant to the process of employee management. It follows that managers in multicultural set up should first and foremost identify the cultural difference in the workforce composition and thereupon use the knowledge to determine their leadership style. The influence of leadership determines the level of success or failure of the culturally diversified organisation (Raju, 2016).

Essentially, team quality plays a critical role in the performance of an organisation as it enhances personal growth of employees and increases the problem-solving possibilities through knowledge sharing (Agarwal and Adjirackor, 2016). Cizikienne (2019), asserts that leadership is instrumental in determining the quality of a team. Besides, one of the merits of a diverse team is the team quality; high team quality improves team outcome (Shaban, 2016). The quality inherent in a diverse team is predominantly determined by the performance of team leaders in managing the team. There has been a plethora of research on leadership and workforce diversity (O'Donovan, 2018 and Shaban, 2019). These authors have mostly considered the impact of diversity on the overall business performance, or the impact of leadership style on business performance. This study will however consider leadership style in the context of a diverse team to determine the role leadership plays in bringing out team quality and achieving organisational objectives. The focus of the present study is to find out how leadership styles affect the team quality and team outcome in a diverse team.

This study seeks to establish that team leaders are instrumental in determining the overall team behaviour adopted in a diverse team. The focus will be on the leadership styles. The study will particularly be considering the transformational and transactional approach to leadership. The aim of this study is to investigate the impact of transformational and transactional leadership styles on team quality in a diverse team and analyzing the relationship between leadership styles and teamwork quality and team outcomes.

In order to achieve the aim of the study, three research questions have been set:

1. How do diverse teams assess their own team quality and the attainment of team goals?
2. What is the impact of a manager's leadership style on team quality?
3. What is the impact of a manager's leadership style on outcomes in a diverse team?

This thesis is structured into four sections: theoretical review, methodology, data presentation and analysis, and discussions of findings. The first section is the theoretical discussion of the key concepts of the study. A literature review of previous studies will be conducted to identify contributions of other researchers on team diversity and leadership styles. The review will also identify gaps in the study.

In the second chapter, focus will be on the research methodology. This chapter will discuss the research design, the method adopted to collect data, all the information on the population and the sampling technique adopted for the study. The reliability test of the findings, the method adopted for data analysis and the methodological limitations of the study will all be featured in this chapter. While the third chapter will feature the presentation of the data and the analysis of the data. The fourth chapter will entail the theoretical explanation of the data findings, the managerial implications, and the recommendations for future research and the study is concluded with conclusion.

Appreciation to my supervisor Liina Randmann for her unending support and guide throughout the period of this study. Thank you ma'am.

# **1. LITERATURE REVIEW**

This chapter will a wide range of literature on the dicourse of leadership especially in the context of team diversity, team quality, and team outcomes. The findings and submissions from previous will be examined to identify arguments and positions that can be adopted into the deductive explanation of the findings of the present study. The gaps in these study will also be identified to justify the focus of the present. The review of literature in this chapter will brioadly focus on the two dimensions that constitute the key elements and variables of the study, leadership styles, team diversity in multicultural context.

## **1.1. Review on team diversity**

Different authors have taken different appraoches to the definition of diversity in the workplace, however, difference amongst employees has constantly been echoed by several studdies has the characteristic element of workforce diversity (Childs, 2005; Krome, 2014; Ozgen *et al.*, 2015). According to Luring and Salmer (2011), diversity is an existing feature in every organisation as no organisation can have homogeneity in all the demograpics, variation always exist; what matters is the demographics that is placed in focus (Luring andSalmer, 2011). Amaram (2007) considers cultural dynamism as the most defining feature of diversity, the study argues that culture influence the behaviour of employees and some instances affaect their attitude to work. Armstrong et al. (2010) also considers diversity in the workplace to be primarily defined by the diffence in culture which in the study is considered to be a key contributor to organisational performance.

More so, culture is dynamic and susceptible to influence but cannot be changed (Hofstede, 2010). As pointed out by Duygulu & Ciraklar (2009), the understanding of culture is based on the level of culture that is in focus. Several studies have identified the levels of culture to include the international level, national level, regional level, organizational level, team level, and individual level (Karahanna *et al.*, 2005; Duygulu & Ciraklar, 2009; Ishakova & Ott, 2020). National culture refers to the beliefs, values and social perception that is held by a majority of nationals in a country, these beliefs and values may either be different or come in variations at the regional level of the

country, hence the regional division of culture (Karahanna *et al.*, 2005). Many organizations have principles that constitute their organizational culture, these principles vary at the team level to constitute team culture as well (Ishakova, M. and Ott, 2020). In many scenarios, employees undergo an onboarding process that acquits them with the corporate culture of the organization both at the organizational level and at the team level (*Ibid*). This study will focus on how the different levels of culture affect the leadership style of team managers.

Moreover, several authors have identified the benefits of a diverse workforce. Researchers such as Cox and Blake (1991), have posited that workforce diversity results in an increase in organizational flexibility, creativity, and problem-solving, improved resource acquisition, enhanced marketing advantages, and reduce costs. For instance, Marriott formed a multicultural team to complete a global assessment of the current status of Renaissance and New World hotel chains. Also, Royal Dutch Shell's six multicultural teams invented the "light touch" oil-discovery method (Madhusudhan & James, 2021). These case studies have further provided concrete evidence of an existing relationship between team diversity and team outcomes.

However, Seyhan & Motsching (2017), identified that the impact of team diversity on team outcomes can either be positive or negative. The duo, *ibid*, explained that the information-processing approach is one of the major approaches to team bonding that has a positive impact on team outcomes. The approach suggests that diversity through information sharing and processing results in creativity and innovation as a consequence of the availability of different viewpoints, knowledge, experiences, and background (Wang *et al.*, 2016). This added information and rich resource pool might therefore enhance the group performance (Williams & O'Reilly, 1998; Mannix & Neale, 2005). Thus, diversity in a team increases team quality, through improved abilities, information, and knowledge available within the team. Individuals in diverse groups might have greater access to informational networks outside of their group.

On the flip side, diversity is a challenging issue for interpersonal team dynamics, decision-making processes, and performance (Jackson & Joshi, 2010). Organizational diversity is an issue that continues to grow together with global diversity management both in the international business world and in national-scale organizations. Hofstede *et al.*, (2010) posit that the six different dimensions of national culture influence the behaviour of people over time, and these could pose operational challenges in a diverse team. For Instance, Hofstede (2011) presents ten differences between larger power distance societies and smaller distance societies. One of the differences is

in the perception of hierarchy. While the small power-distance society perceives hierarchy to be an avenue for inequality, the larger power-distance society sees it as an inequality structure established for convenience (*Ibid*).

According to Jeong (2020), individualistic tendencies affect diverse groups. Jeong posits that communication gaps that exist because of the difference in culture affect team productivity. Hence, misinterpretation as a result of language barriers is a common challenge faced by diverse teams, especially in multinational organizations (Homan *et al.*, 2007). According to Gazzola, Templin, and McEnteen-Atalianis (2020), communication gaps in diverse groups are not just based on language difference alone, it is also on the mode of communication. While some team members in the group would rather prefer a formal kind of communication, other team members may be more comfortable with an informal approach (*ibid*). Communication is thus far established as a major challenge for diverse groups.

Whether a company is global or not, global diversity proves and affects it both directly and indirectly (Agrawal, 2012). A team composed of culturally diverse members experiences less cohesiveness than culturally homogenous teams (Wright & Drewery, 2006). Group size is also essential for obtaining a degree of unity, as larger team sizes lead to lower interaction between members and consequently a reduced level of cohesion (*ibid*).

Adler (2008) asserts that culturally diverse teams experience more mistrust than homogenous teams. The study posits that team members in a diverse team tend to feel closer related and attracted to people sharing the same culture. This mistrust is believed to take its roots in misinterpretation in a cross-cultural environment and not due to any concrete dislike. Mistrust also leads to another negative point of increased stress compared to homogeneous teams (Madhusudhan & James, 2021). These shortcomings associated with the composition of a diverse team do not deter organizations from recruiting talents with different cultural backgrounds. This shows that organizations consider workforce diversity relevant to their performance regardless of the threats it poses to their business. It is consequently not out of place to interrogate the extent to which this diversity in organizational teams is managed to improve business performance.

Further, since business corporations are concerned about integrating people to improve productivity regardless of the difference in their ethnicity, gender, and other differences (Matveev & Milter, 2004), it follows that productive leadership in organizations where diversity in culture

exist must take into consideration the existing difference in values, habits and communication style all of which are deeply rooted in culture (Pauline *et al.*, 2019). As leaders in organizations, team managers have to contend with managing multicultural diversity in their diversity. Shaban (2016), added that another step that is considered a crucial one is increasing diversity awareness. The study posited that to increase diversity awareness inside the organization, people have to be aware of the multiple experiences, attitudes, and perspectives of others. This could be accomplished through programmes that disclose personal biases and stereotypes and then dispel these false beliefs and stereotypes about various groups (*Ibid*). Added to that, these programs help to enhance the understanding among team members in a diverse group of cross-cultural or multicultural nomenclature.

## **1.2. Overview of leadership**

Leadership and leadership style are integral to organizational performance. The effectiveness of an organisation depends on its leadership and leadership style. According to Omolayo (2007) and Burns (1973), leadership is a social influence process in which the leader enlists the cooperation of followers to accomplish organisational objectives. According to DuBrin (2001), a leader's leadership style is a relatively consistent recurring pattern of behaviour. Nanjundeswaraswamy and Swamy (2014), opined that leaders through their leadership styles influence employees and the overall productivity of the organization. Leadership styles contribute significantly to organizational culture. Diverse teams need effective leaders who understand the complexities of the rapidly changing global environment to improve their performance.

Again, studies have shown that the leadership style adopted by a leader is influenced by factors that surround the leaders. These factors are the organizational environment, demographics, staff characteristics, resources, economic and political factors, technology, and the multicultural nomenclature of the organization (Burns, 1973; Hassan *et al.*, 2018). Alitz and Walker (2018) argue that all the factors that influence the leadership style of a team manager or top management in an organization are primarily influenced by national or organizational culture. Albeit it is important to underscore all the variables that influence leadership in an organization, the focus of this study will be limited to only the multicultural variable. The essential focus of this study is on

team managers of diverse teams, to determine how the cultural dynamics of their teams affect their approach to leadership.

Also, the leadership role assigned to the team managers determines to a great extent how they can effectively manage barriers in the languages spoken by members of the team, the diversity in cultural behaviour within the group, possible perceptions of gender within the group, and getting a consensus from the group (Jayanthi & Rajandrab, 2014; Kappagomtula, 2017). According to Opku *et al.*, (2015), the roles assign to leaders modify their behaviour and improves their relationship with their subordinates. The study identifies that the obligatory characteristics of leadership to “head”. Beyond this feature, the function of a leader has to particularly spelled to help them determine the pattern of behaviour they will exude to their team members and the kind of approach they will adopt to control their subordinates (Al-Nawafah *et al.*, 2021).

Nonetheless, Mintzberg (1973) categorizes the function of managers into three broad categories namely: interpersonal roles, informational roles, and decisional roles. These roles point out how relevant managers are to business performance. Although the specific duties of managers in every organization are still largely dependent on the job description provided by the organization, team managers are primarily responsible for their teams and their actions as well as decisions on team issues that affect the performance of team members (Mintzberg 1973; Tovmasyan, 2017). Kappagomtula (2017), stated that beyond the cross-cultural or multicultural nature of the diverse team, team managers have to take into consideration the scope and complexities of team projects to identify the constraints of the team. Thus, the management of a diverse team is contextually factored by the organizational objective as well as the task and responsibility given to a diverse team as an operational unit of the organization.

To manage diversity effectively, team leaders need to have a specific set of values, abilities, and attitudes. Diversity management requires respect, acceptance, and recognition of individuals' differences and uniqueness (Lumadi, 2008). Managing diversity effectively requires that managers take several steps to alter values and attitudes and promote the effective management of diversity. Previous study argues an initial step is to secure top management's commitment to diversity, as this is an essential step to giving team members a huge sense of inclusion in the overall workforce (*ibid*). The logic of this argument will be improved as this study looks to stretch the discussion beyond the formal commitment of the organization to diversity and inclusion. The intent of the study also includes observing the behavioural pattern of team managers and how they articulate

the formal provision of inclusion in a diverse workplace through their diverse teams. According to Jones and George (2009), it is imperative for team managers to cultivate appropriate performance and business-oriented mindsets, as well as ethical values within their profession. This is necessary to ensure that they are able to effectively utilise the diverse workforce at their disposal.

As a case study of PricewaterhouseCoopers (PwC), an international tax assurance and tax consulting company ranked top 5 by Diversity Inc. for six consecutive years, between 2011-2016 practically highlights the influence of multicultural teams on management leadership style (Narin & Eginli, 2016). The company was able to achieve this by constantly using diverse team managers to create awareness about diversity within and outside the company (*Ibid*). Additionally, PwC's diversity management practices are planned globally and performed locally. In this sense, when global and local practices are assessed, practices are bent to fit the particular country's cultural structure and employee characteristics to reflect their cultural dimensions (*Ibid*). At each point, PwC creates diversity programs according to national cultural values or adapts global programs into local branches according to cultural values that are required to achieve success (Peretza *et al.*, 2016). The top management of PwC works with leaders of a diverse team to ensure coordination between global and local practices and monitor them in planning and performing diversity management programs. This case study shows the level of influence a multicultural workforce has on the mode of operation in an organization.

The study of leadership styles has taken several dimensions in academics for about a century now, with many scholars opining that the transformational style of leadership is the most efficient style to adopt in a diverse team (Ismail *et al.*, 2014). Bass and Avolio (1993) posit that transformational leadership is characterised by a leader's ability to broaden their perspective and prioritise the welfare of their subordinates. This is achieved through the cultivation of a shared understanding and commitment to the goals and objectives of the organisation, which in turn motivates employees to transcend their individual interests for the benefit of the collective. This theoretical application of leadership is considered relevant to the focus of this study because it promotes the ideology of diversity and inclusion. Nonetheless, the effectiveness of a transformational leadership style is still hinged on other organizational factors which this study seeks to uncover.

As opined by Hussein *et al.* (2017), the transformational leaders improve team creativity level through their relationship with team members. The study explains that these kinds of leaders are intentional about shared objectives and their liberal approach to leadership encourages knowledge

sharing which consequently results to creativity. As opined by Ng *et al.*, (2012), team creativity is a reflection of team quality. From the combined arguments of (*Ibid*) and Hussein *et al.*, (2017), the transformational form of leadership improves team quality through shared knowledge and group creativity. This will adopt the submission of these scholar to substantiate the effect of transformational leadership in improving team quality and team outcomes.

### **1.3. Teamwork quality and team outcome**

Teamwork quality and team outcome are crucial aspects of successful team performance. Teamwork quality refers to the extent to which team members work together in a cooperative and supportive manner, demonstrating effective coordination and utilization of their collective resources and skills (Edmondson, 2018). Authors have argued that it encompasses elements such as psychological safety, open communication, active listening, and conflict resolution. On the other hand, team outcome pertains to the collective result achieved by a team in relation to its objectives, including the accomplishment of specific goals, production of high-quality work, and delivery of valuable outputs that surpass individual efforts (Katzenbach & Smith, 2015).

Several factors influence teamwork quality and team outcomes, playing a crucial role in determining the success of a team. . West (2012) emphasized the importance of communication in effective teamwork, stating that teams with strong communication skills are more likely to exhibit high levels of coordination and achieve better outcomes. Effective communication is a vital factor that significantly impacts teamwork quality. As opined by Hackman (2002), clear and open communication channels facilitate the exchange of ideas, information, and feedback among team members, leading to efficient collaboration, conflict resolution, and informed decision-making.

In addition, Belbin (2012), acknowledges that team diversity and the allocation of roles also influence teamwork quality and team outcomes. Diverse teams, with members from different backgrounds, skills, and perspectives, bring a range of ideas and approaches to problem-solving and innovation (Belbin, 2012). This diversity enhances creativity and decision-making processes, leading to improved team outcomes. Additionally, clearly defining team roles and ensuring each member's strengths are utilized optimally promotes efficient collaboration and contributes to positive team outcomes (Daft, and Lane, 2018).

Furthermore, different approaches have been adopted in research to measure teamwork quality and team work outcomes. Variables such as team effectiveness, communication effectiveness, collaboration and coordination, psychological safety, perception on role clarity, trust and mutual respect (DeDrue & Karan, 2003; Mathieu *et al.* 2008; Avolio *et al.*, 2009). Hoever, Hoegl and Gemuenden, (2001) conceptualised TeamWork Quality (TWQ), as a model to measure team quality and team outcomes. The model specifies six facet to measure TWQ namely communication, coordination, balance of member contributions, mutual support, effort, and Cohesion. These facets are studied independently to identify the outcome of team performances. These model is adopted in the present study to measure the outcome of teams from an individualised perspective, allowing team members to measure their own performance.

### **1.3. Overview of leadership**

Leadership involves influencing the thoughts and attitudes of a group of individuals to achieve a specific objective (Northouse, 2016). Akparep (2019) opines that effective leadership is crucial for the success of any group, organization, or nation. According to Yukl (2013), leader motivates others to understand and come to an agreement on what needs to be done and how to go about it to accomplish shared objectives.

Leadership and leadership style are integral to organizational performance. Leadership is a social influence process in which the leader seeks the voluntary participation of subordinates to reach organizational goals (Omolayo, 2007; Burns, 1973). According to DuBrin (2001), leadership style refers to the consistent behavioural pattern that is typical of a leader. Nanjundeswaraswamy and Swamy (2014), opined that leaders through their leadership styles influence employees and the overall productivity of the organization. Leadership styles contribute significantly to organizational culture. Diverse teams need effective leaders who understand the complexities of the rapidly changing global environment to improve their performance.

Again, studies have shown that the leadership style adopted by a leader is influenced by factors that surround the leaders. These factors are the organizational environment, demographics, staff characteristics, resources, economic and political factors, technology, and the multicultural nomenclature of the organization (Burns, 1973; Hassan *et al.*, 2018). Alitz and Walker (2018) argue that all the factors that influence the leadership style of a team manager or top management

in an organization are primarily influenced by national or organizational culture. Albeit it is important to underscore all the variables that influence leadership in an organization, the focus of this study will be limited to only the multicultural variable. The essential focus of this study is on team managers of diverse teams, to determine how the cultural dynamics of their teams affect their approach to leadership.

Also, the leadership role assigned to the team managers determines to a great extent how they can effectively manage barriers in the languages spoken by members of the team, the diversity in cultural behaviour within the group, possible perceptions of gender within the group, and getting a consensus from the group (Jayanthi & Rajandrab, 2014; Kappagomtula, 2017). According to Opku *et al.*, (2015), the roles assign to leaders modify their behaviour and improves their relationship with their subordinates. The study identifies that the obligatory characteristics of leadership to “head”. Beyond this feature, the function of a leader has to particularly spelled to help them determine the pattern of behaviour they will exude to their team members and the kind of approach they will adopt to control their subordinates (Al-Nawafah *et al.*, 2021).

Nonetheless, Mintzberg (1973) categorizes the function of managers into three broad categories namely: interpersonal roles, informational roles, and decisional roles. These roles point out how relevant managers are to business performance. Although the specific duties of managers in every organization are still largely dependent on the job description provided by the organization, team managers are primarily responsible for their teams and their actions as well as decisions on team issues that affect the performance of team members (Mintzberg 1973; Tovmasyan, 2017). Kappagomtula (2017), stated that beyond the cross-cultural or multicultural nature of the diverse team, team managers have to take into consideration the scope and complexities of team projects to identify the constraints of the team. Thus, the management of a diverse team is contextually factored by the organizational objective as well as the task and responsibility given to a diverse team as an operational unit of the organization.

Team managers have to possess certain values, skills, and attitudes to manage diversity effectively. Diversity management requires respect, acceptance, and recognition of individuals' differences and uniqueness (Lumadi, 2008). The effective management of diversity necessitates that managers undertake various measures to modify values and attitudes and facilitate the efficient management of diversity. Previous study argues an initial step is to secure top management's commitment to diversity, as this is an essential step to giving team members a huge sense of inclusion in the overall

workforce (*ibid*). The logic of this argument will be improved as this study looks to stretch the discussion beyond the formal commitment of the organization to diversity and inclusion. The intent of the study also includes observing the behavioural pattern of team managers and how they articulate the formal provision of inclusion in a diverse workplace through their diverse teams. Team managers have to develop the correct performance and business-oriented attitudes and the correct ethical values within the profession that allows them to make appropriate use of the diverse workforce (Jones & George, 2009).

As a case study of PricewaterhouseCoopers (PwC), an international tax assurance and tax consulting company ranked top 5 by Diversity Inc. for six consecutive years, between 2011-2016 practically highlights the influence of multicultural teams on management leadership style (Narin & Eginli, 2016). The company was able to achieve this by constantly using diverse team managers to create awareness about diversity within and outside the company (*Ibid*). Additionally, PwC's diversity management practices are planned globally and performed locally. In this sense, when global and local practices are assessed, practices are bent to fit the particular country's cultural structure and employee characteristics to reflect their cultural dimensions (*Ibid*). At each point, PwC creates diversity programs according to national cultural values or adapts global programs into local branches according to cultural values that are required to achieve success (Peretza *et al.*, 2016). The top management of PwC works with leaders of a diverse team to ensure coordination between global and local practices and monitor them in planning and performing diversity management programs. This case study shows the level of influence a multicultural workforce has on the mode of operation in an organization.

#### **1.4. Review of leadership styles**

The study of leadership styles has taken several dimensions in academics for about a century now, with many scholars opining that the transformational style of leadership is the most efficient style to adopt in a diverse team (Ismail *et al.*, 2014). According to Bass & Avolio (1993), transformational leadership happens when a leader becomes wider and upholds the interests of the employees, once they generate awareness and acceptance for the purpose and assignment of the group, so when they blend employees to appear beyond their self-interest for the good of the group. This theoretical application of leadership is considered relevant to the focus of this study because it promotes the ideology of diversity and inclusion. Nonetheless, the effectiveness of a

transformational leadership style is still hinged on other organizational factors which this study seeks to uncover (Avolio and Bass, 2014).

According to Essa (2019), Leadership theories offer insights into the behaviours, qualities, and circumstances that make a successful leader. Therefore, they can be used to examine a leader's style (Bolden et al., 2003). It is imperative to understand the different styles and theoretical frameworks for leadership to achieve effective leadership practice. These theories inform the leaders on the approaches and measures needed to administer their duties effectively and lead to the growth and development of the individuals and the organization as a whole (Kapur, 2020). The most relevant leadership styles depend on the context of the organization, its nature, culture, and goals.

However, on a general note, the servant, laissez-faire, autocratic, democratic, transformational, and transactional are considered the most applicable leadership styles in the context. The servant leadership style involves considering the needs of followers first (Mansaray, 2019). Characterized by empathy, humility, stewardship, and persuasion among others, this style of leadership emphasizes empowering followers to reach their full potential (Muzira & Muzira, 2020). In the Laissez-faire style of leadership, the leader allows their followers to make decisions with minimal input and supervision. This style may be practicable in teams with highly skilled and experienced members who can perform their duties independently (Khan *et al.*, 2015).

All-round control and decision-making by the leader describe the autocratic style of leadership. Unlike laissez-faire, this style involves the leader giving orders and making all decisions without considering the input from subordinates. Autocratic leadership is most effective in situations that require quick decision making such as emergencies (Akpapere, et al., 2019). Although several studies have stated that autocratic leadership is not the most appropriate style of leadership in the organisational context, the style is however appropriate in situational contexts

As experienced in a democracy, the democratic style of leadership has cooperation and involvement as its watchwords. This style of leadership promotes open communication where subordinates are involved in the decision-making progress toward the success of the team (Sharma & Singh, 2013). Leaders who adopt the transformational style of leadership encourage their followers to look beyond their interests and engage in meaningful work that advances the

organization as a whole. They inspire and motivate followers to realize a shared vision or objective by uplifting, inspiring, and supporting them (Christiansen and Walumba, 2013).

It has been established that transformational leadership significantly improves organizational outcomes such as job satisfaction, staff engagement, and performance (Herminingsih, 2020; Khan et al., 2020). Judge and Bono (2000) associated transformational leadership with the Big Five personality traits which include emotional stability, openness to experience, agreeableness, conscientiousness, and extraversion. Hogan and Curphy (1999) earlier argued that this style of leadership stresses the leader's charisma rather than other relevant leadership qualities. Leaders who adopt transformational leadership have also been argued to have a tendency of manipulating their followers to achieve their goals rather than those of the organization (Yukl, 1999).

As postulated by Bass and Avalorio (1993) the transactional leadership style underscores rewarding or punishing followers based on their performance. This style is defined by contingent, goal-oriented, monitoring, and directive behaviours. It is applicable in highly-structured and stable companies. According to research, transactional leadership can be effective in highly structured organizations that are focused on meeting performance standards. Limsila and Ogunlana (2008) on associated transactional leadership with positive employee performance in the construction industry. Similarly, Dai et al., (2013) study on employees of international hotels in China showed transactional leadership to have a positive effect on job satisfaction and employee productivity in the hotel industry.

The transactional leadership style has however drawn criticism for being excessively preoccupied with short-term objectives and failing to offer chances for professional and personal development (Schein, 2010). James MacGregor Burns who advanced the concept of transactional leadership criticized the style for focusing more on rewards and punishments. Burns (1978) argued that transactional leadership is not well suited for transformational change.

In transformational theory, a leader collaborates with the followers rather than acting in their own best interests by making necessary changes alongside the followers (Tafvelin, 2013). Transactional theory on the other hand considers rewards and punishments as motivators for employee behaviour. The theory stresses that the expectation of receiving rewards for good performance such as bonuses and promotions, among others, and punishment for poor

performance inspires employees to carry out their duties (Asrar-ul-Haq and Anwar, 2018). This, according to the leaders who adopt the theory, is instrumental to achieving specific objectives. As opined by Hussein et al. (2017), the transformational leaders improve team creativity level through their relationship with team members. The study explains that these kinds of leaders are intentional about shared objectives and their liberal approach to leadership encourages knowledge sharing which consequently results to creativity. As opined by Ng *et al.*, (2012), team creativity is a reflection of team quality. From the combined arguments of (*Ibid*) and Hussein *et al.*, (2017), the transformational form of leadership improves team quality through shared knowledge and group creativity. This will adopt the submission of these scholar to substantiate the effect of transformational leadership in improving team quality and team outcomes.

Conclusively, the cultural dynamics of teams greatly influence how a leader handles diverse teams. These differences can impact leadership expectations, decision-making processes, and communication approaches. Therefore, to successfully manage diverse teams, team managers must be sensitive to these variations.

The literature reviewed in this chapter has provided an understanding of the precise strategies and methods teams managers can employ to successfully manage tasks and teams to achieve organisational objectives however, the evidences suggest that limited research has been conducted to explain the relationship between the leadership styles adopted in diverse multicultural teams and the team performance. The present research has identified this gap and will focus on evaluating the influence of leadership style on teamwork quality and team outcome in multicultural diverse team.

## **1.5. Introduction to the case company**

For the purpose of anonymity in this study, the organisation used as the sample shall be referred to as “Entity”. Entity is a Nordic start-up company that specialises in the production of portable electronic devices. The company has two production facilities, one in the Nordic region and the other in Estonia. About 450 employees from diverse backgrounds are presently employed at the production site in Estonia.

As of the third quarter of the year 2022, the company's commitment to diversity and inclusion is evident in its staff composition, which includes 36 different nationalities. This diversity has benefited the company by fostering cultural awareness and tolerance and by contributing to the development of a more inclusive and dynamic workforce.

The production facility in Estonia has both production and support departments. The production department are given alias for anonymity sake, they are Alpha, Omega, Beta, Gamma, Kappa, Logistics, Supply Chain, and Warehouse. The production departments collaborate with other supporting divisions, such as information technology (IT), human resources, talent acquisition, facility administration, power management, and health and safety. These departments play vital roles in ensuring seamless and effective operation of the business.

Strong emphasis is placed on sustaining an open and transparent communication culture within the organisation. The management conducts weekly meetings on the first business day of each week at which departmental activity reports for the previous week are shared with the entire staff. This includes communicating the company's vision and mission statement, cultural values, and current goals. The weekly meetings also provide an opportunity for team leaders to conduct departmental meetings with their teams, during which they recognise and announce the week's top performers. The team leaders take the time to elucidate how their activities contribute to the company's overall goals and objectives. This practise of recognising and celebrating success within the company has played a significant role in fostering a positive work culture and a sense of teamwork.

The human resources department is crucial to the profitability of the company. They organise biannual leadership training programmes for team executives. These training programmes provide team leaders with the opportunity to acquire new skills and leadership strategies that will enable them to lead their teams more effectively. In addition, the training programmes provide a forum for team leaders to collaborate and share best practises, thereby nurturing a culture of continuous learning and growth.

## **2. METHODOLOGY**

This chapter discusses the validity of this study and the details of how the data was obtained and analysed will also be stated. This research has adopted an empirical-analytical approach with deductive reasoning.

### **2.1. Philosophical assumptions**

Research strategy is a reflection of the research philosophy adopted in a study. The philosophical assumptions adopted in the study influenced the choice of data to be used in the study, the method of collecting the data, and the approach to the analysis of the data. Research philosophies generally set the tone for the overall research strategy in research (Tamminen & Poucher, 2020).

The ontological assumption places focus on reality particularly from the point of view of the researchers' beliefs about the phenomenon being studied. In research, ontological perspectives can vary. For example, a positivist ontology assumes an objective and independent reality that can be studied through empirical observation and measurement. Positivist researchers aim to uncover universal laws and causal relationships (Burrell & Morgan, 1979). On the other hand, a constructivist ontology acknowledges the socially constructed nature of reality and emphasizes the subjective experiences and meanings that individuals attribute to phenomena (Guba & Lincoln, 1994).

The objectivist ontology is employed in this study. This assumption identifies that there is an objective reality that exist outside the human perception. To this end, the researcher takes an unbiased position to observe to reality by following an empirical process based on statistics. The ontological assumption influenced the empirical quantitative research method employed in the study.

The positivist assumption has been adopted in this study to emphasize objectivity, logical reasoning, and empirical evidence. Positivists believe that the natural world operates according to fixed laws and that these laws can be discovered through careful observation and experimentation (Creswell, 2014). The research was carried out on measurable and observable data and the researcher has no influence of the data or the outcome of statistical analysis, it is purely empirical.

In addition, while the methodological assumption places emphasis on the strategy that the research applies to get data, the axiological assumption focuses on the ethical consideration in research (Kothari, 2004). In this research, survey was carried out to gather data from a significant population through effective and efficient tools. The source of data (primary) influenced the ethical approach adopted in the data collection process. The researcher in the course of the research maintained an ethical distance from the data gathered without interfering with data gather.

Overall, an objectivist research paradigm is evident in the research philosophy adopted in the study. This paradigm justifies the neutrality of the researcher in this research and also justifies the use dependence on empirical evidence to make deductive conclusion based on the phenomenon observed (Creswell & Creswell, 2014). The absence of the researcher's influence on the data set made the data set adopted for the study valid, it also contributed to the reliability of the findings made from the findings.

## **2.2. Research design**

The study adopted a quantitative research design to gather the data used to answer the research questions and achieve the research objectives. This method allows for the gathering of data from an identified sample population with a structured data collection. The research statistical. The method was used to empirically observe how team members rate their team quality and investigate the effect of leadership style on team outcome. This study adopted a questionnaire-based survey as the quantitative tool of gathering data.

The study also adopted the deductive method of reasoning to interpret the findings from the statistical analysis. This approach was useful for testing theoretical framework in a systematic and objective manner. The approach was particularly used to evaluate the assessment of team quality by employees and at the same time evaluate the effect of different leadership styles on the performance of the team. The data adopted for the studied were measured and the significant interpretation were drawn for the deductive analysis carried out in the study.

Google form tool was used to conduct the questionnaire-based survey that generated the data used in this study. Google form is a popular tool for collecting data and conducting surveys. While it is

not an open-source platform, it is free to use and can be an effective tool for gathering data in research. The survey was carried out in Small and Medium sized enterprise in Estonia. A mail was sent to the Human Resource Manager of the sampled organisation to request for permission to carry out the survey in the firm. The request was granted, and the link was shared to employees through mail. At the end of the survey, 111 responses were recorded and exported for analysis. The survey was divided into two major sections with 64 questions. While the first section was designed to measure team quality, the second section was designed to determine the effect of leadership style on team performance using the Multifactor Leadership questionnaire format (MQL). The questions were drafted in 6 Likert scale of absolutely disagree, rather disagree, disagree, agree, rather agree, and absolutely agree (See Appendix 1). The 6 point Likert scale is suitable for multivariate research because it allows for a manageable number of items in the test, preventing respondents from being overburdened, and it is reliable according to psychological testing standards (Chomeya, 2010). Furthermore, using a six-point scale encourages people to think more carefully about the inquiry, which leads to a decision that is either positive or negative, making neutrality rare (Thompson, 2018). Thus this study's 6-point Likert scale.

### **2.3. Sample and sampling method**

The sample for this study were drawn from the staff of a start-up company in manufacturing industry that specialises in the production of portable electronic devices. This company is highly diverse multiculturally with employees from about 36 nationalities spread across from the entry level to the management level.

Survey was administered, 110 responses were recorded in the survey. The link was opened for responses on the 13th of March 2023 and the link was closed from receiving responses from the 27th of March 2023. 28% of the respondents were female employees of the select organisation, 69% were male employees and 2% chose not to declare their gender see Table 1.

The study also considered years of experience as an important demography in the survey. The survey divided that work experience into 6 categories which are 1-6 months of experience (0%), 7-12 months of experience (20%), 13-18 months of experience (50%), 19-24 months of experience (23%) 25-36 months of experience (6%). Although the survey intended to gather responses from 8 departments namely, Alpha, Omega, Beta, Gamma, Supply Chain, Delta, Warehouse, and

Kappa. Nevertheless, four departments namely Gamma (14%), Beta (35%), Delta (14%), and Alpha (27%) responded to the questionnaire favourably.

Table 1. Demographic statistics of the sample population

	<b>Frequency</b>	<b>Percent (%)</b>
<b>Gender</b>		
Male	77	69
Female	31	28
No gender	2	2
<b>Length of stay(months)</b>		
7 - 12 months	22	20
13 - 18 months	56	50
19 - 24 months	25	23
25 - 36 months	7	6
<b>Departments</b>		
Alpha	30	27
Gamma	15	14
Omega	3	3
Kappa	3	3
Beta	39	35
Supply chain	2	2
Warehouse	2	2
Delta	16	14
<b>Country of Origin</b>		
Africa	16	14
Europe	5	5
Asia	14	13
North America	1	1
Estonia	33	30
Nigeria	26	23
Bangladesh	15	14
N	110	100

Source: Ogunnaike (2023), author's calculations based on Appendix 2

The convenience sampling method was adopted for the study with the respondents being employees of a Start-up with diverse workforce in Tallinn, Estonia. The target population was chosen based on the convenience sampling method.

Convenience sampling is a non-probability sampling technique where participants are selected based on their availability and willingness to participate in the study. It is a type of sampling

method in which individuals who meet the predetermined criteria for a study are enrolled in the research without any specific selection process (Emerson, 2021). More so, this sampling method is commonly used in research when it is difficult to access a representative sample or when time and resources are limited. In the present study, the non-probability sampling method was adopted because of the size of the target population. For the inclusion criteria, the survey considered employees who are willing to participate. The survey was distributed to key departments, that is, the staff in the production section using the company's official communication platform known as Slack.

#### **2.4. Measures used in research**

The questionnaire was designed to collect responses from individual respondents, and it contained 64 questions which measured teamwork quality, team work outcome or performance and leadership styles in two major sections of the survey. These questions were further subdivided into five subcategories, three subcategories in the first section and two in the second major sections. The questions used in the survey were adapted from three independent studies and they were modified to fit into context of the research questions and objectives of the present studies.

This study adopted the questionnaires from two reputable journal articles to investigate teamwork quality and team outcome (Table 2). The first section considered the components that determine quality by considering investigating the mode of communication, coordination, mutual support, efforts, and Cohesion (Hoegl & Gemuenden 2001). The impact of the team quality is measured in the second subsection of the questionnaire. They were specifically measured through Team Performance and Team Member Success (Lindsjörn *et al.*, 2016). In other words, the survey examined the outcome of team quality from a general perspective through team performance and from a personalised perspective through team member success. A Multifactor Leadership Quality (MLQ) by Hartog *et al.* (1997) was consequently used to determine and examine leadership style adopted within the organisation.

Table 2. Questionnaire scales and the sources

Scale	References
Teamwork Quality	Hoegl, M., & Gemuenden, H. G. (2001). Teamwork quality and the success of innovative projects: A theoretical concept and empirical evidence. <i>Organization science</i> , 12(4), 435-449.
Team Performance Team Member success	Lindsjrn, Y., Sjøberg, D. I., Dingsyr, T., Bergersen, G. R., & Dyb, T. (2016). Teamwork quality and project success in software development: A survey of agile development teams. <i>Journal of Systems and Software</i> , 122, 274-286.
Multifactor Leadership Quality (MQL)	Braathu, N., Laukvik, E. H., Egeland, K. M., & Skar, A. M. S. (2022). Validation of the Norwegian versions of the Implementation Leadership Scale (ILS) and Multifactor Leadership Questionnaire (MLQ) in a mental health care setting. <i>BMC psychology</i> , 10(25), 1-11.

The most evident modification to these studies is the Likert scale adopted by the present study. Various studies from which the questionnaire was designed adopted different Likert scales which ranged from 1-3 to 1-5. However, to achieve uniformity, the present study adopted 6 Likert scale in all the sections of the questionnaire. The scale included the rating ranging from 1=Absolutely Disagree, 2=Rather Disagree, 3=Disagree, 4=Agree, 5=Rather Agree, 6=Absolutely Agree.

Thus, the MLQ questionnaire aspect placed focus on the transformational and transactional leadership styles. In total, the questionnaire has a total of 14 subscales; communication (5 items), coordination (5 items), mutual support (4 items) efforts (4 items), cohesion, (4 items), effectiveness (4 items), efficiency (4 items), individualised consideration (4 items), intellectual simulation (4 items), inspirational motivation (4 items), individualised influence (4 items), management by exception active (4 items) and management by exception passive (4 items). The first seven subscales were used to determine teamwork quality and team outcome, while the remaining seven were used to examine the transformational and transactional leadership styles.

When obtaining reliability statistics for the data, Cronbach's alpha was used to test the internal consistency among variables (Table 3). According to Cripps (2017), a Cronbach's alpha coefficient ranges from 0 to 1 with a value closer to 1 indicating a higher level of internal consistency among the items that make up the scale. All the scales and sub-scales displayed alpha coefficients that were greater than 0.7, which is the minimum degree of reliability that is regarded to be acceptable.

In addition to this, the inter-item correlation coefficients were found to be positive and greater than 0.3 across all the scales.

Table 3. Coefficient of alpha of validated scales and the number of items in the subscales

Scale of variables	Cronbach's alpha	No. of items
<b>Teamwork quality</b>		
Communications	0.883	3
Coordination	0.805	5
Mutual Support	0.921	4
Effort	0.898	4
Cohesion	0.917	4
<b>Team outcome</b>		
Effectiveness	0.944	4
Efficiency	0.921	4
<b>Transformational leadership style</b>		
Individual Consideration	0.913	4
Intellectual Simulation	0.923	4
Individual Influence	0.951	4
Inspirational Motivation	0.943	4
<b>Transactional leadership style</b>		
Contingent Reward	0.990	4
Management By Exception (Active)	0.927	4
Management By Exception (Passive)	0.920	4

Source: Ogunnaike (2023); author's calculation based on Appendix 2

## 2.5. Method of analysis

This study employed the statistical software SPSS version 29 to analyse the data obtained from a questionnaire. The Statistical Package for the Social Sciences (SPSS) is a robust and extensively employed software for conducting data analysis across diverse domains, particularly within the social sciences. The software provides a multitude of functionalities to automate intricate statistical computations and processes, thereby reducing the burden on researchers to perform such computations manually and saving their time.

Cronbach's alpha was employed to assess the internal consistency of the scale utilised, as part of a reliability test conducted on the data. The assessment of the consistency and stability of a research instrument is a crucial statistical measure known as the reliability test. The statistical properties of

the scales were evaluated through the computation of measures of central tendency, variability, and distribution, specifically the mean, median, and standard deviation.

The study employed the One-Way ANOVA test and Post Hoc test with Tamhane method to ascertain statistically significant variations among the variables. The aforementioned assessments were employed to scrutinise the calibre of the team and its influence on the team's final result, along with scrutinising the various styles of leadership. The analysis of variance (ANOVA) is a statistical technique utilised to evaluate the significance of variances among group means. On the other hand, the Post Hoc test is employed to determine the specific groups that exhibit significant differences from each other. Regression analysis was used to analyse the relationship and the impact of the leadership styles considered in the study on both teamwork quality and to understand the predictors in the models.

The utilisation of SPSS in the present investigation was pivotal in furnishing precise and dependable statistical outcomes that were indispensable in formulating inferences and proposing suggestions. The assessment of reliability demonstrated the internal consistency of the research tool, and the application of ANOVA and Post Hoc analysis facilitated the detection of significant statistical variances between the groups. The implications of the study's findings are relevant for both practical applications and future research endeavours within the domain of team quality and leadership styles.

### **3. DATA PRESENTATION AND ANALYSIS**

The data analysis was conducted using SPSS 29 software. The initial step in the analytical process involved obtaining the reliability and validity of the data. Descriptive statistics are utilised to determine the central tendency and variability of data. According to Fisher and Marshall (2009), numerical or graphical representations are utilised to comprehend the characteristics and factors of the sample through the application of descriptive statistics.

#### **3.1. Descriptive statistics of the scales**

The first step of the data analysis is to check the used scales' internal consistency and validity. Item with insufficient accuracy of measurement have been eliminated. To evaluate the reliability, Cronbach's Alpha has been captured using SPSS 29.0. All the scales were obtained at an acceptable level of internal consistency where the Cronbach's Alpha for the teamwork scales ranged from 0.805- 0.944 and multifactor leadership ranged from 0.913-0.943. Although two items were removed from the communication subscale due to very weak inter-item correlation coefficients. An item was reversed in both coordination and effort due to negative and weak inter-item correction coefficients, after which the scales fall within the acceptable Cronbach's alpha criteria.

Table 4. contains the the mean, median and standard deviation of of all the scales as assessed by all the respondents. Looking at the teamwork quality, effectiveness is somehow rated the highest while coordination has the lowest mean score rating on the scale. Meanwhile, on the MLQ scale, intellectual simulation has the highest rating while the management by exception passive got the lowest mean score rating. Something worthy to notice is the standard deviation across the subscales. It quantifies the degree of dispersion or variability exhibited by a dataset with respect to its mean value. Upon examination of the standard deviation values presented in the table, it is evident that the subscales exhibit varying degrees of variability, with certain subscales displaying greater standard deviations in comparison to others.

The standard deviations for the subscales of communication, mutual support, and cohesion are greater than 1, which suggests a considerable degree of variability in the mean scores obtained for these subscales. By contrast, the standard deviations for the subscales of Efficiency and Coordination are less than 1, suggesting a reduced level of variability in the scores for these subscales.

In general, the standard deviations in this table indicate that there is some variability in the scores for each subscale, although the degree of variability varies across subscales. This variation may be attributable to individual differences in how participants perceive and respond to group dynamics, which could influence their subscale rating. Thus, the data indicates that the study participants held favourable perceptions regarding the quality of teamwork and leadership, exhibiting sound internal consistency.

Table 4. Descriptive Statistics of the scales

Variable scales	Cronbach's	Mean	Median	Std. deviation
<b>Teamwork quality</b>	<b>0.931</b>	<b>4.60</b>	<b>4.75</b>	<b>0.815</b>
Communication	0.883	4.81	5.00	1.095
Coordination	0.805	4.44	4.60	0.926
Mutual support	0.921	4.85	5.00	1.069
Effort	0.898	4.76	5.00	1.091
Cohesion	0.917	4.72	5.00	1.074
<b>Teamwork outcomes</b>	<b>0.952</b>	<b>4.80</b>	<b>5.00</b>	<b>0.953</b>
Effectiveness	0.944	4.89	5.00	1.022
Efficiency	0.921	4.70	4.75	0.988
<b>Transformational leadership style</b>				
Individualized consideration	0.913	4.61	4.75	1.272
Intellectual simulation	0.923	4.65	4.75	1.160
Inspirational motivation	0.951	4.64	5.00	1.177
Individual influence	0.943	4.62	5.00	1.239
<b>Transactional leadership style</b>				
Contingent reward	0.909	4.60	4.75	1.149
Management by exception (active)	0.927	4.21	4.00	1.315
Management by exception (passive)	0.920	2.90	3.00	1.292

Source: Ogunnaike (2023) author's calculation from Appendix 2

By comparing the mean score of the gender, the data set shows that the means score for the male respondents are higher than that of the females across the subscales except for coordination and effectiveness where the female have higher mean score than the male respondents on the teamwork quality scale.

The findings suggest that there are no appreciable differences in the scores of the different teamwork quality measures between the male and female participants, as all p-values are higher than 0.05. But there are some variations in the results when it comes to leadership styles. Male participants outperformed female participants on Management by Exception (active), with a p-value of 0.032 indicating that this difference was statistically significant. Male participants similarly scored higher than the female participants on the Individual Influence scale, but the difference was not statistically significant  $p = 0.051$  (Table 4).

Additionally, it indicates that men consider management by exception passive to be more common in the workplace than women do (3.14 vs. 2.38, respectively), as evidenced by the lower mean score for this leadership style for men than for women. The statistically significant t-value of 2.828 and p-value of 0.006 indicate that there is a substantial difference between how men and women perceive this leadership practices.

Males scored higher on the management by exception (passive) scale than females. However, collaboration quality scores were not gendered. The sample size for female participants is limited, which may limit the applicability of the results.

Table 4. T-test result for the gender group on all the scales

Scales	Male N= (77)		Female N= (31)		t-value	p-value
	Mean	Std. Deviation	Mean	Std. Deviation		
<b>Teamwork quality</b>						
Communication	4.85	1.080	4.68	1.166	0.728	0.468
Coordination	4.42	0.925	4.52	0.959	-0.499	0.619
Mutual Support	4.89	1.061	4.84	1.093	0.224	0.823
Effort	4.78	1.042	4.77	1.172	0.022	0.983
Cohesion	4.77	1.060	4.57	1.122	0.873	0.385
<b>Team outcomes</b>						
Effectiveness	4.89	1.000	4.96	1.067	-0.323	0.747
Efficiency	4.73	0.921	4.69	1.109	0.232	0.817
<b>MLQ</b>						
Individualised consideration	4.72	1.259	4.46	1.248	0.978	0.331
Intellectual stimulation	4.78	1.117	4.42	1.239	1.454	0.149
Inspirational motivation	4.68	1.154	4.47	1.248	0.852	0.396
Individual influence	4.74	1.154	4.23	1.370	1.971	0.051
Contingent reward	4.68	1.153	4.40	1.134	1.161	0.248
Management by exception(active)	4.37	1.307	3.77	1.284	2.171	0.032
Management by exception(passive)	3.14	1.252	2.38	1.276	2.828	0.006

Source: Ogunnaike 2023; author's calculation based on Appendix 3

One-way ANOVA Post Hoc test with Tamhane method was employed to ascertain disparities in assessments among multiple groups, with the aim of identifying any significant statistical differences between the length of working within the organisation groups with respect to MLQ scales. The findings indicate that there were no significant differences between the tenure of working group, as determined by statistical analysis (Appendix 3).

According to the data, there is a positive correlation between the duration of a team's length of stay and the mean score for individualised consideration. The data indicates that there is a statistically significant increase in the mean score from 4.8182 for teams with a duration of 7-12 months to 5.0357 for teams with a duration of 25-36 months. Teams that have been in existence for a period of 7-12 months exhibit the highest standard deviation, which suggests a greater degree of variability in the ratings provided by team members. The collective average score of all teams is 4.6136.

Thus, this information suggests that with increased duration of collaboration among multicultural teams, there is a tendency for team members to perceive the leader as exhibiting greater individualised consideration towards them. This phenomenon may be attributed to heightened levels of familiarity, trust, and comprehension of distinct variations and inclinations among individuals. To cultivate a culture of individualised consideration, it may be advantageous for team leaders to prioritise the establishment of robust relationships with their team members and exhibit a sincere interest in their personal and professional growth.

The results suggest that leaders maintain a consistent level of intellectual stimulation irrespective of team tenure, as evidenced by the relatively stable mean scores observed across all four-time intervals.

The data suggests that there is a positive correlation between team tenure and mean scores for Inspirational Motivation, implying that leaders tend to enhance their ability to inspire and motivate their team members as they gain more experience.

In terms of individual influence, the average scores exhibit a degree of consistency during the initial three time intervals, followed by a marked decline for teams collaborating over a period of

25-36 months. The aforementioned proposition posits that leaders' capacity to exert personal influence on team members may diminish following a specific duration of working together.

The results indicate that the mean scores for Contingent Reward exhibit a degree of stability during the initial three-time intervals. However, a significant increase is observed for teams that have collaborated for a duration of 25-36 months. This proposition posits that leaders may exhibit an increased propensity to employ contingent rewards as a leadership tactic subsequent to a specific duration of collaborative engagement.

The Management by Exception Active approach exhibits a consistent mean score trend during the initial three time intervals, followed by a substantial decline for teams operating collaboratively for a duration of 25-36 months. This implies that leaders may exhibit a decreased tendency to engage in proactive team management and instead opt to intervene solely in response to issues or exceptional circumstances.

The results indicate that in Management by Exception Passive, there is a negative correlation between team tenure and mean scores. Specifically, as team tenure increases, the mean scores decrease. This suggests that as teams work together for extended periods, leaders tend to reduce their propensity to intervene and instead delegate the responsibility of problem-solving to their team members.

In general, the data indicates that the duration of working together among multicultural teams may influence the leadership approach adopted by their leaders. Certain aspects of leadership style exhibit consistency over time, whereas others exhibit distinct patterns of transformation as the duration of team membership increases.

### **3.2. Independent sample test on team quality**

Looking at the distribution of the mean score of the respondents on transformational leadership style, a new variable called TL2 was created. The variable comprises of two groups, group 1 for low score ratings and group 2 other for high score ratings. An independent sample test was conducted on the team quality to check if there is a significant difference between the groups to

see how they perceive the teamwork quality and team outcome. Table 5. shows the outcome of the analysis. shows that group 2 was associated with significantly higher means in all dimensions of teamwork quality and team outcomes compared to group 1 as the p-values indicate that these differences are statistically significant at  $p < .05$ .

Table 5. Independent sample test of team quality based on TL2 groupings

	TL2	N	Mean	Std. deviation	t-value	p-value
<b>Teamwork quality</b>						
Communication	1	26	3.67	0.943	-0.743	0.001
	2	84	5.16	0.880		
Coordination	1	26	3.52	0.650	-0.702	0.001
	2	84	4.73	0.804		
Mutual Support	1	26	3.60	0.949	-0.905	0.001
	2	84	5.24	0.763		
Effort	1	26	3.64	0.894	-0.725	0.001
	2	84	5.10	0.901		
Cohesion	1	26	3.51	0.726	-0.841	0.001
	2	84	5.09	0.869		
<b>Team outcome</b>						
Effectiveness	1	26	3.82	0.986	-0.754	0.001
	2	84	5.22	0.778		
Efficiency	1	26	3.64	0.762	-0.777	0.001
	2	84	5.03	0.804		

Source: Ogunnaike 2023; author's calculation based on Appendix 5

In the same vein, similar analysis was carried out on the transactional leadership style. A new variable was recoded as TA2 thereby categorising the responses into two groups. Group 1 and those who rated the transactional leadership score low while group 2 are those who rated it high. An independent sample test was conducted to see if there is a significant statistical difference between the dimensions of the team outcome and teamwork quality. Table 6. shows the outcome of the analysis that group 2 was associated with significantly higher means in all dimensions of teamwork quality and team outcomes as compared to group 1. Moreover, the p-values indicate that these differences are statistically significant at  $p < .05$ .

Table 6. Independent sample test of team quality based on TA2 groupings

	TA2	N	Mean	Std. deviation	t-value	p-value
<b>Teamwork quality</b>						
Communication	1	26	4.37	1.174	-0.384	0.001
	2	84	5.13	0.913		
Coordination	1	26	4.14	0.966	-0.308	0.001
	2	84	4.67	0.833		
Mutual support	1	26	4.38	1.221	-0.428	0.001
	2	84	5.20	0.781		
Effort	1	26	4.43	1.192	-0.278	0.001
	2	84	5.00	0.948		
Cohesion	1	26	4.22	1.103	-0.459	0.001
	2	84	5.09	0.890		
<b>Team outcome</b>						
Effectiveness	1	26	4.48	1.141	-0.383	0.001
	2	84	5.19	0.806		
Efficiency	1	26	4.17	1.016	-0.550	0.001
	2	84	5.10	0.757		

Source: Ogunnaike 2023; author's calculation based on Appendix 5

### 3.3. Regression analysis

Regression analysis was conducted to analyse the impact of both transformational and transactional leadership on the team quality construct, that is, the teamwork quality and team outcome. Tables 7 to 12 show the outcome of the regression analysis, indicating the model fit, ANOVA and the coefficient of beta.

Multiple regression analysis was used and the result shows that 73.1% of the variance in the teamwork quality (TWQ) can be accounted for by three predictors, collectively,  $F(3, 106) = 99.533$ ,  $p < .001$ . Looking at the individual contributions of the predictors the result shows that inspirational motivation ( $\beta = .540$ ,  $t = 6.857$ ,  $p < .001$ ), intellectual stimulation ( $\beta = .338$ ,  $t = 4.289$ ,  $p < .001$ ) predict positively while management by exception passive ( $\beta = -.157$ ,  $t = -3.140$ ,  $p < .002$ ) have negative prediction.

Table 7. Model for TWQ

Model	R	R square	Adjusted R square	F change	Sig. F change
1	0.859	0.738	0.731	9.859	0.002

Source: Ogunnaike 2023; author's calculation

Table 8. Anova TWQ

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	53.496	3	17.832	99.533	0.000
	Residual	18.990	106	179		
	Total	72.486	109			

Source: Ogunnaike 2023; author's calculation

Table 9. Coefficients of the predictors on teamwork quality (TWQ)

Model		Unstandardized coefficients		Standardized coefficients	t-value	p-value
		$\beta$	Std. error	$\beta$		
1	(Constant)	2.047	0.206		9.942	0.001
	Inspirational motivation	0.375	0.055	0.540	6.857	0.001
	Intellectual simulation	0.238	0.055	0.338	4.289	0.001
	Management by exception passive	-0.099	0.032	-0.157	-3.140	0.002

Source: Ogunnaike 2023; author's calculation

In the same vein the Tables 10 to 12 show the regression analysis results conducted on the team outcome (TO) as influenced by the practices of both transformational and transactional leadership styles within this organization. The result shows that 65.6% of the variance in the team outcome (TO) can be accounted for by four predictors, collectively,  $F(4,105)=5.598, p<.001$ . Looking at the individual contributions of the predictors the result shows that intellectual simulation ( $\beta=.427, t=3.785, p<.001$ ), inspirational motivation ( $\beta=.415, t=3.514, p<.001$ ) and Contingent reward ( $\beta=.324, t= 2.366, p<.02$ ) predict positively the team outcome or performance while individual influence ( $\beta= -.345, t=-3.063, p<.003$ ) have negative prediction.

Table 10. Model for team outcome (TO)

Model	R	R square	Adjusted R square	F change	Sig. F change
1	0.818	0.669	0.656	5.598	0.020

Source: Ogunnaike 2023; author's calculation

Table 11. Anova team outcome (TO)

Model		Sum of Squares	df	Mean square	F	Sig.
1	Regression	66.188	4	16.547	52.959	0.000
	Residual	32.807	105	312		
	Total	98.996	109			

Source: Ogunnaike 2023; author's calculation

Table 12. Coefficient of beta on team outcome (TO)

Model		Unstandardized coefficients		Standardized coefficients	t-value	p-value
		$\beta$	Std. error	$\beta$		
1	(Constant)	1,598	0.234		6.839	0.001
	Intellectual simulation	0.351	0.093	0.427	3.785	0.001
	Inspirational motivation	0.336	0.096	0.415	3.514	0.001
	Individual influence	-0.265	0.087	-0.345	-3.063	0.003
	Contingent reward	0.269	0.114	0.324	2.366	0.020

Source: Ogunnaike 2023; author's calculation

### 3.3. Correlation analysis of team quality and MLQ scale

From table correlation matrix table (Appendix 4), Individualized consideration has a significant relationship with all subscale of team work quality  $p < 0.01$ , Intellectual simulation has a significant relationship with all subscale of team work quality  $p < 0.01$ , inspirational motivation has a significant relationship with all subscale of team work quality  $p < 0.01$ , individual influence has a significant relationship with all subscale of team work quality  $p < 0.01$ , contingent reward has a

significant relationship with all subscale of team work quality  $p < 0.01$ , management by exception active has a significant relationship with all subscale of team work quality  $p < 0.01$ , management by exception passive has a significant relationship with only one subscale of team work quality coordination  $r = -0.248$   $p = 0.009$ , while it does not have significant relationship with the others.

Pearson's coefficient of correlation measures the strength and direction of association between two quantitative variables. Correlation may be linear, non-linear and positive or negative' (Collis & Hussey, 2014, p. 270). In this study, Spearman's correlation coefficient (rho-  $\rho$ ) was performed to measure the strength and direction of monotonic association between nonparametric variables measured on an ordinal scale (Sedgwick, 2014). Spearman's correlation coefficient ( $\rho$ ), the strength of the correlative relationships was assessed as follows,  $0.30 \leq \rho \leq 0.49$  – weak relationship;  $0.50 \leq \rho \leq 0.69$  – moderate relationship;  $0.70 \leq \rho \leq 0.89$  – strong relationship;  $\rho \geq 0.9$  very strong relationship (Dancey and Reidy, 2004, p.176). Several Teamwork Quality subscales revealed a significant correlation with Multifactor Leadership, although Management by exception passive did not show any relationship with any of the Teamwork Quality subscale except with Coordination a subscale ( $r = -0.248$  \*\*  $p = 0.009$ ).

### **3.4 Findings and Summary from the Data Analysis**

The study used Spearman's correlation coefficient ( $\rho$ ) to measure the strength and direction of monotonic association between nonparametric variables measured on an ordinal scale. The result from the findings reveals that there is a significant relationship between leadership styles and teamwork quality. Appendix 4 specifically show that there is a statistical relationship between the various leadership styles including individualised consideration, intellectual stimulation, inspirational motivation, and management by exception (active). The result of the analysis suggests that all the leadership styles examined in the study have a significant relationship with all subscales of teamwork quality (meaning there is a statistically significant relationship between these leadership styles and teamwork quality), with a  $p < .01$ . This implies that the relationship between these leadership styles and teamwork quality is very likely not due to chance.

The result in table Appendix 4 further explains that management by exception passive has a significant relationship only with one subscale of teamwork quality, which is communication

(indicated by the correlation coefficient  $r = -0.248$  and a  $p = .009$ ). This means that the relationship between this leadership style and communication aspect of teamwork quality is significant, while it is not significant for other subscales.

## 4. DISCUSSION

This study made a significant contribution by conducting an empirical analysis of the conceptual framework that leadership styles have influence on team quality and outcomes using start-up company that specialises in production of portable electronic devices while focusing on the transformational and transactional forms of leadership styles.

The primary contribution of this research is its validation of the positive impact of leadership styles within the sample organization, that is, transformational leadership style in line with previous studies which states that leaders who adopt the transformational style of leadership encourage their followers to look beyond their interests and engage in meaningful work that advances the organization. They inspire and motivate followers to realize a shared vision or objective by uplifting, inspiring, and supporting them (Christiansen & Walumba, 2013).

The empirical data also validates transactional leadership style having positive influence on the team performance as Limsila and Ogunlana (2008) associated transactional leadership style with positive employee performance in the construction industry. Similarly, Dai *et al.*, (2013) study on employees of international hotels in China showed transactional leadership to have a positive effect on job satisfaction and employee productivity in the hotel industry.

The data from the regression analysis performed helps to establish the relationship and the impact of the leadership style on the teamwork quality and team outcome. When the elements of teamwork quality (communication, coordination, mutual support, effort and cohesion) were regressed with the practices in both transformation and transactional leadership style, three models were generated and the model with the best fit has three predictors having about 73% of the variability that happens within the model. Two out of the three predictors are leadership practices that are attributed to transformational leadership style and they both have positive impact.

Similarly, the regression between the elements of team outcome (effectiveness and efficiency) and the two leadership styles also gave a good model fit with 4 leadership practices as the predictors being responsible for about 66% of the variability within the model. Three out of the leadership practices are from transformational leadership styles while the fourth one is from the transactional leadership style.

The beta coefficients of the predictors in the first model for the teamwork quality implies that when there is an increase of one unit in the inspirational motivation, there is an increase of 0.54 unit in the teamwork quality, for every increase of one unit in the intellectual simulation, there is an increase of 0.34 unit in the teamwork quality, for every increase of one unit in the management by exception passive, there is decrease of 0.16 unit in the teamwork quality.

In the second model, the beta coefficient of the predictors in the team outcome shows that whenever there is a unit increase in the intellectual simulation, there is an increase of 0.43 unit in the team outcome, for every increase of one unit in the inspirational motivation, there is an increase of 0.42 unit in the team outcome, for every increase of one unit in the individual influence, there is a decrease of 0.35 unit in the team outcome and for every increase of one unit in the contingent reward, there is an increase of 0.32 unit in the team outcome.

Recoding the tranformational(TL2) and transactional (TA2) leadership styles variables from continous to categorical variables having two groups of low and high and comparing the scores of the respondents on the team quality based on either TL2 or TA2. the outcome suggests that there is no major difference between the way the two groups perceives their team quality in general term.

Team diversity is common feature in several organisations today. Organisations in the modern business clime are often multicultural because of the practice of globalisation, inclusion, the emphasis on competency, and the organisational focus on improved performance. To this end, and effective leadership style is needed to help manage the multicultural nomenclature of diverse teams to produce positive team outcome. The assumption put to test in this study is that leadership style influences the outcome of teamwork, and the team outcome.

Further, the evidence of past literature was used to establish two leadership styles that predominantly contributes to the performance of teams and individual employees. The transactional leadership style and the transformational leadership style were identified through evidence from past studies to be the two major forms of leadership styles that influence team outcomes. While the transactional leadership style has been discussed in many literatures to involve the use of rewards and systems to motivate employees and manage their performance, the transformational leadership through the evidence of literature aligns the objective of employees with organisational objectives as the strategy for performance management. This study has

examined both leadership styles and teamwork quality and there is evidence of a significant relationship between them.

Every research endeavour has its own set of limitations, and the present study is not an exemption to this rule. One notable constraint of our analysis is that although it was based on the input of production staff, it would have been advisable to supplement this data with interviews of organizational leaders to obtain a more comprehensive understanding of the research.

#### **4.1 Theoretical Explanation of Results**

Bass and Riggio (2006), outline four components of transactional leadership namely, idealised leadership, inspirational leadership, intellectual simulation, and individualised consideration all of which were measured in the MLQ model adopted in the design of the survey questions. Bass and Riggio (2006) also identified four components of transactional leadership: contingent reward, management-by-exception (active and passive), and laissez-faire which was also well integrated into the MQL questionnaire model adopted for this research work.

Idealized influence refers to the leader's ability to serve as a role model for followers and gain their respect and trust. Transformational leaders set high ethical standards and lead by example, inspiring followers to emulate their behaviour and values. In the study, this component was measured as a subscale of four questions that quarried the leaders' selflessness, the leader's approach to respect within teams, consideration for ethics, leaders' ability to share value and team. The result from the analysis of this leadership component in relation to multicultural teams which is represented in the study by the difference in country of origin. From the result of the analysis that the idealised influence is predominantly adopted by leaders across the different showing evidence of transformational leadership.

According to Bass and Riggio (2006), transformational leaders through inspirational motivation communicate a compelling vision of the future and inspire followers to commit to that vision, even in the face of significant challenges. Several research have posited that that all components of transformational leadership are positively related to organizational outcomes (Avolio &

Yammarino 2002; Chen *et al.*, 2018; Khan *et al.*, 2020). Similarly, this study reveals that transformational leadership correlates with the teamwork outcome. The result from the correlation analysis show that all the subscales of the transformational leadership style relate with teamwork quality outcome.

In addition, Lowe *et al.*, (1996) examined the impact of transformational and transactional leadership on team effectiveness. They found that the combination of transformational and transactional leadership had a stronger positive effect on team effectiveness than either type of leadership alone. Similarly, in the present study, the evidence from result of the correlation analysis reveals that two types of leadership, transactional and transformational both relate to team effectiveness and other components examined in measuring team quality.

The result from the study shows that the different styles of transformational leadership and transactional leadership with the exception of Management by Exception (Active), have positive relationship with the team quality. By implication, the combination of the transformational leadership and transactional leadership appears to be effective in managing multicultural diversity that characterises the different teams in the organisations.

However, in the present study the years of experience job experience appears to have given a different dimension to the outcome of the study. The result from the analysis show that employees with longer period of experience and fewer period of experience (7-12 months and 25-36 month) perceive leaders differently from other employees. The implication of this result is that the years of experience of employees also contributes to how employees and team members perceive their leaders. Although a similar observation was made in the evaluation of the relationship between employee years of experience and the teamwork quality (TWQ), no significance was observed in the subscales of teamwork quality except for effort. However, the observation is valid because a statistically significant difference is observed in all the subscales.

In conclusion, this study has examined the impact of transformational and transactional leadership styles on team quality in multicultural teams. The findings indicate that both styles of leadership are positively related to team quality outcomes. The combination of transformational and transactional leadership is particularly effective in managing multicultural diversity in teams. However, the years of experience of employees can also contribute to how employees perceive their leaders, highlighting the need for leaders to be aware of the impact of their leadership style

on different employee groups. Overall, this study underscores the importance of leadership in promoting team quality in multicultural teams and provides insights into how leaders can effectively manage diverse teams.

## **4.2 Managerial Implication**

The study has a number of consequences for human resources. It first emphasizes the significance of leadership in encouraging team excellence in ethnic teams. In order to develop successful leadership abilities, particularly in managing diverse teams, human resource managers should pay close attention to the leadership style of their managers and offer training and assistance. The study also shows that managing multicultural teams benefits greatly from the combination of transformational and transactional leadership approaches. This suggests that when assigning managers to lead diverse teams, HR managers should take their leadership style into account.

The study also emphasizes the need of taking employees' years of experience into account when assessing the influence of leadership on team quality. The potential effects of employee behaviour should be understood by HR managers.

## CONCLUSION

The result from the present study which shows a correlation between the leadership subscales and the subscales of team quality has affirmed the relation that exist between leadership styles and the outcomes of teams. Explicitly, the transformational leadership style is more related in contributing to team effectiveness, communication within teams, team efficiency, and team cohesion compared to the transactional leadership style. By implication, quality team outcome is likely to emerge from a transformational leadership.

Beyond the leadership other factors have been examined in this research to contribute to teamwork quality including communication within teams, the synchronisation and structuring of team efforts, support amongst team members, the level of efforts invested in a task, and team cohesion. The variables were tested to identify gave an insight on team activities. The outcome of these activities was evaluated through the measurements of team effectiveness and efficiency. The result from the evaluation of team quality show that the employees rate themselves to be successful, however, they presume that from the organisation perspective, they are not perceived to be successful and ineffective because they do not complete tasks as captured in the survey.

In addition, the survey conducted reflects the multicultural dimension that the study seeks to examine as the results from the data gathered show that four continents of Africa, Europe, Asia, and North America, constituted the participants in the survey. This further shows the validity of the data in answering the research questions designed for the study. The difference in the countries of the participants establish that the multicultural context of the study justifying the arguments carried out in the research.

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# APPENDICES

## Appendix 1. Questionnaire

**Introduction:** Hello, I am Temitope, a final year student of International Business in Tallinn University of Technology, Estonia. As part of the requirements for my master's thesis, I am conducting research on **The Influence of Multicultural Teams on Managers' Leadership Style**.

I hope you can spare about 10 minutes of your precious time to help me get going in this study. The survey is anonymous, the results are confidential, purely for academic purpose and will never be used otherwise. If you have any questions, please email me at [teogun@ttu.ee](mailto:teogun@ttu.ee)

Thank you in advance!

(NB: This survey passed through HR Department required approval)

Instructions: Kindly respond to the items appropriately

Gender: 1. Male, 2. Female, 3. Prefer not to mention

How long have you been working here?

1 - 6 months, 7-12 months, 13-18 months, 19-24 months, 25-30 months, 31-36 months

Department

1. Alpha 2.Omega 3.Beta 4.Gamma 5. Supply Chain 6. Warehouse 7. Delta 8. Kappa

Country of origin \_\_\_\_\_

### SECTION 1: Teamwork Quality

Please read the following statements and indicate your agreement on the scale of 1-6 where 1 stands for = Absolutely disagree, 2=Rather disagree, 3=Disagree, 4=Agree, 5=Rather agree and 6=Absolutely agree

#### Communication

1. There is frequent communication within the team.
2. The team members communicate mostly directly and personally with each other.
3. Work-relevant information is shared openly by all team members.
4. Important information is kept away from other team members in certain situations.
5. In our team there are conflicts regarding the openness of the information flow.

### Coordination

1. The work done on subtasks to achieve team goals is closely harmonized.
2. There are clear and fully comprehended goals for subtasks within our team.
3. The goals for subtasks are accepted by all team members.
4. There are conflicting interests in our team regarding subtasks/subgoals.
5. The work done on subtasks to achieve team goals is closely harmonized.

### Mutual support

1. The team members help and support each other as best they could?
2. If conflicts came up, they are easily and quickly resolved.
3. Suggestions and contributions of team members are respected.
4. Our team is able to reach consensus regarding important issues.

### Effort

1. Every team member puts much effort into the team tasks.
2. Every team member makes the work quality their highest priority.
3. Our team puts much effort into the work.
4. There are conflicts regarding the effort that team members put into the work.

### Cohesion

1. All members are fully integrated in our team.
2. Our team is sticking together.
3. The members of our team felt proud to be part of the team.
4. Every team member feels responsible for maintaining and protecting the team.

### Effectiveness

1. Going by the results, our teamwork, can be regarded as successful.
2. From the management perspective, all team goals are achieved.
3. Our teamwork results are of high quality.
4. The team is satisfied with the teamwork results.

### Efficiency

1. The company is satisfied with how the teamwork progresses.
2. Our team works in a cost-efficient way.
3. Overall, our team works in a time-efficient way.
4. Our team usually is within schedule with the work.

## Section 2: Multifactor Leadership Questionnaire

Please read the following statements and indicate your agreement on the scale of 1-6 where 1 stands for = Absolutely disagree, 2=Rather disagree, 3=Disagree, 4=Agree, 5=Rather agree and 6=Absolutely agree

### Transformational leadership

#### Individualized consideration

1. My leader spends time teaching and coaching me.
2. My leader treats me as an individual rather than just a member of the group.
3. My leader considers that I have different needs, abilities, and aspirations from others.
4. My leader helps me develop my strengths.

#### Intellectual simulation

1. My leader re-examines critical assumptions to question whether they are appropriate.
2. My leader Seeks differing perspectives when solving problems.
3. My leader gets you to look at problems from many different angles.
4. My leader suggests new ways of looking at how to complete assignments.

#### Inspirational motivation

1. My leader talks optimistically about the future.
2. My leader talks enthusiastically about what needs to be accomplished.
3. My leader articulates a compelling vision of the future.
4. My leader expresses confidence that goals will be achieved.

#### Individualized influence

1. My leader goes beyond self-interest for the good of the group.
2. My leader acts in ways that build respect.
3. My leader considers the moral and ethical consequences of decisions.
4. My leader talks about his/her most important values and beliefs.

#### Transactional leadership

##### Contingent reward

1. My leader provides assistance in exchange for my efforts.
2. My leader discusses in specific terms what is responsible for achieving performance targets.
3. My leader makes it clear what I can expect to receive when performance goals are achieved.
4. My leader expresses satisfaction when I meet expectations.

##### Management by exception active

1. My leader focuses attention on irregularities, mistakes, exceptions, and deviations.
2. My leader concentrates full attention on dealing with mistakes, complaints, and failures.
3. My leader keeps track of all mistakes.
4. My leader directs our attention to failures to meet standards.

##### Management by exception passive

1. My leader does not interfere until problems become serious.
2. My leader waits for things to go wrong before taking action.
3. My leader shows that he/she is a firm believer in "If it isn't broken don't fix it".
4. My leader demonstrates that problems must become chronic before taking action.

**Thank you for your time.**

## **Appendix 2. Cronbach's alpha and descriptive statistics**

Link to the data

[https://drive.google.com/drive/folders/1WgEzEHHmysR3ArQDW2PDeo6UnOoB0Prh?usp=share\\_link](https://drive.google.com/drive/folders/1WgEzEHHmysR3ArQDW2PDeo6UnOoB0Prh?usp=share_link)

### **Appendix 3. Tables from SPSS outputs**

Link to the data

[https://drive.google.com/drive/folders/1WgEzEHHmysR3ArQDW2PDeo6UnOoB0Prh?usp=share\\_link](https://drive.google.com/drive/folders/1WgEzEHHmysR3ArQDW2PDeo6UnOoB0Prh?usp=share_link)

## **Appendix 4 Correlation matrix table**

Link to the drive for the data

[https://drive.google.com/drive/folders/1WgEzEHHmysR3ArQDW2PDeo6UnOoB0Prh?usp=share\\_link](https://drive.google.com/drive/folders/1WgEzEHHmysR3ArQDW2PDeo6UnOoB0Prh?usp=share_link)

## **Appendix 5. Regression analysis**

[https://drive.google.com/drive/folders/1WgEzEHHmysR3ArQDW2PDeo6UnOoB0Prh?usp=share\\_link](https://drive.google.com/drive/folders/1WgEzEHHmysR3ArQDW2PDeo6UnOoB0Prh?usp=share_link)

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