



Vaasan yliopisto
UNIVERSITY OF VAASA

Akhtar Rasheed (2302277)

**Impact of transformational leadership style on
employee creativity in Finnish manufacturing
industry**

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Abstract

This thesis examines the impact of transformational leadership (TL), rooted in Bass's (1985) transformational leadership theory, on employee creativity in the Finnish manufacturing sector, a critical industry for Finland's global competitiveness. Transformational leadership theory emphasises four core dimensions of transformational leadership—Idealised Influence, Inspirational Motivation, Intellectual Stimulation, and Individualised Consideration—that collectively inspire employees to exceed expectations and foster innovation. By exploring these dimensions, the study investigates how leadership fosters creativity and engagement among employees. Grounded in a positivist paradigm, the research employs a quantitative design, collecting survey data from manufacturing professionals. Regression analysis is used to evaluate the relationship between leadership dimensions and employee creativity. The findings reveal that all four dimensions significantly enhance creativity, with Intellectual Stimulation being the strongest predictor. Idealised Influence builds trust, Inspirational Motivation fosters shared goals, and Individualised Consideration addresses employees' unique needs. These results offer theoretical insights by advancing understanding of how transformational leadership shapes creativity in specific cultural and industrial contexts. Practically, they offer Finnish manufacturing leaders' actionable strategies to drive innovation, such as challenging conventional thinking and providing tailored support. While limitations, such as reliance on self-reported data and a single-industry focus, are acknowledged, the study provides a foundation for further exploration across diverse contexts. This research underscores the strategic importance of transformational leadership in cultivating innovation within dynamic industrial environments.

1. Introduction

Transformational leadership has recently been considered for fostering employee creativity, particularly in the context of industries where being innovative is crucial for competitiveness. The manufacturing industry is also, however, characterised by a turbulent and complex environment, and therefore the need to embrace leadership styles that encourage a climate of creativity and change is imperative. This chapter presents the purpose of the study and its objectives and justifies the exploration of the influence transformational leadership has on employee creativity in the Finnish manufacturing sector. This chapter, through an exhaustive consideration of the background and the problem articulated within this framework, works towards understanding the connection between practices in leadership and the development of the creativity of the employees in this key industry. Before moving further, let's develop background for this research in the next section.

1.1 Background

In Finland, manufacturing carries a lot of weight. It is a primary contributor to national income, growth, innovation, and employment opportunities (Pihlajamaa et al., 2023). Manufacturing in Finland covers a range of industries such as machinery, electronics, metalworking, and forestry, which combined made about 25.52% of the country's GDP in 2022 (O'Neill, 2024). The sector has to stay competitive within the context of a global economy, which dominates technological development, complex precision engineering, and a highly skilled workforce. The scope of manufacturing in Finland includes design activities of building ships as well as electronics and robotics, which emphasizes the dynamic development of the country (Nuutila, 2019).

Transformational leadership can be viewed as an approach where innovation and creativity are commonplace, and this is important for the Finnish manufacturing industry. Havrilesky (2022) states that transformational leaders are those who are able to moti-

vate and animate employees through a common vision, break conventional thinking patterns, and foster development within the team (Bass & Riggio, 2006). Such leaders foster a trust and empowerment culture, which is important in dealing with the turbulent challenges of the manufacturing space (Mandagi et al., 2023). In Finland, where the manufacturing sector keeps changing with technological improvements and market orientation, the transformational leadership enables the development of innovation and resilience within the organization.

Employee creativity is useful for innovation in the manufacturing sector, as this speaks to an employee's ability to create new processes, products, and systems or improve on current ones in the organization (Amabile, 2018). Creativity in this perspective is not only an attribute but a product that is also, more so, shaped by the organizational culture and leadership. One of the functions of transformational leadership is to harness the creativity of their subordinates by creating conditions in which making mistakes is acceptable, experimentation is encouraged, and the employees are willing to go beyond carrying out their normal functions (Wang et al., 2011). The relationship between transformational leadership and creativity is of great relevance in manufacturing processes, as innovative approaches in addressing problems are essential in helping organizations remain operational and competitive (Harrikari et al., 2021).

In addition, as brought out by Le Hoang and Ho (2022), the innovations have always been a core component in Finnish industries due to their long history of technological achievements. Employee creativity and transformational leadership, however, become important factors for the preservation of the development legacy. In manufacturing, where the focus and emphasis are on operational effectiveness and the need for constant enhancement of processes, it is a necessity for transformational leaders to elevate the innovation capability of their teams in order to adapt to the complexities posed by globalization, market evolution, or transformation of consumer needs (Reim et al., 2022).

Nasifoglu Elidemir et al. (2020) assessed that employee creativity is a way to drive organizational innovation and competitiveness. Creativity enables organizations to reach new solutions, improve existing processes, and align themselves effectively according to changing market dynamics. However, cultivating creative cultures within organizations requires suitable leadership to inspire, motivate, and empower employees to bring out their creativity to the fullest (Imam et al., 2020).

Moreover, transformational management is considered to be one of the efficient leadership styles when promoting creativity (Berkovich & Eyal, 2021). Knezović & Drkić (2021) demonstrated that by implementing inspiration, motivation, and empowerment into their staff, transformational leaders can develop a supportive working environment where their employees will likely to display innovation and creativity. Through the creation of compelling visions and challenging the status quo, and supporting staff in a tailored manner, transformational leadership can unlock creative energies within teams and drive organizational success.

Shafi et al. (2020) argued that transformational leadership is one of the ways of fostering an organization's creativity. It denotes that transformational managers find the ability to inspire, motivate, and empower workers to create a favourable environment that encourages taking risks, readiness to experiment, and generation of ideas (Gajdzik & Wolniak, 2022). However, despite the significant number of existing researches that clearly show the effect of transformational leadership on organizational performance and job satisfaction, one noticeable gap remains - to understand the implications of this kind of leadership practice on employee creativity in the context of Finnish manufacturing research (Gajdzik & Wolniak, 2022). Most studies on transformational leadership and creativity have been conducted in different industries or cultural settings. This study fills the gap by examining these dynamics in the Finnish manufacturing sector.

1.2 Context of the study: Finnish Manufacturing Industry

According to the work by Imam et al. (2020), the manufacturing sector has the potential of propelling the economy due to its multiple industrial activities both within and outside the borders of Finland. Finland's manufacturing sector is made up of machine and electronics and paper products industries, which are known for their concentration on international markets (Reim et al., 2022). Key industries such as electronics and engineering have also contributed to the strength of Finland's manufacturing sector through adequate research and development as well as a strong infrastructure that has enabled its firms to integrate into global supply chains.

However, the competitive edge initially held over the rest of the economy has now shifted to other areas, bringing about increased pressure on an organization to come up with new and innovative products and processes (Pihlajamaa et al., 2023). Gaining competitive advantage now requires organizations to not only enhance their current processes but also look for new ways of competing. In such fast-changing circumstances, however, management creativity has been identified as the main source of new ideas and change. Employees' ability to think outside of the box is known to be beneficial to product concept development and business process design changes in relation to the market, which are crucial for success (Nasifoglu Elidemir et al., 2020).

Fostering an environment for this creativity requires effective leadership. Transformational leadership, which actively urges employees to go beyond the ordinary, has proven especially efficacious in areas where innovation is paramount (Jun & Lee, 2023). With the help of transformational leaders who build a common goal and champion the cause of taking risks with their minds, organizations continue to be relevant even with the changing pace of the market. Finnish manufacturing companies are also now starting to consider such leadership as a prerequisite for being innovative, not just for adapting but for being a step ahead of the competition.

Sustainability in the country's manufacturing can, therefore, be seen to play a dual critical role as it serves to be the main environmental commitment as well as the main driver for innovation in the sector. As D' Amato et al. (2020) proposed, the implementation of business practices related to sustainability and green technology can help companies not only achieve their 'environmental mission' but create a peculiar positioning in the global competitive market. It is within the broader strategic goals of Finland (Mandagi et al. in 2023) to integrate advanced technology and promote sustainability to maintain a competitive advantage. Important topics that give impetus to the sustained success of the manufacturing industry in Finland include the creativity and innovation, as well as the transformational leadership. These perspectives provide a framework for how the industry can understand its potential role in guiding sustainable practices in a world grappling with globalization and technological change.

While the potential benefits of transformational leadership have been shown in the literature, many studies have not been done to investigate its connection with employee creativity in the context of the manufacturing sector (Della Porta, 2023). The existing research into the manufacturing industry in Finland is limited, often focusing on broader regions or different sectors. Furthermore, most literature reviews generic technological and sustainability trends but do not offer insight into the unusual cultural and industrial dynamics of the Finnish context. Furthermore, the country's emphasis on integrating advanced technologies and being sustainable further highlights that in-depth research is necessary to understand how leadership styles interact with these factors to influence employee creativity (Ilgin & Karjalainen, 2023). This gap should thus be bridged, especially for organisations trying to enhance employee creativity using transformational leadership to become more competitive globally. Next section will summarise the who research work into a research question that this study has to answer at the end.

1.3 Research Question

Sustainability aim of the current research is to examine the role of transformation leadership in triggering and boosting creative in employees in manufacturing industry of Finland where innovation is at the heart of country to produce goods with least negative impact on the environment. The research question of the present study is defined in the following manner:

RQ. How does transformational leadership influence employees' creativity in the Finnish manufacturing sector?

1.4 Significance of Research

This research gives special focus to the unique characteristics of the Finish manufacturing industry and examines whether transformational leadership influence employee creativity within this specific cultural and industrial context. The study draws on the established theories linking transformational leadership and creativity by demonstrating how these two converge into the environment of the manufacturing sector. This study has targeted SMEs manufacturing companies within Finland.

Lemmetty et al. (2020) states that there is an empirical need to examine the effect that may be caused by transformational leadership on the creativity of employees who work in the manufacturing sector of Finland. The spirited and innovative manufacturing in Finland is among the main contributing factors to the country's economy, establishing and keeping competitive advantages in the global market (Azeem et al., 2021). With the most recent effects of globalization and advances in technology, organizations within the sector need to foster a culture of creativity and innovation that will put them ahead in the competitive environment (Pihlajamaa et al., 2023).

For example, Le Hoang and Ho (2022) assessed that the studies, therefore, should seek to fill this gap by providing new empirical evidence and theoretical insights into the con-

nection among employee creativity and transformational leadership in the Finnish manufacturing industry. Understanding how leadership practices influence creativity within this context will be very important for organizations willing to leverage employee creativity into innovative activities that can keep them competitive in the changed marketplace. Besides this, technology integration is at the highest level in this sector in Finland and is characterized by its sustainability (Kivimaa & Rogge, 2022). It is, therefore, very necessary to understand how the leadership style further acts with these features to influence creativity with strategies that are going to be aligned with the unique characteristics of this sector.

1.4.1 Practical Implications of Research

According to Harahap et al. (2023), from a practical perspective, role of transformational leadership in fostering creativity provides guidelines at the leadership and policy levels within the Finnish manufacturing organizations' sector on how to develop leadership is to create culture of creativity and innovation. Reim et al. (2022) described that organizational strategies that provide the best leadership to enhance creativity will enable keys to design specially developed training programs and other leadership development plans to foster and establish employees capable of spurring innovation and withstanding global competition.

1.5 Definitions of key Concepts

Manufacturing Industry

Manufacturing involves combining a number of raw materials, parts, or components and using labour, machinery systems, tools, as well as chemical and biological processes, in creating finished goods (Schwab, 2018; Kenton, 2022). This industry is essential to the world economy since it adds value to raw materials and generates products on a large scale for consumers as well as the industry itself (Lieder & Rashid, 2016; OECD, 2021).

Manufacturing is usually classified according to its type of production, and this may include discrete manufacturing industries such as automobiles, machinery, and electronics or process manufacturing, which produces chemicals, food, or pharmaceuticals (Infor, 2024; Kanta, 2024). However, within these boundaries, the industries of the given sector are usually specified according to their productive efficiency, from simple handwork to fully automated manufacturing systems with the use of robotics and intelligent systems (Kenton, 2022).

Transformational Leadership

Ugochukwu (2024) defines transformational leadership as, “It is a leadership style where leaders inspire, motivate, and stimulate their followers intellectually to work towards a shared and valued goal.” Bernard Bass (1985) indicates that transformational leaders are regarded as outstanding and exceptional in that they inspire and encourage the followers to go beyond their own self-interest for the sake of the group or organisation so as to achieve performance that surpasses what would have been achieved by minding their welfare (NJOROGE, 2023).

Employee Creativity

According to Chen et al. (2021), employee creativity can be defined as “Generating novel and useful ideas, processes, or solutions by the employees at their workplace”.

1.6 Thesis Outline

This thesis is organized into five chapters, which collectively provide understanding of the effect of transformational leadership on employee creativity within the Finnish manufacturing industry. Chapter 1 introduces the research, which gives a background of the study. It describes the outline of the described research with the rationale, purpose, aims, objectives, and questions. Chapter 2 is a literature review where the existing research is

synthesized regarding transformational leadership, employee creativity, and their intersection within an organizational context. Chapter 3 describes the research methodology, explains the employed qualitative approach, data collection methods, sampling strategy, and data analysis techniques. The chapter 4 discussed the results of the study and gave an insight into the connection among transformational leadership and employee creativity in mid- and large-sized manufacturing companies in Finland, based on empirical evidence. Finally, Chapter 5 concludes with the significant findings and recommendations for further research and practical implications for organizational leaders in the Finnish manufacturing industry.

2. Literature Review

This literature review aims to critically examine the available body of knowledge concerning transformational leadership and employee creativity. These constructs are important to understand because it is believed that transformational leaders have the charismatic ability to enlighten and motivate employees. Hence, there is a need to create an organisational culture that is necessary for creativity and innovation (Nyakomitta, 2021). Taking into account a high degree of innovation and sustainability, the Finnish manufacturing industry offers a relevant setting in which to conduct the study of transformational leadership in connection with employee creativity. Moreover, this industry faces some challenges and enjoys unique opportunities in its operating environment due to the strongly demanding globalised market. In such a context, there is a need for continuous innovations to remain competitive. The review of literature is aimed at adding valuable insights that may inform leader practices and add to theoretical discourse regarding organisational behaviour and innovation management by exploring how transformational leadership enhances creativity among employees. The study starts with a brief overview of contextual factors relevant to Finnish manufacturing industry.

2.1 Contextual Factors in the Finnish Manufacturing Industry

In the Finnish manufacturing sector, some contextual factors influence how transformational leadership relates to employee creativity. The manufacturing sector is one of the backbones of the economy of Finland. The industry is characterised by highly advanced technological capacity coupled with sustainable performance. This sector typified innovation and efficiency maximisation to set up a niche within the competitive global market (Bollmann, 2021). The organisational and cultural dynamics in Finnish SMEs, including manufacturing firms, consist of large, flat structures with a great deal of autonomy for all employees (Saarinen, 2024). Therefore, it is difficult to encourage creativity and innovation (Pöllänen, 2021).

Due to the highly sophisticated technological level within this sector, adaptation and continuous learning are demanded from personnel a task challenging to leadership. The further integration of sustainability initiatives is another source of complexity because companies need to juggle economic performance and environmental responsibility. Despite, all these approaching challenges, there are also extensive opportunities for innovation especially applying transformational leadership practices that would achieve a very good cultural fit given the collaborative and future-oriented nature of the industry.

The integration of the use of technology and sustainable practices into Finnish manufacturing brings about a significant change in people's relationship towards leadership styles and creativity. In this case, transformational leaders are at the forefront of integrating technological adoption and sustainable practices into the operation. For instance, green technologies implemented under transformational leadership are associated with achieving higher levels of innovation and creative problem-solving (Zhang, 2020).

Case studies from Finnish manufacturing firms for instance, from the implementation of circular economy principles show that transformational leadership can facilitate issues of sustainability to be integrated with technological innovation. For example, transformational leadership in the Finnish company Valmet had strongly integrated advanced digital technologies with sustainability practices. These contextual factors highlight the importance of leadership styles, such as transformational leadership, which will be discussed next.

2.2 Key Theories on transformational leadership and creativity

The foundation for this study is firmly grounded in the transformational leadership theory, which underscores the importance of leaders as motivators, mentors, and supporters of those (subordinates) placed under their charge. This conceptualisation has been given by Bass (1985), who was the first to introduce the term transformational leadership, comprising four components. Transformational leadership has been extensively researched, and several theories have been developed to understand the components and

the impact of transformational leadership. One of the cornerstone contributions to transformational leadership theory by Burns (1978), where he introduced the concept as part of his work on political leaders. Burns identified transformational leaders as those who engage with followers in a manner that lifts both the leader and followers to higher levels of motivation and morality.

Transformational leadership style depicts the ability to instigate significant changes in the followers and their organisations by appealing to the best ideals and morals. Continuing from the work of Burns, Bass (1985) developed the transformational leadership theory further to provide a clearer perspective of what a transformational leader is and what effects can be expected (Siangchokyoo et al., 2020). Before developing a further theoretical foundation on transformational leadership, let's have some view of theories on employee creativity.

Frameworks for studying organizational creativity provide structured approaches toward the understanding and enhancement of this complex phenomenon. Probably one of the most influential theories in the area of organizational creativity is Amabile's Componential Theory of Creativity, which describes that creativity is the result of domain-relevant skills, creative processes relevant to the task, and intrinsic motivation toward the task (Kukkonen & Bolden, 2022).

The second influential framework is the Interactionist Perspective of Creativity, which concentrates on dynamic interaction between the person and the environment (McKay et al., 2022). This perspective applied to organisational settings postulates that the context employees operate within is easily alterable through organisational interventions, like line management development or cultural initiatives, and such changes then impact creativity.

Moreover, the third influential theory explaining employee creativity is the Social Cognitive Theory, which focuses on self-efficacy and outcome expectations (Afriyie et al.,

2020). This theory suggests that individuals who believe in their creativity and also expect positive outcomes from creative efforts will be more likely to develop creative behaviours. Transformational leaders can facilitate raising creative self-efficacy through encouragement, resources, and opportunities to build skills.

The theoretical perspectives on employee creativity uniquely underscore the interplay between individual characteristics and organisational factors. Organisational climate and leadership styles, certainly transformational leadership, are important in setting an enabling environment that allows for creativity. Models such as Amabile's Componential Theory and the Interactionist Perspective provide robust frameworks through which to understand and enhance creativity within organisational contexts. Tapping into these insights, organisations would be better placed to create conditions that support and enhance employee creative capability to drive innovation and competitive advantage. After developing core theories on transformational leadership and employee creativity, let's go back to transformational leadership, as it is one of the major constructs of this research.

2.3 Transformational Leadership

Transformational leadership inspires employees to go beyond self-interest for organisational goals by offering a clear vision, intellectual stimulation, and personalised support. Unlike transactional leadership, it focuses on intrinsic motivation and creativity (Khan et al., 2022). There is a popular theory that is governing transformational leadership style, which is discussed next. As already discussed in the theory section (2.4) that Bass has further developed the transformational leadership theory and conceptualized four fundamental dimensions of transformational leadership, often known as the "Four I's".

The first dimension is Idealized Influence, where transformational leaders become role models for their followers. They have a high level of ethical conduct, and are highly trusted, and respected; thus, followers tend to copy their behavior. Idealized influence

is also about expressing determination to achieve goals and having a vision that can be an inspiration for other people (Nyakomitta, 2021).

The Second one, inspirational motivation, presents the ability of transformational leaders to clearly articulate an inspiring vision of the future that serves as motivation for followers to be inspired (Khan et al., 2022). Transformational leaders instil in their followers a sense of collective purpose and excitement, where each of the followers is induced to work towards the goals with increased commitment and effort. This is the inspirational side of vision motivation toward common action that leads to the achievement of organizational objectives.

The third component, Intellectual Stimulation, explains that transformational leadership creates an innovative and creative environment (Shafi et al., 2020). This is achieved by the leaders questioning existing assumptions, encouraging critical thinking, and inspiring followers to go above and beyond with their approaches to handling any issues. The element helps create a trend of improvement and change in a company since it instils a culture of learning and innovation.

The fourth component of transformational leadership, Individualised Consideration, is the personal attention that a transformational leader accords to each follower: his/her development needs (Mlinarevic et al., 2022). In other words, individualised consideration is the degree to which a leader takes care of the needs of each team member and acts as a guide, mentor, or coach for them (Muhammad Sharif, 2024). They act as a mentor and coach, providing necessary advice and feedback for the strengths and aspirations of the person. It is an individualised approach to building strong leader-follower relationships and enhancing the growth and performance of followers by dealing with their unique needs and fostering a supportive and empowering environment. Some people mix the concept of transformational leadership with other leadership styles, especially transactional leadership; therefore, the difference between the two is discussed in the next section.

2.3.1 Transformational Leadership vs. Transactional Leadership

For an understanding of the characteristics of transformational leadership, one might contrast it with transactional leadership, which is a much more traditional form of leadership and, in many cases, has been used to stand in contrast to transformational leadership. Transactional leadership pays attention to the transactions that occur between the leader and the follower: here, the leader rewards or punishes the followers based on their performance (Naeem & Nawaz, 2017). This leadership style follows a quid pro quo pattern, which is marked by clear structures, expectations, and rewards linked to performance.

Transactional leadership is all about achieving tasks, controlling performance, and procedures to be followed. The primary elements of transactional leadership involve the following: Contingent Reward whereby leaders provide specified rewards or incentives in return for meeting pre-defined performance specifications or desired objectives (Raveendran, 2021). This component relies on setting clear expectations and recognising and rewarding followers for their compliance and achievements. This form of leadership is based on the passive management style.

Active Management by exception in which leaders actively monitor followers' performance and take corrective action when deviations from standards occur (Sekyere, 2020). This involves closely supervising work processes, identifying errors, and intervening promptly to address issues and ensure compliance with established procedures. Passive Management by exception is a kind where leaders intervene only when problems or failures are too evident (Otto et al., 2021).

Both transformational and transactional styles of leadership have their virtues; using a transformational style of leadership is very beneficial in effectively instigating creativity, innovation, and long-term growth in organizations. The followers are inspired to work and create an environment characterised by constant improvement and adaptation,

which is, in fact, much needed for survival in the fast-moving and competitive world of contemporary business. After developing a theoretical foundation for transformational leadership, the next section will talk about employee creativity.

2.4 Employee Creativity

2.4.1 Definition and description

Creativity in organizational behavior was defined by Ogbeibu et al. (2021) as the process through which individuals or groups come up with new and useful ideas within a work organization. Creativity, in other words, is defined as the act of generating relevant and novel ideas that support problem-solving and growth (Amabile, 2018). It means creative thinking that can result in new products, improved processes, or unique solutions to problems. Creativity thus turns into a very significant character of organizational innovation, and it becomes quite necessary to gain a competitive advantage in today's dynamic global marketplace. Influencing factors include individual traits, cognitive style, intrinsic motivation, and organizational factors like culture and leadership style.

2.4.2 Theoretical Perspective on employee creativity

It is acknowledged that the creation of new ideas is not solely an attribute of individual beings; rather, it occurs at different levels—individuals, teams, and organisations (Jain & Jain, 2016). But at its best, creativity transcends a style or action and becomes a combination of thoughts, feelings, and situations (Runco & Jaeger, 2012). According to theoretical perspectives, it is not a simple innate quality but a developed phenomenon resulting from the relationship between the person and the environment (Zhou & Hoever, 2014).

Creativity is also a function of the organizational culture defined as the work environment of employees shared within the organization and its members. However, it is critical to observe that managers lead this culture, and one key form of leadership in this

context is called transformational leadership. Transformational leaders foster trust, intellectual stimulation, and individualized support within their groups, therefore encouraging employees to seek new approaches for problem resolution (Bass & Riggio, 2006; Gong et al., 2009).

Creativity is conceptualised as a multi-dimensional phenomenon influenced jointly by factors associated with individuals and those of both organisations and the environment (Zhang, 2020). For example, some of the factors could be individual, such as personal motivation and cognitive abilities, while some of these factors could be organisational, such as leadership style, support, and resources. This can include environmental factors (broad spectrum of industry dynamics and cultural influence). The organisational climate, or the perceptions employees share about their work environment, is one primary organisational factor affecting creativity. After exploring theoretical constructs of transformational leadership and employee creativity, it is time to examine the existing literature on the impact of that leadership on employee creativity.

2.5 Theoretical Framework: Relationship between Transformational Leadership and Creativity

The study combines contemporary theories of leadership and creativity in order to investigate how four dimensions of transformational leadership directly affect the creativity of employees (Okreglicka et al., 2023). For example, employees' efforts can be directed towards organisational goals because idealised influence and inspirational motivation are infused within them, and these ideals are from ethical consideration (Wang et al., 2022). Employees are encouraged to think creatively and take on unconventional tasks through intellectual stimulation, while individualised consideration caters to each employee's needs, hence promoting an innovative environment (Jaiswal & Dhar, 2015). This model therefore suggests that in the current environments, where everything is rapidly changing, creativity becomes one of the most important factors for organisations, and transformational leaders are the ones who foster this creativity.

A supportive environment for the fostering of creativity should allow for risk-taking and experimentation. Such an association between transformational leadership and employee creativity has already been well documented (Ogbeibu et al., 2021). Assuming the perspective of Van Tuin et al. (2021), transformational leadership enhances intrinsic motivation by aligning values and goals with those of the organisation, thus creating an environment for creativity at the workplace. Other than this, transformational leaders also establish psychological safety, under whose umbrella employees could take a risk and give their novel idea articulations without the threat of negative consequence impositions (Tuin et al., 2021). Transformational leaders also empower their followers by providing intellectual stimulation and individualised consideration, thus motivating them to think autonomously and challenge the established system (Zhang, 2020).

As earlier discussed, four dimensions of transformational leadership provide unique perspectives in enhancing employee creativity and performance through an environment characterised by innovation, critical thinking skills, and personal growth. The framework theorises that transformational leaders facilitate the enhancement of both the individual and the organisation by addressing intrinsic motivations and bridging them together with the organisational goals (Bass & Riggio, 2006). This can be said of the research Iqbal et al. (2021) in the Australian manufacturing industry, where transformational leadership was positively related to greater organizational innovation. Therefore, it is time to develop a theoretical foundation for the relationship between these four dimensions and employee creativity in the next section.

2.5.1 Idealized influences and employee creativity

The Idealised influence makes it easier for leaders to be seen as role models and for them to have the trust and confidence of their subordinates. Leaders who possess this dimension focus on common values and ethical practices that help motivate employees to feel committed and passionate. This makes it easier for employees to take creative risks because the work environment is psychologically secure. Studies have shown em-

employees' trust in their leader is a strong predictor of their willingness to engage in innovative activities since idealised influence offers the encouragement needed to seek change and be useful (Bass & Avolio, 1993; Sosik, 2015).

In addition, it has also been presented earlier on that, these days, it is understood that transformational leaders who practice the required ethical standards and provide the desired organisational goals motivate their employees to work toward achieving the organisational goals in the long term. Such a synergy motivates not only individual creativity but also group creativity, and in an ever-changing industry like this, the importance of such adaptability cannot be overemphasised (Rosing, 2023). The focus on a loved vision that idealises influence provides a great platform for creativity and innovation to be harnessed in the workplace. Based on above discussion, it is hypothesized as:

Hypothesis 1: A positive relationship exists between idealized influence and employee productivity

2.5.2 Inspirational motivation and employee productivity

In the context of the inspirational motivation dimension, it is focused on the ability of leaders in describing a hypothetical outcome in order to encourage employees to strategically work towards it. By adopting a motivational approach that nurtures a sense of purpose or enthusiasm, leaders challenge employees to look around and seek out creative ideas rather than performing basic tasks. This dimension has been found to enhance creativity since employees with increased motivation are more likely to resolve problems on their own (Jaiswal & Dhar, 2015).

Inspirational motivation allows leaders to encourage their employees to emote and use their creative ideas to face challenges. New forms of research evidence workers tend to be more willing to innovate when they find their work reflects a greater purpose for the organisation (Hughes et al., 2018). This desire to go beyond the standard is reinforced by

the presence of the right context or environment, which helps achieve the desired creative output. Based on above literature review following hypothesis is formulated:

Hypothesis 2: Inspirational motivation is positively contributing to employee creativity.

2.5.3 Intellectual Stimulation and Employee Creativity

The Empirical studies always indicate a positive relationship between transformational leadership and employee creativity across various industries. For instance, Shafi et al. (2020) pointed out that intellectual stimulation and supportive work environments are created through transformational leadership, which further enhances employee creativity. For example, transformational leadership was found by Hidayat-ur-Rehman & Alsolamy (2023) to have a positive effect on innovation in that this approach had intellectual stimulation and a motivating vision which encouraged employees to explore new ideas and ways.

Intellectual stimulation compels employees to be reasonable outliers by questioning accepted practices and inventing new ones. This dimension promotes the use of critical thinking, new ideas, and creativity in problem-solving. Leaders who provide intellectual stimulation promote a culture where employees are encouraged to try new things and learn from mistakes, which increases their creative abilities (Bass & Riggio, 2006). From research by Marbell (2024) transformational leaders' intellectual stimulation was studied in the introduction of sustainability programs in the Finnish manufacturing sector and found to lead to the creation of creative solutions to problems related to sustainability. The study revealed that leaders who motivate and encourage employees to inculcate practices good for the environment and think innovatively in approaching environmental issues can consequently develop both innovation and sustainability in a business.

Organisational studies point out that employees' deliberate intellectual stimulation appears to be a significant predictor of their ability to innovate along any dimension, but

especially in industries where problems have to be constantly solved. Leaders who practice exposing subordinates to debates and disagreements stimulate people to go further, and in this case, innovations of both types are produced at the same time. For instance, organisations with intellectual stimulation in the workplace have been observed to have enhanced levels of idea exercise and implementation because employees have motivation to initiate change and be independent thinkers (Wang et al., 2023).

The research has brought to light that leaders who foster intellectual stimulation and provide an inspiring vision for the future get the employees to focus on creative problem-solving and continuous improvement. This leadership style was particularly effective in an environment where innovation constitutes a condition of competitiveness. More specifically, in the context of Finnish manufacturing, the study by Shafi et al. (2022) reported that transformational leadership has a significant positive impact on employees' creativity and performance. The study argued that due to flat organizational structures and the collaborative work culture of Finnish manufacturing firms, the tenets of transformational leadership fit well with those of Finnish manufacturing environments. Following hypothesis is crafted from the above literature review:

Hypothesis 3: Intellectual stimulation and employee creativity are positively related.

2.5.4 Individualized consideration and employee creativity

There are several principles associated with transformational leadership, and one of these is individualised consideration, as it focuses on the developmental needs of the employee. Giving specific feedback, mentoring, and showing employee support helps to boost the employee's motivation and confidence to suggest ideas or solutions in a stiff environment. This specific approach boosts creativity by enhancing sense of efficacy and motivation in the employees, as stated by Eisenbeiss et al. (2008).

A study conducted last year emphasises the available literature on the impact of individualised consideration to explain the processes involved in the establishment of a culture

of growth and innovation. Such employees would consider exploring complex tasks and creative solutions to enhance innovation in the organization. Besides, the conducive environment fostered by such types of leaders' styles encourages engagement and sharing of ideas, which improves the creative output in teams (Cai et al. 2023). This dimension brings home the importance of compassion and personal involvement as the main factors for releasing the imaginative capabilities of the workers. It is hypothesized that:

Hypothesis 4: There is a positive association between individualized consideration and employee creativity.

2.6 Empirical Evidence from other industries: Transformational Leadership and Employee Creativity

Research conducted by Asada et al. (2021) established that transformational leadership positively contributed to the employee's creative self-efficacy for great creative performance. Similarly, transformational leadership is found to enhance significantly innovation and creativity needed to maintain competitiveness in the framework of manufacturing. For example, Ghimire et al. (2021), conducted a study on the Australian manufacturing industry that proved that transformational leadership is characterized by higher organizational innovation due to the culture maintained for creative problem-solving abilities and continuous change. All these studies now create the implication that transformational leadership is an influential leadership concept in developing an enabling environment for creativity (Marbell, 2024).

2.6.1 Technology Sector

The technology sector is a good ground to consider the effects of transformational leadership on creativity because this is a sector characterized by high innovation and change. The research identified that leaders who question the status quo and engage in risk-

taking facilitate an environment likely to lead to creativity and innovation. Further, Ba-tool et al. (2023) conducted research in a high-tech firm and revealed that transformational leadership strongly increased the employees' creative performance. Additionally, transformational leadership enhances the creative self-efficacy of employees, which positively influences their creative performance.

2.6.2 Healthcare Sector

In healthcare, transformational leadership is among the important factors that encourage creativity in a sector that largely depends on problem-solving and creative practices for enhanced patient care and organizational performance. Research in this sector has also proven that transformational leadership generates better problem-solving and creative practices from health professionals. Stanescu et al. (2021) using a sample of nurses, established that there existed a positive relationship between innovative behavior and transformational leadership about being professionally active.

Hussain and Khayat (2021) studied how transformational leadership impacted quality improvement initiatives in health. Transformational leadership of a vision through quality improvement realization and inclusion of employees in the decision-making process will enhance innovation abilities within the healthcare team. This kind of leadership is not only creative but also improves patient outcomes and organizational performance. In the healthcare sector, transformational leadership influences acceptance positively towards the practice of innovative practices by healthcare providers.

2.7 Chapter Summary

This study applies Amabile's Componential Theory and highlight creativity as a genuine result of individual skills, creative tactics, and intrinsic motivation. In the present study, Transformational Leadership Theory (Nyakomitta, 2021), is applied to understand whether idealized influence, inspirational motivation, intellectual stimulation, and indi-

vidualized consideration as forms of leadership encourage employee creativity. The combining of these theories positions transformational leadership as a means to inspire employees to be creative and contribute creatively. The empirical analysis that follows is based on this framework.

Research on the impacts of transformational leadership on employee creativity shows that such leadership enhances creative thinking. For example, Ashfaq et al. (2021) and Stanescu et al. (2021) proved that transformational leaders enhance creativity by stimulating intellectual thinking and psychological empowerment. Nevertheless, transplanting these findings onto the context of Finish manufacturing industry is still necessary.

First of all, much of the existing research was conducted in different geographical and industrial contexts or sectors like technology and healthcare (Pihlajamaa et al., 2022). These studies may not take full account of the unique cultural and organisational dynamics existing within Finnish manufacturing firms. Thus, how far findings can be transferred directly to the context of Finnish manufacturing firms remains open to question and would require further empirical investigation.

On one hand, higher levels of innovation and creative ranks are attributed to transformational leadership. Still, how exactly transformative leadership and employee creativity interact in facilitating integrations related to sustainable practices and advanced technologies into manufacturing is relatively unexplored (Asada et al., 2021). A key gap in research is explaining how transformational leadership influences creativity in a Finnish manufacturing context. Pre-existing and generic models of creativity, such as the Componential Theory of Creativity by Amabile, therefore encompass all factors but likely fail to grasp specifically industry variables like green tech integration or the pressures of global competition (Kukkonen & Bolden, 2022). Conversely, whereas the Interactionist Perspective highlights the role of the environment, it does not give details about the cultural and organizational features of the Finnish firms, typified by their flat structures and high innovation expectations.

3. Research Methodology

In this chapter, it will be discussed the methodology adopted to explore the impact of transformational leadership on employee creativity within the Finnish manufacturing industry. It is followed by an in-depth explanation of the philosophical underpinnings. Furthermore, this chapter talks about the research strategy, sampling techniques used in the study, the data collection process, and the methods of data analysis.

3.1 Research Philosophy

Research philosophy explains the beliefs, values, and assumptions that lie behind the undertaking of research, including ontology (the nature of reality) and epistemology (the nature of knowledge) (Al-Ababneh, 2020). In this context, ontology is concerned with the questions that explore what the reality is. Whereas epistemology asks the questions that consider how the reality in the form of knowledge is gained and validated. For the purposes of this research, a quantitative approach has been employed, guided by a positivist research philosophy, which focuses on measurable and observable realities.

To stand within the positivist paradigm means to support a viewpoint, postulated by Bryman, that knowledge has to come from known facts, which can be tested against a prior formulated statement (Bryman, 2016). In this context, transformational leadership and employees` creativity are the primary variables of interest. The emphasis is on investigating the association between these two constructs, aligning directly with the primary objective of the dissertation: to examine how leadership behaviors impact creativity within the context of Finnish manufacturing industry. The current research seeks to identify generalizable patterns and tendencies in the relationship between transformational leadership and employee creativity by applying quantitative techniques, such as statistical analysis, to recognize measurable patterns and relationships, ensuring objectivity and reproducibility in the findings (Creswell & Creswell, 2018).

The ontology of this study assumes the existence of an objective reality in which leadership behaviors and creativity are experienced and can be measured. Knowledge, in this case, is acquired through data collection and interpretation, which supports the application of survey tools such as the Multifactor Leadership Questionnaire (MLQ) for measuring transformational leadership (Avolio & Bass, 1995) and creativity scales (Amabile et al., 1996) to evaluate employee innovative behaviors.

This research adheres strictly to the positivist paradigm, emphasizing measurable constructs and relying on quantitative data to establish statistical correlations and causal relationships (Saunders et al., 2019), this study offers conclusions about the connections between transformational leadership and creativity.

3.2 Research Method

According to Saunders and Tosey (2012), "there are approximately three types of research methods: deduction, induction, and abduction." The deductive approach is associated with quantitative research (this research's concern), wherein the underlying theory is checked by data gathering and its subsequent analysis. It moves from the general theories to specific observations (Saunders et al., 2019). This method is quite fitting in this case, as it investigates the impact of transformational leaders on the creativity of employees in the Finnish manufacturing industry, using extant models and tested measurement techniques.

The deductive approach provides for the possibility of generating further hypotheses from established theories; Bass and Riggio (2006), for instance, provide the transformational leadership model, while Amabile (2011) offers the componential theory of creativity. Such propositions are further subjected to structured surveys where it is possible to assess the effect of the dimensions of transformational leadership, such as idealized influence and intellectual stimulation, on real creativity measures. It's this methodology that guarantees that the research yields reliable and applicable findings in both theory and practice in the field of manufacturing.

Quantitative methods are most applicable in situations that call for the testing of relationships between variables through statistical means and structured data collection methods (Creswell & Creswell, 2018). This is consistent with the goals of the study, which seeks to, from the employees' perspective, measure and test whether transformational leadership behaviors impact employee creativity. This study was conducted in a context of Finish manufacturing environment.

Quantitative research is characterized by its generalizability, replicability, and ability to identify statistical relationships between variables, making it ideal for this study. In this light, this particular study, seek to explain employee creativity as an outcome of transformational leadership. Furthermore, in line with previous studies (e.g., Cheung & Wong, 2011), this method allows for an extensive investigation of how transformational leadership influences employee creativity, allowing for deep investigation into the participants' experiences and in line with the Positivism philosophy.

The use of standard instruments like the Multifactor Leadership Questionnaire (MLQ) and creativity assessment scales makes it possible to avoid various divergencies in responses interpretation (Avolio & Bass, 1995; Amabile et al., 1996). In this manner, this study explains how the tools used in this research allow for the collection of patterns and relationships that are based on numbers so that the study is able to see the effect of particular leadership styles on the creativity of employees in a defined manner.

In addition to this, the focus of the deductive method on hypothesis testing also strengthens the study design in such a way that the conclusions drawn from the study advance the body of knowledge by either validating or refuting the prior defined empirical findings. Such consideration of the requirements of the quantitative research makes the deductive method critical in the fulfillment of the study objectives.

3.3 Data collection and sample description

In order to gather relevant and sufficient data, a survey questionnaire was administered to gather information from the respondents of the study. The purpose of the questionnaire was to investigate the respondents' attitudes towards leadership styles and their contribution towards creativity by using tested tools such as Scholl's four factors model (Avolio & Bass, 1995) and Amabile's components for measuring creativity (Amabile, 2018). The use of standardized scales ensures reliability and validity in measurement.

This research, which is evaluated through qualitative elements, focused on collecting data by utilising a convenience sampling method, referring to those employees within the Finnish manufacturing sector who were approachable and willing to respond. The sample comprised junior to middle management executives under a supervisor (team leader) who was actively participating in the creative and innovative processes in the company. This methodology provided an effective way of collecting data whilst still being appropriate to the aims of the study. The structured self-administered questionnaires were constructed to provide in-depth information on how the different dimensions of transformational leadership relate to employee creativity.

The author obtained responses from 100 manufacturing organisations' employees whose were working in different departments in the manufacturing sector. The demographic analysis was conducted with the purpose that it gives detailed and valuable insights on basic characteristics of the sample survey. The most important demographic variables are delineated in Table 1, and they are gender and age, qualification and position in the organisation (role), number of years of experience, the department where the respondent works, as well as the number of employees working in the organisation.

Table 1. Respondents' demographic characteristics

Characteristics	Frequency	Percent
Gender		
Male	78	78.0
Female	22	22.0

Total	100	100.0
Age		
20-30yrs	38	38.0
30-40yrs	48	48.0
40-50yrs	11	11.0
Above 50yrs	3	3.0
Total	100	100.0
Qualification		
Bachelor	33	33.0
Masters	59	59.0
M.Phil.	7	7.0
PhD	1	1.0
Total	100	100.0
Job Role		
Intern/Trainee	25	25.0
Assistant/Support Worker	24	24.0
General Staff/Employee	51	51.0
Total	100	100.0
Years of experience		
1–3 years	32	32.0
4–6 years	37	37.0
7–10 years	19	19.0
Above 10 years	12	12.0
Total	100	100.0
Working Department		
Production	33	33.0
Sales & Marketing	34	34.0
R&D	22	22.0
HRM	11	11.0
Total	100	100.0
No of employees		
Less than 50 Employees	30	30.0
50–249 Employees	32	32.0
250–499 Employees	11	11.0
500 or more Employees	27	27.0
Total	100	100.0

The sample consisted of 78% of respondents who were male and 22% of respondents who were female, which is typical for the gender structure of the Finnish manufacturing industry. The age of most participants was between 30 and 40 years old (48%), while the next major group was 20-30 years old (38%). Respondents aged between 40 and 50 years accounted for 11%, and those above 50 years accounted for only 3%. This distribution

indicates that it is the middle-aged professionals who occupy the largest share of the manufacturing industry, which is consistent with previous findings that this age group is most productive and active in leadership positions (OECD, 2021).

Most of the respondents (59%) were master's degree holders, while 33% held bachelor's degrees. 7% and 1% of the respondents had such overwhelming scenarios as the M.Phil. and PhD, respectively. This observation emphasises more on the higher education in the sector and is in agreement with the proposition that advanced education results in higher levels of innovation in manufacturing (Gertler, 2017). Interns/trainees (25%), assistants/support workers (24%), and general staff/employees (51%) comprised the respondents. The considerable number of general staff emphasises the managerial nature of the industry, with many simple production processes taking up the labour structure of the industry.

Participants' work experience participation was classified as 32% ranging between 1-3 years; 37% for 4-6 years; 19% for 7-10 years; and 12% for more than ten years. The dominance of professionals with 4-6 years of experience is consistent with industry patterns, since a younger workforce is ascending to management positions (Ngoepe-Ntsoane, 2024). The departments under consideration included production at 33%, sales and marketing at 34%, research and development at 22%, and HRM at 11%. The distribution reveals that there is some emphasis on primary production processes while also focusing on marketing and growth strategies, an important factor of strategies in manufacturing industries (Porter, 1985).

In terms of organisational size, the sample had some variation, with 30% of the respondents from organisations with an employee base of less than 50, 32% from mid-size organisations with 50–249 employees, 11% from medium-large companies with an employee base of between 250–499, and 27% from large companies with over 500 employees.

The demographic outcomes offer a strong basis to better appreciate the interplay between transformational leadership behaviours and employee creativity tendencies coupled with different professions in the Finnish manufacturing business.

3.4 Research Strategy

In order to answer the research question, the research strategy provides the direction that will be used to systematically tackle the question posed. Common research strategies include experimental studies, surveys, case studies, and action research, each suited to specific purposes and aims. Research approaches are multiple: experimental, survey, case studies, and action research all fit specific usages and aims (Saunders et al., 2019). Experimental research attempts to determine causality under certain controlled conditions, while case study research aims to examine particular instances in the real world in greater detail. A survey is an alternative recommendation as a response to a research question that aims at testing hypotheses or exploring the existence of trends among a larger population (Bryman, 2016).

In this study, the survey method is adopted, because of the nature of the study that focuses on the impact of transformational leadership on the creativity of employees. Surveys are particularly useful for collecting quantitative data systematically, enabling the testing of hypotheses derived from the leadership and creativity framework (Bass & Riggio, 2006).

The use of standardized instruments in creativity practice, like the Multifactor Leadership Questionnaire (MLQ) and the creativity assessment scales, ensures the collection of harmonized, repeatable data, regardless of participant mobility. This structured approach enables the study to ascertain statistical relationships between variables, providing robust insights into how leadership behaviors influence creativity at the organizational level (Hair et al., 2019a).

Surveys are chosen for their versatility, cost-effectiveness, and ability to cover large populations, thereby improving the quality of results. The structured nature of this strategy also facilitates the comparability of responses, enabling efficient and reliable quantitative analyses (Creswell & Creswell, 2018). Furthermore, this strategy is particularly appropriate given that the research aims to examine quantifiable outcomes rather than exploring personal perspectives, aligning well with the principles of quantitative research.

3.5 Sampling Technique and Sample

This study utilized convenience sampling to obtain the participants for the research. In statistics, convenience sampling is a non-probability sampling method where the sample is drawn from the part of the population that is easily accessible and willing to participate, making it feasible in gathering data in a relatively brief period of time (Etikan et al., 2016). While convenience sampling may pose challenges regarding the generalization, it remains a popular method in quantitative studies when time or resource constraints make other sampling techniques impractical.

The author distributed a Google Forms survey to more than 120 employees working in manufacturing sector in Finland. Out of the 120 surveys, 106 were completed, and after eliminating incomplete or incorrectly filled questionnaires, 100 responses were finalized for data analysis. The sample consists of employees from junior to mid-level positions working under a supervisor in various departments of a company, ensuring some level of diversity. For the purposes of this analysis, this sample size is adequate, as descriptive statistics, correlations, and regression can be conducted effectively with this dataset. According to Bell et al. (2019), a minimum of 100 participants is sufficient for basic quantitative studies, enabling valid deductions and analysis of relationships between variables.

In this study, the inclusion of employees from various departments in the manufacturing firms ensures diversity in opinions on leadership behaviors and creativity. While convenience sampling is limited in terms of representativeness, the diversity of roles among

participants strengthens the reliability of data by offering broader insights aligned with the research objectives. Employees from manufacturing firms are appropriate respondents as they are integral to innovation and restructuring processes, making them highly relevant for studying leadership and creativity interactions (Reim et al., 2022).

3.6 Measures

In this research, only validated instruments were adopted. The values of all items were measured using the 5-point response of the Likert scale, which ranges from 1 (Strongly Disagree) to 5 (Strongly Agree). A 20-item scale for measuring transformational leadership designed by Avolio and Bass (1995) was used in the study. This scale is consisted of four transformational leadership dimensions. Furthermore, five items were set from each dimension.

Employee creativity was assessed using the scale developed by Zhou and George (2001), consisting of 13 items. This scale focuses on behaviors and attributes associated with creativity in the workplace. To ensure contextual relevance to the Finnish manufacturing sector, certain scale items were slightly adjusted to reflect the specific organizational and cultural nuances of the study's setting. The adaptations were carefully undertaken to preserve the validity and reliability of the scales while aligning them with the study's objectives and the unique dynamics of the selected sector.

3.7 Data Analysis

In this research study, SPSS software was used for detailed analysis of the data. Descriptive statistics, including measures such as mean scores, standard deviations, and frequency distributions, were used to recognise general patterns and trends in the data. These metrics have given understandings into the prevalence, degree, and inconsistency of transformational leadership behaviors and employee creativity within the sample

population. By summarizing major features of the data, these measures supported elucidate the degree and variances in leadership practices and creative activities among survey respondents (Field, 2018; Hair et al., 2019a).

Analytical tasks assumed to assist in the estimation of the accuracy of the measurement tools are also known as the reliability analysis. The reliability of the scales was evaluated by a commonly used parameter Cronbach's alpha (Taber, 2018). The recommended threshold of 0.7, as minimal acceptable reliability was applied. Furthermore, Cronbach's alpha value of a variable/scale should be at least 0.7 and less than 1.0 to be accepted for the study.

The reliability scores of four dimension of transformational leadership: idealized influence's 0.906, inspirational motivation's 0.855, intellectual stimulation's 0.830 and individualized consideration's 0.878. Further, reliability as single construct secured reliability score of 0.949. The results showed that the survey items on transformational leadership and employee creativity measured the constructs consistently, which was important for further analysis (Pallant, 2020).

In the course of this study, the author assessed the reliability of the scales measuring transformational leadership and employee creativity through the use of Cronbach's alpha, one of the most commonly used measures of internal reliability (Field, 2018). The results are summarised in Table 2.

Table 2. Reliability analysis of scale

Scales	No of items	Alpha Value
Idealized Influences	5	0.906
Inspirational motivation	5	0.855
Intellectual stimulation	5	0.830
Individualized consideration	5	0.878
Employee creativity	13	0.949

The scale measuring Idealised Influence, which had five items, received high endorsement with an alpha value of 0.906, indicating that the concept tested had a lot of agreement among respondents. This suggests a good level of consistency in defining the ability of leaders to become a reference point for employees, which is an important aspect of transformational leadership (Bass & Avolio, 1994). In the same way, the dimensions of the Inspirational Motivation scale ($\alpha = 0.855$) showed great accuracy and convey an important dimension of leadership—others placed emphasis on its importance towards facilitating changes in team interrelations (Northouse, 2021).

The Intellectual Stimulation scale, which asked if bosses promote creativity and problem-solving, yielded a strong alpha coefficient of 0.83, which is in accordance with its conceptual framework that seeks to encourage creativity among workers (Zhou & George, 2001). Individualised consideration, which pertains to the overall concern of leaders for individual employees and their growth, was also reliable and had an alpha equal to 0.878.

The Employee Creativity scale, which represented 13 items, obtained a high alpha of 0.949. This significant value also enhances the validity of the instrument designed to measure creativity, which is also a broad and multifaceted concept (Amabile et al., 1996). Simply, the alpha scores are above the minimum recommended standard of 0.70, thereby enhancing the reliability of the scales (Hair et al., 2019b). These findings substantiate the validity of the measurement constructs that were used for seeking answers on the relationship between transformational leadership and employee creativity.

In the next step, Pearson's correlation technique was applied in order to establish relationships among the variables of interest. This enabled the investigation of the strength and nature of relationships that existed between the four aspects of transformational leadership (Hair et al., 2019b).

As a last step, regression analysis was performed in order to check the hypotheses of the study. The linear regression approach ventured to establish whether the transformational leadership dimensions affected employees' creativity, where coefficients and levels of significance were used to assess the strength of such relationships. Regression findings provided evidence on the scope and how some specific leadership behaviors, such as inspirational motivation, enhanced creativity among employees at Finnish manufacturing boats (Field, 2018; Hair et al., 2019b).

3.8 Ethical Consideration

Ethics Ethics forms an integral concern in any research, especially when data collection involves human participants. Therefore, this study follows proper ethical guidelines that protect the rights and welfare of the participants in the course of this research. The first ethical issue is informed consent (Hutton et al., 2008). Informed consent is provided to the participants with all the information regarding the purpose of the study, the procedures involved, and their rights as participants. Participants have the right to stop participation in the study at any given moment and will not be penalised.

Confidentiality and data protection are also important in the present research. Participants are anonymised using either pseudonyms or participant codes, which replace any identification that may be present in the data. Recordings, interview transcripts, and other data are stored on password-protected devices to which only the researcher has access. The element of this study follows the rules set out by the General Data Protection Regulation, and it hence shows that the processing of the data will be secure, with complete protection of privacy for the respondents. In cases where a participant would opt to withdraw from the study, all data collected concerning that participant would be removed from the study and destroyed. In bringing these ethical considerations into the light, this study conforms to the standards of integrity in research: protection of participants' rights while producing valid and reliable findings.

4. Results and Analysis

4.1 Descriptive Statistics

Statistics enlisted in the descriptive analysis give a snapshot of the study, which includes the primary distributions and variation. This research considered five constructs: Idealised Influence, Inspirational Motivation, Intellectual Stimulation, Individualised Consideration, and Employee Creativity, each of which was examined using a five-point Likert scale. Table 3 is illustrating the outcomes of the analysis.

Table 3. Descriptive Statistics

	N	Mean	Std. Deviation
Idealized Influences	100	3.7860	.94249
Inspirational motivation	100	3.7440	.87251
Intellectual stimulation	100	3.7620	.78506
Individualized consideration	100	3.6680	.94205
Employee creativity	100	3.7631	.83636

The constructs of Idealised Influence had a mean of 3.786 (SD = 0.942). This suggests that employees in the manufacturing industry agree on the point that their leaders possess adequate ethical values and are also leading by example. This is consistent with the work of Bass and Riggio (2006), who argued that idealised influence is of great concern when it comes to smoothing the trust and respect in employees. For Inspirational Motivation, the mean score was 3.744 (SD=0.872), indicating moderate agreement that the leaders were able to articulate a vision. The above findings conform to other studies that placed emphasis on the role of motivational leadership as an important factor towards an employee's acceptance of the organisational vision (Northouse, 2021).

Leaders were able to foster the dimension of intellectual stimulation, as evidenced by the mean of 3.762 (SD = 0.785), which implies employees had a moderately high level of

stimulation to think creatively. Such leadership practices are generally positively related to employees' creativity and problem-solving at the workplace (Avolio et al., 1999). The mean for individualised consideration was slightly lower at 3.668 (SD = 0.942), suggesting that the organisations should do more in trying to meet and address the individual employee needs. Still, this value does support a focus on mentorship and employee growth, which is a central theme in transformational leadership theories (Zhou & George, 2001).

Under Employee Creativity, a mean of 3.763 (SD = 0.836) indicates that a moderate development of creativity was noticed by the respondents in the performance of the organisational roles. These results emphasise the role of transformational leadership in the development of innovative approaches as highlighted by other researchers like Amabile et al. (1996) and many other related studies (Shafi et al., 2020; Stanescu et al., 2021). The presence of moderate mean scores across these constructs is seen as the reason behind the balanced application of transformative leadership dimensions that enabled enhanced employee creativity. In addition, the standard deviations are reasonable, indicating spread but not extreme outliers, which ensures that the data is strong (Field, 2018; Hair et al., 2019b). These descriptive results deliver a solid underpinning for further inferential analysis.

4.2 Correlation Analysis

The analysis of correlation allows one to determine the degree and direction of the association between the two variables. This helps in getting a perspective about the transformational leadership dimensions with employee creativity. The results shown in Table 4 highlight that all variables were noteworthy correlated with each other at the significance level of 0.01, which points to their interrelation and harmony on the theoretical level. The significant correlations found in this study are consistent with theoretical expectations and past research (e.g., Shafi et al., 2020; Yang et al., 2021), which emphasise those leadership traits in nurturing creativity in organizations. These results support the

interconnectedness of the constructs and lay a good premise for the following regression analysis.

Moreover, the analysis does not reveal any adulating high values of correlation coefficients (over 0.80), which points out multicollinearity problems. This guarantees that the variables are still often relevant within the dataset, and it enhances the methodological robustness of the study. Any leadership dimensions interrelatedness observed in this study may be expected in the context of transformational leadership that is composite in nature and has common traits that are interrelated. These results are quite critical in the understanding of the relationship between descriptive statistics and the advanced reliance method. They also reinforce the fact that the data structure is appropriate for the regression analysis and the objectives of the study are justifiable.

Table 4. Correlation analysis

		1	2	3	4	5
Idealized Influences (1)	Pearson Correlation	1				
Inspirational motivation (2)		.792**	1			
Intellectual stimulation (3)		.700**	.712**	1		
Individualized consideration (4)		.713**	.752**	.734**	1	
Employee creativity (5)		.717**	.677**	.750**	.727**	1

** . Correlation is significant at the 0.01 level (2-tailed).

The correlation of idealised influence with employee creativity is also strong at 0.717, demonstrating the extent to which ethical leadership behaviours are able to facilitate the creative output of employees. High levels of integrity among transformational leaders are expected to provoke followers to seek innovation, as pointed out by Amabile (2018) and Avolio (2011). This suggest that supervisors with a high score on idealised influence will boost the creativity abilities of employees working under their supervision.

The relationship between inspirational motivation and employee creativity was shown to significantly correlate at 0.677, which is sufficiently high to note the influence of having a strong vision as being useful to the employees' creative capabilities. This is owing to the fact that as prior studies have shown and theorised, visionary leaders are more able to push and deepen the phenomenology within their employees (Northouse, 2021).

Intellectual stimulation registers the highest among all dimensions' correlation with employee creativity at 0.750. And this justifies the need for the subordinates to think critically and even displace the norm. Employees engage in innovative behaviour when their leaders provide them with an environment that encourages intellectual stimulation (Zhou & George, 2001).

Individualised consideration similarly affects employee creativity as well, with a figure of 0.727, indicating the importance of individual approaches in the development processes of the employees. Such conclusions coincide with the cadences of transformational leadership, where attention to the needs of subordinates encourages them to further grow personally and find innovative methods to solve challenges (Bass & Avolio, 1994).

There is empirical evidence to support the theoretical foundations of transformational leadership in the context of this analysis. Leadership constructs and their impact on creativity have been shown to have consistent, strong positive correlations across the dimensions of leadership. It is emphasised in this analysis that leaders who combine ethical actions, motivation driven by vision and intellectual challenge, as well as providing personalised support, are the leaders who boost employees' creativity. Hence, these leaders promote innovation and performance in the organisational context by encouraging and including the people in an environment that is both diverse and challenging.

Fostering an inclusive and challenging environment is one of the key contributions of transformational leadership being provided by the leaders in this growing evidence base

in nurturing creativity in the manufacturing as well as complex dynamical sectors. Findings suggest all respondents ranked the correlations reported as both strong and practical, which in turn can be used for leadership development. Organisations should focus on providing all-inclusive, comprehensive training programs focused on different aspects of transformational leadership in order to fully utilise the creative potential that is available. The outcome of such investments is enhancement in employees' morale and creativity and strengthening of the competitiveness of the organisation in the longer term.

4.3 Regression Analysis: Hypotheses Testing

4.3.1 Impact of idealized influences on employee creativity

Table 5. Testing hypothesis 1

Hypothesis	IV	DV	R ²	Beta	T	F	Sig.
H1	TLII	EC	0.514	0.717	10.179	103.622	p < 0.001

The Hypothesis 1 regression analysis assesses the impact of Idealised Influences (II), which is one of the dimensions of transformational leaders, on Employee Creativity (EC). According to the results indicated in Table 5, however, this was very strong and highly significant— $p < 0.001$. The majority (51.4%) of the variance accounting for employees' creativity ($R^2 = 0.514$) was high. The beta coefficient ($\beta = 0.717$), owing to the parameters $T = 10.179$ and a very low Sig value ($\text{Sig} = p < 0.001$), was notable as well.

Hypothesis 1 is supported, and it can be claimed that employees under idealised influence—leaders who are in full command of unquestionable ethical practices and are seen as the role models—harness and build employees creativity. It is also consistent with other studies, e.g., Teymournejad and Elghaei (2017), that involvement with idealised leaders transforms the leader's gallery to be creativity-focused. Creativity and the trust and commitment driven by courage and vision are intrinsic qualities of the leaders that stimulate employees to engage in novel and original ideas.

The model is said to be effective in comprehending the association as the F-statistic is significant ($F = 103.622$). The results coincided with what was provided by Shafi et al. (2020), who stated that idealised leadership behaviours not only encourage the employees but also help to build an atmosphere that encourages exploration and innovativeness.

This study also supplements the work of Saad Alessa (2021), who advocated for idealised influence in enhancing an organisation's overall creative capabilities, especially in times of high competition and change. Employees are more willing to go beyond the standard way of doing things and try to do things differently when there is a high perception of the leaders of the organisation being trustworthy and motivating.

These practical outcomes are very important. Organisations that would like to enhance creativity must invest in training intended at promoting the idealised methods of leadership. Creativity could be instilled in the leaders by being reliable, setting high ethical benchmarks, and matching what one advocates for personally to what is defined at the organisation. It also encourages leaders to be role models, which in turn increases the confidence of employees and fosters their creativity.

4.3.2 Impact of inspirational motivation on employee creativity

Table 6. Testing hypothesis 2

Hypothesis	IV	DV	R ²	Beta	T	F	Sig.
H2	TLIM	EC	0.458	0.677	9.094	82.698	$p < 0.001$

In testing Hypothesis 2 through regression analysis, the author sought to find out the influence of Inspirational Motivation (IM), a characteristic feature of transformational leadership, on Employee Creativity (EC). The results, presented in Table 6, reveal a highly

significant — $p < 0.001$ — positive relation between the two variables. The model accounted for 45.8% of the variance in employee creativity ($R^2 = 0.458$), and the beta coefficient indicated moderate to strong positive influence ($\beta = 0.677$). The relationship is highly significant as evidenced by the T value of 9.094 and p value of $p < 0.001$, which validates the strength of the model.

Thus, these results considerably prove Hypothesis 2, for leaders seeking to motivate teams through a clear vision while putting in place shared values are more likely to galvanise creativity in their employees. It can then be further maintained that inspirational motivation goes a long way to increase a person's intrinsic motivation, imbue innovativeness, and a mission in the workplace. This is consistent with Maladzhi and Yan (2014), who stressed that followers who receive a well-defined and motivating vision tend to increase their creativity and performance. A similar observation was made by Shafi et al. (2020), who noted that transformational leaders possessing inspirational motivation were able to create an environment appropriate for thinking creatively and problem-solving.

The existing findings are consistent with Nasir et al. (2022), who stated that inspirational motivation has a positive impact on the creative output of employees as it creates excitement and engagement with their work. This view was also substantiated by Asada et al. (2021), who emphasised the role of leaders who articulate an appealing vision in enhancing the creativity of employees in fast and turbulent environments. By inspiring employees to overcome current hurdles and address underlying problems, these leaders aid in the development of creative solutions.

The value of the F-statistic (82.698) has further affirmed the statistical validity of the model. These results proclaim the significance of inspirational leadership within the context of enhancing organisational creativity. Inspiring and highly determined leaders' one focus allows their subordinate team members to apply creativity in performing tasks.

These leaders' attributes help employees overcome challenges and foster creative thinking and thereby support the establishment of a creative business climate.

4.3.3 Impact of intellectual stimulation on employee creativity

Table 7. Testing hypothesis 3

Hypothesis	IV	DV	R ²	Beta	T	F	Sig.
H3	TLIS	EC	0.562	0.75	11.222	125.926	p < 0.001

The next step in the regression assessment, which is Hypothesis 3, looks at Intellectual Stimulation (IS) as one of the key elements of transformational leadership and its impact on Employee Creativity (EC). From the data, it is shown that IS and EC have a very high R² value of 0.562 and a statistically significant relationship —p < 0.001 — with about 56.2% variance in creativity, which can be explained by the model developed in Table 7 here. The beta coefficient of 0.75 explains the strong impact of the relationship, which is statistically significant: T-value = 11.222, p-value = p < 0.001.

Further, findings have shown how those employees who boost intellectual stimulation, which encourages them to actively question concepts and develop new and unique concepts, significantly contribute to improving EC levels and therefore must be encouraged within the organization. The norm of fostering intellectual stimulation on the part of the leaders and encouraging team members to transform norms and think creatively has an effect on the creative performance of the team. This is consistent with the findings of Shafi et al. (2020), as they also suggested that such leaders stimulate their employees improving their creativity and innovative capabilities. The researchers noted that it is the leaders who first direct the employees to think differently and then engage in the process of creative problem-solving to the utmost satisfaction of generating new ideas.

Mansoor et al. (2021) notice that intellectual stimulation is among the most reliable factors forecasting creativity in the organisational setting. Transformational leaders can raise the creative potential of their teams by evoking curiosity and creating a climate in

which it is alright for team members to voice peculiar views. The research further indicates that intellectual stimulation promotes a sense of cognitive agility among the employees, encouraging them to tackle issues differently to come up with different solutions.

Supporting these conclusions, Cengiz Ucar et al. (2021) turn the attention to the fact that intellectual stimulation enhances employees' versatility as it nurtures a warm climate in which multiple viewpoints are accepted. Through their empirical research, they established that leaders who actively promote intellectual stimulation are much more likely to encourage their employees to their creative ways of thinking. The readiness to dispute the status quo and to promote exploration and learning in the organisation are direct contributors to an improved creative performance.

The argument regarding the relevance of the model is reinforced as the F-statistic of 125.926 shows, among other things, that intellectual stimulation is an important characteristic towards creativity. Such leaders, who are able to ask interesting questions that stimulate their employees' intellectual curiosity, are able to create a work context that allows for innovations and creative thinking. These results highlight the role of the leader in providing such intellectual stimulation along with the need for unleashing the creative talents of the employees.

4.3.4 Impact of individualized consideration on employee creativity

Table 8. Testing hypothesis 4

Hypothesis	IV	DV	R ²	Beta	T	F	Sig.
H4	TLIC	EC	0.529	0.727	10.486	109.958	p < 0.001

The regression analysis of Hypothesis 4 examines the two-way relationship between Individualised Consideration dimension of transformational leadership and Employee Creativity. According to Table 8, it is evident that there is a positive effect with highly significant —p < 0.001 — correlation values, with R² standing at 0.529, implying that employee

creativity accounts for 52.9% of the variation in the model. Moreover, with a beta coefficient of 0.727, this explains the great effect individualised consideration has on creativity, and the relationship is supported by $T = 10.486$ and significance value = $p < 0.001$.

This leadership practice stems from the theory of individualised consideration and refers to the concept in which leaders consider the needs and growth of every individual in their teams. Transformational leaders who give individualised attention to every employee are able to stimulate creativity in them because such employees are encouraged to be innovative and take a different approach towards work. This practice does not just facilitate belongingness and a sense of worth but further enables the employees to be more creative than ever before (Shafi et al., 2020).

Shafi et al. (2020) point out the importance of individualised consideration in relation to the creative work of employees as it enhances the feeling of being appreciated by the employees. They found out that leaders who care about their followers' development and nurturing of their personal interests motivate the employees to be more creative and progressive in their problem solving. Leaders are able to promote higher creativity within teams by delivering on individual developmental requirements and offering his/her inspirational editorial remarks.

The same goes for Yang et al. (2021), who state that consideration of an individual through individualised consideration is a significant factor in nurturing creativity among employees. In their research, they established that employees who perceived their leaders as effective were more willing to perform creative activities and come up with original solutions to the tasks given. This kind of attention increases creativity and employee happiness and motivation, which in turn fosters the culture of innovation.

These findings are also consistent with Purwanto's (2020) work, who found that individualised consideration improves organisational empowerment. However, employees' chances of providing innovative solutions or taking chances when customary ways of

doing things are challenged increase when leaders provide specific assistance and direction. This is quite essential in volatile markets where many developments are taking place.

The strength of the model is also improved with the F-statistic of 109.958, which asserts that individualised consideration is one of the strong predictors of employee creativity. Transformational leaders focus on the individual needs and potential of employees in addition to ensuring their satisfaction so as to engage in creative behaviour, which is critical for the growth of the organisation.

4.4 Summary of hypotheses

The results of the analysis in this research endeavour define and quantify transformational leadership as a phenomenon that affects employee creativity calculated in four dimensions. The regression results reveal that there are significant and positive associations between each component of leadership style and creativity; R^2 ranges from 0.458 to 0.562, meaning that transformational leadership has the biggest contribution in explaining the variance in creativity. In particular, intellectual stimulation and individualised consideration were found to be the most creative style predictors, in line with previous research (Shafi et al., 2020; Yang et al., 2021). These findings mean that leaders who stimulate their members to think about intellectual issues while at the same time catering to their individual needs possess great potential to improve the creative output of the team. In summary, this study emphasises that transformational leadership plays an important role in creating and enhancing innovative practices and organisational creativity.

5. Discussion and Conclusions

5.1 Interpretation of Findings

The results of the analysis in this research endeavour define and quantify transformational leadership as a phenomenon that affects employee creativity calculated in four dimensions. The regression results reveal that there are significant and positive associations between each component of leadership style and creativity; R^2 ranges from 0.458 to 0.562, meaning that transformational leadership has the biggest contribution in explaining the variance in creativity.

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The parameters of idealised affection and inspirational motivation reflected slightly lower but nonetheless noteworthy contributions to creativity, with references such as Teymournejad and Elghaei (2017) and Saad Alessa (2021) supporting their practicality in boosting organisational innovation through inspiring and aligning employees with the leader's vision.

In the context of the Finnish manufacturing sector, this study investigated the effects of four transformational leadership aspects on employee creativity - Idealised Influence, Inspirational Motivation, Intellectual Stimulation, and Individualised Consideration. The

results showed that all aspects of transformational leadership have a major and favourable impact on worker creativity, underscoring their combined contribution to the development of an inventive workforce (Mlinarevic et al., 2022).

Since role-modelling leaders foster trust and inspire employees to imitate excellent behaviour, idealised influence showed the strongest correlation with employee inventiveness. Similarly, by creating a common vision and motivating staff to think creatively, inspirational motivation has been shown to improve creativity (Mansoor et al., 2021). The regression study revealed that intellectual stimulation, which pushes workers to challenge presumptions and consider novel solutions, had the highest predictive value, confirming its crucial role in encouraging creativity. Last but not least, individualised consideration was crucial in meeting the specific needs of each employee, promoting their professional and personal development, and stimulating creative outputs (Reim et al., 2022).

The transformative power of leadership in fostering creativity and innovation is highlighted by earlier studies like Shafi et al. (2020), which are consistent with our findings. Additionally, the study shows how TL is applicable in the Finnish industrial setting, confirming findings by Imam et al. (2020) about the significance of leadership in industries that are driven by innovation and competition.

Notwithstanding its merits, the study includes limitations that should be taken into account. First, the study was limited in its applicability to other industries or areas due to its concentration on a single industry—manufacturing—and its geographical setting, Finland. A broader insight might be obtained by broadening the focus to include global comparisons or a variety of sectors.

Second, self-reported measurements were used in the study's quantitative methodology, which could restrict the depth of insights or add bias. Complementary qualitative methods, like case studies or interviews, could improve knowledge of leadership styles and how they affect innovation.

Third, although the study looked at how transformational leadership characteristics directly affected employee creativity, it ignored other moderating or intervening factors such as team interactions, organisational culture, and job happiness. By addressing these elements, a more complex understanding of the processes behind creativity may be possible.

5.2 Comparison with Existing Literature

The findings from the study are in agreement with a wide range of literature that exists on the relationship between transformational leadership and the creativity of employees. Maladzi and Yan (2014) and Nasir et al. (2022) revealed that transformational leaders promote creativity as they have a vision that makes followers willing to take risks and try out new things. Asada et al. (2021) also reported that these leaders' need for inspirational motivation and idealised influence gives purpose to employees, which leads to an overall increase in employee's intrinsic motivation towards the implementation of creative tasks.

The current results were further supported by Cengiz Ucar et al. (2021), who highlighted the importance of intellectual stimulation in driving creative thoughts. This study's findings support this claim by stating that creative employees recall leaders who challenge conventional wisdom and promote creative solutions to problems. In line with that, Purwanto (2020) and Yang et al. (2021) indicated that individualised consideration is critical in building a psychologically safe climate under which employees can experiment with new ideas without the fear of being evaluated.

Teymournejad and Elghaei (2017) additionally voiced the uniformity of the transformational leadership approach across the different organisational settings as a factor supporting the results of this research. Furthermore, Saad Alessa (2021) substantiated that transformational leadership dimensions work in unison to produce levels of sustained

creative output amongst teams, which concurrently reinforces the current study's focus on their collective benefits.

5.3 Implications for Finnish Manufacturing Industry

According to several studies, the results of this study have great relevance for the development of the Finnish manufacturing sector, which is more and more oriented towards innovation, digital transformation, and employee engagement. Employee creativity depends greatly on transformational leadership. The role of a creative workforce is crucial in sustaining competitiveness. Those in charge of Finnish manufacturing will benefit from these insights to tune their management approaches to the rapidly changing needs of the sector.

The dimension of Transformational leadership that has proved to be at the core of lifting creativity and was pointed as the most important is leadership power in the form of intellectual stimulation. This means that the owners of Finnish manufacturing firms should allow employees to defy the 'status quo' and venture into the unexplored territory. Imam et al. (2020), and Reim et al. (2022) studies demonstrate how TL with strong emphasis on its intellectual stimulation enables industries that are technologically intensive to innovate in processes and products. For example, creating opportunities for going through an idea-gathering stage and having an idea generation or testing stage in the procedure will really improve the level of employee participation. Individualised consideration stresses how crucial it is to know each employee's personal needs and how they can be assisted individually. Finnish companies have much to gain from individual training and mentoring programs, as pointed out by Pihlajamaa et al. (2023), that would help create an innovative ambience. In addition, such measures that promote employee health and career development impact positively on retention and performance. In addition, idealised influence and inspirational motivation illustrate the importance of such leaders in the manufacturing context. Leaders who can communicate a clear vision and set aims for employees that help achieve the goals of the organisation are able to create that common purpose to trigger both innovation and performance. As Mandagi et al. (2023)

demonstrated, this type of leadership boosts team cohesion, which is especially important in Finland's industrial environment.

Finally, the fusing of transformational leadership styles with technology as advocated by Jun and Lee (2023) could leave Finnish manufacturing firms as strong global innovators. The establishment of digital tools and an innovative leadership culture could enhance Finnish manufacturers in achieving their sustainability objectives and market needs in an effective way, as indicated by Ilgn and Karjalainen (2023).

The study's conclusions offer a number of practical takeaways to leaders who want to use transformational leadership techniques to boost employee creativity. Moreover, each dimension among the four dimensions of transformational leadership provides unique tactics that leaders can use to improve organisational performance and encourage creativity.

- Fostering an environment that pushes staff members to think critically and consider novel concepts is one way that leaders can promote creativity. Implementing techniques like brainstorming meetings, innovation laboratories, and seminars aimed at fostering problem-solving abilities is part of this. Intellectual stimulation is essential in knowledge-intensive companies, according to Imam et al. (2020) and Reim et al. (2022), since it motivates staff members to challenge established procedures and develop novel solutions.
- It is critical to acknowledge each employee's distinct contributions and offer tailored support. To address each person's needs, leaders can customise growth plans, put mentorship programs into place, and provide helpful criticism. This approach is consistent with research by Yang et al. (2021), which emphasises the value of individualised care in raising staff morale and encouraging creativity.

- In order to inspire employees, leaders must have a compelling vision and successfully convey it to them. To match workers' efforts with company goals, leaders can deploy motivating speeches, narratives, and well-defined goal-setting. According to Mandagi et al. (2023), a common goal fosters team commitment and cohesion, which in turn spurs innovation and output.
- Leaders who set an example for their staff members foster mutual respect and trust, which motivates people to imitate actions that advance the success of the company. This entails making moral decisions, exhibiting fortitude, and upholding a strong work ethic. According to research by Jun and Lee (2023), leaders who exhibit these traits foster an innovative and accountable culture.
- By making communication and teamwork easier, digital tools can support transformational leadership techniques. To find areas where employee creativity may be maximised, leaders can use analytics or virtual brainstorming tools. According to Ilgin and Karjalainen (2023), combining leadership approaches with digital initiatives improves the capacity for creativity.
- It is crucial to establish a psychologically secure workplace where staff members may freely express their opinions without worrying about backlash. According to Asada et al. (2021), these kinds of settings promote greater involvement and creative results.

Leaders can successfully apply transformational leadership principles to foster employee creativity and propel organisational success by implementing these doable tactics.

5.4 Theoretical Contributions

This research contributes to the literature on transformational leadership and employee creativity by providing empirical evidence of the multidimensional impact of transfor-

mational leadership on creativity. It strengthens the understanding of how transformational leadership dimensions collectively and individually enhance innovative behavior. First, this study corroborates the role of intellectual stimulation as the most critical factor in driving creativity, as identified by earlier studies like those of Shafi et al. (2020) and Reim et al. (2022). By emphasising critical thinking and problem-solving, the research contributes to the theoretical framework of creativity as a dynamic interaction between leadership and individual cognitive processes. Second, it extends the understanding of individualised consideration, offering nuanced insights into its role in promoting psychological safety and employee development. This dimension's impact on creativity enriches transformational leadership theories by linking personal development to organisational innovation outcomes.

The findings also support the applicability of transformational leadership theories in specific industrial and cultural domains, such the Finnish manufacturing sector. The state of the art in transformational leadership in more traditional process-based businesses is improved by identifying these dimensions with the needs of manufacturing particular. A thorough approach to this complex problem of the interaction between transformational leadership characteristics is provided by the study's final demonstration of the combined and reciprocal effect of these dimensions. In addition to improving knowledge of transformational leadership, this theoretical contribution makes it applicable to leaders attempting to combine several leadership philosophies for the best possible creative results.

5.5 Suggestions for Future Research

The limitations highlighted above should be addressed in future studies to further our understanding of this field. Research using cross-cultural comparisons or multiple industries can improve the generalisability of results and shed light on how industrial and cultural settings affect the connection between creativity and transformational leadership.

Additionally, by using mixed-method approaches, researchers could combine qualitative and quantitative data to provide a more comprehensive knowledge of leadership practices (Reim et al., 2022). To better understand how transformational leadership encourages innovation in practice, for example, interviews with leaders and employees can provide contextual details.

Future research should also look into mediating and moderating factors including digital tools, team cohesion, and psychological safety to find out how transformational leadership fosters creativity. According to studies by Asada et al. (2021) and Jun and Lee (2023), these factors are important in determining organisational outcomes and should be studied further.

Lastly, by documenting how leadership tactics change over time and their ongoing consequences on worker invention, longitudinal research designs may shed light on the long-term effects of transformational leadership on creativity. Future research can expand on the results of this study by tackling these issues, leading to a more thorough and in-depth comprehension of transformational leadership and its applications in various contexts.

5.6 Conclusion

The relationship between transformative leadership and employee creativity in the Finnish manufacturing sector is thoroughly examined in this thesis. According to the study, employees' creativity is greatly enhanced by all four of the transformational leadership facets: Idealised Influence, Inspirational Motivation, Intellectual Stimulation, and Individualised Consideration. These results emphasise how crucial it is for leaders to foster trust, question accepted wisdom, and offer tailored assistance in order to spur innovation in a fiercely competitive sector. Both scholarly discussion and real-world applications can benefit from the implications, which provide practical advice for fostering creativity in comparable corporate settings.

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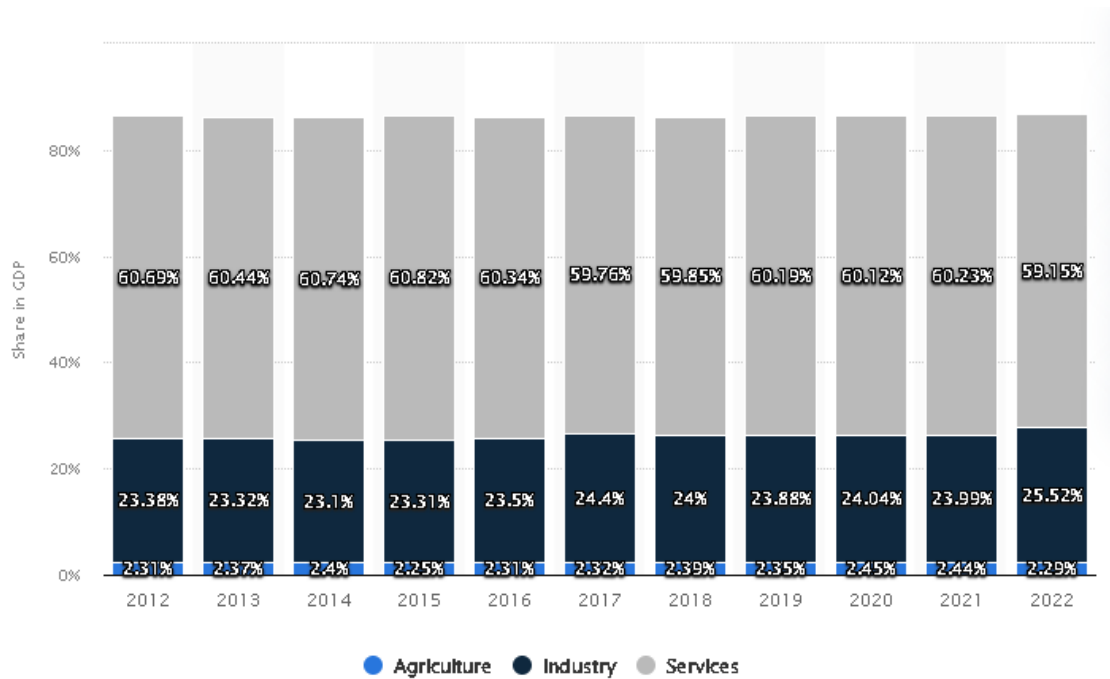
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Appendices

Appendix A: Finland: Share of economic sectors in the gross domestic product (GDP) from 2012 to 2022



Source. (O'Neill, 2024)

Appendix B: Questionnaire

Demographics

Gender:	<input type="radio"/> Male	<input type="radio"/> Female	<input type="radio"/> Other	
Age Group:	<input type="radio"/> 20-30yrs	<input type="radio"/> 30-40yrs	<input type="radio"/> 40-50yrs	<input type="radio"/> > 50yrs
Qualification:	<input type="radio"/> Bachelor	<input type="radio"/> Masters	<input type="radio"/> M.Phil.	<input type="radio"/> PhD
Job Role:	<input type="radio"/> In-tern/Trainee	<input type="radio"/> Assistant/Support Worker	<input type="radio"/> General Staff/Employee	
Years of Experience:	<input type="radio"/> 1–3 years	<input type="radio"/> 4–6 years	<input type="radio"/> 7–10 years	<input type="radio"/> > 10 years
Department:	<input type="radio"/> Produc-tion	<input type="radio"/> Sales & Market-ing	<input type="radio"/> R&D	<input type="radio"/> HRM
Size of Organiza-tion:	<input type="radio"/> Less than 50	<input type="radio"/> 50–249	<input type="radio"/> 250–499	<input type="radio"/> 500 or more

Key: 1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Strongly agree

TRANSFORMATIONAL LEADERSHIP

S/N	Statement	1	2	3	4	5
Idealized Influence						
TLII1	I feel proud to be associated with my team leader	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TLII2	I have complete faith in my team leader	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TLII3	My team leader has a sense of mission which he/she transmits to me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TLII4	Team leader always expresses satisfaction when his/her expectations are met.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TLII5	I have a strong conviction in his/her beliefs and values.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspirational Motivation						
TLIM1	My team leader sets high standards for my work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TLIM2	My team leader is a role model for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TLIM3	My team leader develops ways to encourage me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TLIM4	He/she talks optimistically about the future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TLIM5	I have complete confidence in him /her.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Intellectual Stimulation						
TLIS1	My team leader always shows how to look at old problems in new ways	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TLIS2	My team leader always emphasises my use of intelligence to overcome obstacles.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TLIS3	My team leader makes me back up my opinions with good reasoning.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TLIS4	My team leader always mobilises a collective sense of mission	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TLIS5	My team leader suggests new ways of completing the tasks assigned	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Individual Consideration						
TLIC1	My team leader gives personal attention to me when I seem neglected.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TLIC2	My team leader finds out what I want and helps me to get it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TLIC3	My team leader appreciates when I do good job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TLIC4	My team leader spends time in coaching and teaching every staff members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
TLIC5	My team leader treats me as an individual rather than just a member of the group.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

EMPLOYEE CREATIVITY

S/N	Statement	1	2	3	4	5
EC1	I am encouraged to suggests new ways to achieve goals or objectives.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EC2	I am encouraged to suggests new and practical ideas to improve performance.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EC3	I am encouraged to searches out new processes and techniques.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EC4	I am encouraged to suggests new ways to increase quality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EC5	I am I am encouraged to be a good source of creative ideas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EC6	I am encouraged to not be afraid to take risks.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EC7	I am encouraged to promote and champion ideas to others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EC8	I am encouraged to exhibits creativity on the job, when given the opportunity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EC9	I am encouraged to develop adequate plans and schedules for the of new ideas.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EC10	I am encouraged to often have a new and innovative idea to deal with the customers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EC11	I am encouraged to comes up with creative solutions to customers' problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EC12	I am often encouraged to have a fresh approach to customer queries.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
EC13	I am encouraged to suggest new ways of completing the assignments in the call centre.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
