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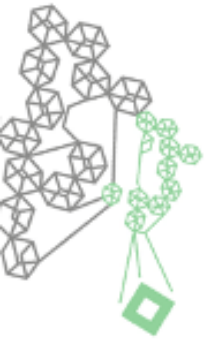
MASTER THESIS

Emotional Intelligence in Successful Self-Managing Agile Teams: A Mixed-Method Approach on the Influence of Trust, Psychological Safety & Shared Leadership on Team Performance & Job Flourishing.

A.R. ten Hoff
[redacted]

Faculty of Behavioral, Management and Social Sciences (BMS)

EXAMINATION COMMITTEE
Dr. L. Carminati
Dr. S.D. Schafheitle
Drs. R. A'yuninnisa



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ABSTRACT

Despite the widespread adoption and proven potential of Agile Self-Managing Teams (SMTs), it appears that SMTs show a difference in their effectiveness as only 42% of Agile projects are successful (Johnson, 2020; Magpili & Pazos, 2018). As a consequence, this study explores the intra-team factors influencing Agile SMTs effectiveness. Drawing on the IPO-model of team effectiveness and the JDR theory, the hypothesized model in which emotional intelligence is incorporated as an input factor; trust, shared leadership, and psychological safety as process factors; and team performance and job flourishing as outcome factors, is tested. By applying a mixed-method approach based on 36 surveys and 5 focus groups, we investigated *if* and *to what extend* the aforementioned variables could influence each other, plus and in-depth exploration of why this is happening. The quantitative results show that emotional intelligence does not have a direct positive effect on team performance and job flourishing, since trust fully and positively mediates this relationship. Furthermore, whilst shared leadership does not moderate the relationship between emotional intelligence and trust, it does have a direct positive relationship to trust. Lastly, psychological safety does not mediate the relationship between trust and the outcome factors, team performance and job flourishing, but does have a direct relationship to team performance. The qualitative results lead to three overarching dimensions, namely intra-team factors, team outcomes, and organizational design, which help explain why the relationships between the factors are existing, and have an influence on the effectiveness of Agile SMTs.

Hence, this study contributes to the theoretical understanding of the factors influencing Agile SMTs effectiveness and to practice by identifying factors which are of importance for the successful implementation of Agile SMT structures within businesses.

Keywords: Agile SMTs; Emotional Intelligence; Job Flourishing; Psychological Safety; Shared Leadership; Team Effectiveness; Team Performance; Trust.

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1 INTRODUCTION

1.1 Current situation and problem statement

In today's society, businesses are challenged with an environment which is constantly evolving and changing at an unprecedented pace (By, 2005). Technological advancements, globalization, changing consumer preferences, and political changes are factors that contribute to this rapid transformation of the business environment (By, 2005). As these factors have created new opportunities for businesses, they also have led to increased competition and pressure on businesses to adapt to the dynamic environment in order to remain competitive (By, 2005). Statistics show that 20% of businesses globally failed within the first year due to the competition that overtakes them (Statista, 2017). Only 34,4% of businesses globally make it to their tenth-year mark, as the average business lasts eight and a half years (Zhou, 2023). Next to this, there was an annual growth in business insolvencies of 10% globally in 2022 and there is an expected annual growth of 14% in 2023 (Statista, 2022). These statistics show that businesses had a hard time adapting to the changing and more competitive business environment. And yet, how businesses can adapt to the continuous changes in the environment to create or sustain a competitive position in the market remains unclear.

One recent way that has been developed to tackle adaptation to continuous change is the Agile way of working. In 2001, the Agile methodology was introduced to improve the software development process but, in the last decade, adoption of the Agile methodology has emerged in many different business sectors beyond the software industry, like innovation management, product development, construction, real estate, education, and services (Ciric & Gracanin, 2017). The Agile methodology is based on four values which are (1) individuals and interactions over processes and tools, (2) working software over comprehensive documentation, (3) customer collaboration over contract negotiation, and (4) responding to change over following a plan (Ciric & Gracanin, 2017). In other words, Agile is a methodology that emphasizes on iterative and incremental delivery of products or services, where requirements and solutions evolve through the collaborative effort of self-managing and cross-functional teams (Ciric & Gracanin, 2017). By implementing Self-Managing Agile teams (SMTs) in businesses, the flexibility to change and the overall performance of the company increases (Kumar et al., 2020). It is a way to respond to the inevitable changes in the business environments and to enhance adaptability (Stormi et al., 2019).

Since it is proven that the Agile methodology increases business performance by the implementation of SMTs (Kumar et al., 2020), the implementation of SMTs within businesses has grown in the last decades (Magpili & Pazos, 2018). However, despite their widespread implementation, review studies show that SMTs differ in their effectiveness (Magpili & Pazos, 2018), such that only 42% of Agile projects are successful (Johnson, 2020). Some implementations of SMTs within companies have resulted in adverse outcomes, like conflict escalation and a reduced awareness of changes outside of the team (Johnson et al., 2013; Wu et al., 2013). Furthermore, studies on team autonomy and team performance appear to be inconclusive (Cordery et al., 2010). This indicates that some SMTs struggle to get to their full potential and to contribute to a higher business performance.

1.2 Research objectives

When SMTs show a difference in their effectiveness in the Agile context (Magpili & Pazos, 2018), it is important to take a look at how intra-team factors influence the performance of these SMTs. This leads to the following main research question:

How do intra-team factors and their dynamics shape the overall effectiveness of self-managing teams in the Agile context?

To answer this research question, two research objectives are formed. The first objective of this research is to find out what intra-team factors influence the effectiveness of Agile SMTs, and to what extent. The input-process-output (IPO) model of team effectiveness is a framework used to understand and analyze the components and interactions that contribute to team effectiveness (Kozlowski, 2018; Mathieu et al., 2008; McGrath, 1964; Wang, 2018). The IPO model consists of three elements, namely input, process, and output (Kozlowski, 2018; Mathieu et al., 2008; McGrath, 1964; Wang, 2018). Emotional intelligence (EI) could be seen as an input factor within the IPO model of team effectiveness, as it is a resource team members bring to the team (Mathieu et al., 2008). EI is a concept proven to be of importance for SMTs, as EI is significantly correlated to human related challenges within the Agile context, like motivation, trust, and communication competence (Luong et al., 2021). Furthermore, studies have shown that EI positively influences team effectiveness in traditional teams (Burinua et al., 2022; Khan et al., 2014; Lee & Wong, 2017). Yet, scant research has explored this positive relationship within the Agile context of SMTs. This research will take a closer look at the relationship between EI and team effectiveness, investigated in this thesis by considering team performance (TP) and job flourishing (JF) as output factors of the IPO model of team effectiveness, since TP and JF represent business outcomes and reflect team effectiveness (Mathieu et al., 2008).

These two concepts are chosen for this research as it is proven that they have a positive relationship with EI among traditional teams, just as team effectiveness (Abdelkreem et al., 2021; A'yuninnisa et al., 2023b; Paik et al., 2019; Shafique & Naz, 2023).

Next to this, it is unclear what process factors, which relate to the possible mediating and moderating mechanisms, could influence the relationship between EI and team effectiveness of SMTs within the Agile context. The Job Demands-Resources (JDR) theory provides insights into the underlying psychological processes which play a role in employee well-being and performance (Bakker & Demerouti, 2006). This theory aligns with the output factors JF and TP, as the concept of JF relates to a person's positive psychological state of mental health (A'yuninnisa et al., 2023a), or in other words an employee's well-being, whilst TP relates to the achieved outcomes of the team (Mathieu et al., 2008).

Research has shown that trust (T) (Lalsing et al., 2012; Buvik & Tkalich, 2022a), psychological safety (PS) (Buvik & Tkalich, 2022b), and shared leadership (SL) (Moe et al., 2009) are individually of importance for SMTs in the Agile context, as they have a positive effect on their effectiveness. Scant research seems to be done on these concepts within the relationship between EI and team effectiveness, or how these concepts relate to one another within the Agile context. Furthermore, as a lot of research is done on the antecedents of job flourishing, the concepts T, PS, and SL seem not to be researched in relation to JF (A'yuninnisa et al., 2023a), while they are determined to be important for well-being (Di Stefano et al., 2018; Silla & Gamero, 2018; Zhu et al., 2018). This research thus does so by placing them within the IPO model of team effectiveness as process factors and by justifying the interrelationships through the JDR theory. In line with the research objective to find out what intra-team factors influence the effectiveness of Agile SMTs, and to what extent, the following sub-research question is answered:

To what extend do emotional intelligence, trust, shared leadership, and psychological safety influence both team performance and job flourishing?

The second objective of this research is to find out how these intra-team factors influence the effectiveness of Agile SMTs. This provides more information on the underlying mechanisms between the intra-team factors and how team members perceive the intra-team factors in relation to the SMTs' effectiveness. In line with the second research objective, the following sub-research question is answered:

How are these salient intra-team factors perceived by team members in relation to the effectiveness of the Agile self-managing teams?

1.3 Theoretical and practical contributions

By answering the research question, this research contributes to theory by extending our current knowledge on how, i.e., processes and mechanisms, the relationship between EI and team effectiveness unfolds within the Agile context. More specifically, this thesis enriches the literature on job flourishing, EI and self-managing teams, by exploring the possible effects of the process factors T, PS, and SL on the relationship between EI and team effectiveness.

This thesis has also practical contributions. Firstly, this research is of relevance to businesses that are thinking about implementing or already have implemented SMTs to higher their business performance, since they should know what factors need particular attention for their SMTs to have a high team effectiveness. Secondly, businesses can take into account the results of this research in their selection, training, and evaluation systems.

Thirdly, this research practically contributes to employees working in SMTs as they can find out which factor needs more personal development to get a higher team performance in the end.

1.4 Outline of the study

The remaining part of this thesis will be structured by first discussing the theoretical framework which examens the existing literature on the Agile context, and the theories and intra-team factors applied in this research. Next to this, the hypotheses and conceptual IPO model of team effectiveness within the Agile context will be presented. Following up on the theoretical framework, the methodology section will elaborate on the research strategy of this study. Afterwards, the results of the research will be presented and shows if the hypotheses are supported. The final part of the thesis, which relates to the discussion and conclusion, shows the main findings of the research.

2 THEORETICAL FRAMEWORK

2.1 The Agile Context

The Agile methodology is an iterative and flexible approach to project management and software development, which emphasizes collaboration, adaptability, and continuous improvement (Ciric & Gracanin, 2017). Agile methodologies originated in the software development industry but have since been adopted by various industries and teams seeking more efficient and customer-centric ways of working (Ciric & Gracanin, 2017). One of the key aspects of the Agile methodology is Self-Managing Teams (SMTs) (Magpili & Pazos, 2017). Agile promotes the formation of cross-functional teams consisting of members with diverse skills and expertise. These teams are self-organizing, meaning they have the autonomy to plan, execute, and manage their work. SMTs encourage collaboration, collective decision-making, and shared responsibility, leading to increased accountability and ownership (Magpili & Pazos, 2017).

It is important to note that Agile is not a prescriptive methodology but rather a set of values and principles outlined in the Agile Manifesto (Manifesto for Agile Software Development, 2001). The Agile Manifesto, created in 2001, is a foundational document which entails the values and principles of the Agile methodology (see Table 1).

TABLE 1 | Agile values and principles (*Manifesto for Agile Software Development*, 2001).

	Agile Values
1.	Individuals and interactions over processes and tools
2.	Working software over comprehensive documentation
3.	Customer collaboration over contract negotiation
4.	Responding to change over following a plan

	Agile Principles
1.	Early and continuous delivery of valuable software
2.	Welcome changing requirements, Agile processes harness change for the customer's competitive advantage
3.	Deliver working software frequently
4.	People interaction daily
5.	Build project around motivated individuals
6.	Face-to-face communication
7.	Working software is the primary measure of progress
8.	Constant pace
9.	Continuous attention to technical excellence and good design enhances agility
10.	Simplicity
11.	Self-organized teams
12.	At regular intervals, the team reflects on how to become more effective

By embracing Agile principles, SMTs can foster collaboration, respond to change, and deliver value more effectively and efficiently. The iterative and customer-centric nature of Agile methodologies enables teams to adapt to evolving requirements, reduce risk, and deliver high-quality products or services, which lead to higher firm performance (Kumar et al., 2019).

2.2 The IPO-model of Team Effectiveness

As this study takes a closer look how intra-team factors influence team effectiveness of SMTs within the Agile context, the Input-Process-Output (IPO) model of Team Effectiveness is the theoretical framework underpinning the relationships explored in this thesis. The IPO model is a widely recognized framework used to understand and analyze the components and interactions that contribute to team effectiveness (Kozlowski, 2018; Mathieu et al., 2008; McGrath, 1964; Wang, 2018), which is in line with the objectives of this study. Team effectiveness is defined as "the real-time altering of behavior and interactions to meet the changing demands of a dynamic environment in order to accomplish the shared team goal" (Gorman et al., 2018, p. 60). The IPO model of team effectiveness consists of three key elements: input, process, and output (Kozlowski, 2018; Mathieu et al., 2008; McGrath, 1964; Wang, 2018).

1. Input: The input in the IPO model represents the resources or information that are fed into a system or process (Mathieu et al., 2008). The inputs refer to the characteristics and resources that team members bring to the team (Kozlowski, 2018; Mathieu et al., 2008). These inputs can include factors such as individual skills, knowledge, experience, attitudes, personality traits, and demographics (Kozlowski, 2018; Wang, 2018). Additionally, team inputs also encompass the resources provided to the team, such as technology, equipment, and organizational support (Kozlowski, 2018; Mathieu et al., 2008). Inputs lay the foundation for team effectiveness, as they shape the potential capabilities and composition of the team (Mathieu et al., 2008).
2. Process: The processes of the IPO model refer to the activities, transformations, or operations performed on the inputs to achieve the desired outcomes (Mathieu et al., 2008). The processes component focuses on the interactions, behaviors, and dynamics that occur within the team (Kozlowski, 2018). It includes how team members communicate, collaborate, and coordinate their efforts to accomplish team goals (Kozlowski, 2018; Mathieu et al., 2008).
3. Output: The outputs component of the IPO model represents the outcomes, results, or achievements of the team (Kozlowski, 2018; Mathieu et al., 2008). Outputs are the end result that provides value or fulfills a purpose based on the inputs and the process undertaken (Mathieu et al., 2008). The outputs reflect the overall effectiveness of the team in achieving its objectives and delivering value (Mathieu et al., 2008).

The IPO model highlights the interdependence and relationships between these three components (Mathieu et al., 2008; Wang, 2018). It acknowledges that inputs shape the team's potential, processes determine how inputs are utilized, and outputs reflect the impact of inputs and processes on achieving team goals (Mathieu et al., 2008; Wang, 2018). Any changes or improvements in the input or the process can directly impact the quality and characteristics of the output related to team effectiveness (Wang, 2018). Overall, the IPO model provides a valuable lens for analyzing and understanding the factors that contribute to team effectiveness, allowing teams and organizations to optimize their inputs, processes, and outputs to achieve desired outcomes (Kozlowski, 2018; Mathieu et al., 2008; McGrath, 1964; Wang, 2018).

2.3 The JDR Theory

When using the IPO model of Team Effectiveness as a framework, the JDR theory can be well implemented to justify the placement of the concepts within the conceptual IPO model and the relationships among the concepts. The JDR theory proposes a psychological model that examines the interaction between job demands and job resources in the workplace and their impact on employee well-being and performance. It provides insights into the underlying psychological processes which play a role in the development of job strain and motivation (Bakker & Demerouti, 2006).

1. Job Demands: Job demands refer to the physical, psychological, social, or organizational aspects of a job that require sustained effort and energy expenditure from the employees. These demands can include workload, time pressure, emotional demands, role ambiguity, interpersonal conflicts, and physical demands. High levels of job demand without sufficient resources to cope with them can lead to increased stress, exhaustion, and burnout (Bakker & Demerouti, 2006).
2. Job Resources: Job resources are the physical, psychological, social, or organizational aspects of a job that can help individuals achieve their work goals, reduce job demands, and stimulate personal growth and development. Examples of job resources include social support, autonomy, feedback, task variety, skill variety, and opportunities for learning and development. Job resources play a crucial role in enhancing motivation, engagement, and well-being, buffering the negative effects of job demands (Bakker & Demerouti, 2006).

The JDR theory proposes that high job demands, coupled with low job resources, can lead to strain and negative outcomes such as burnout and decreased job performance (Bakker & Demerouti, 2006). Conversely, when job resources are abundant and effectively utilized, they can act as buffers, reducing the impact of job demands and fostering positive outcomes like work engagement, job satisfaction, and improved performance (Bakker & Demerouti, 2006). In this research, EI, trust, PS, and SL are seen as job resources.

Organizations can use the JDR theory to assess and manage job demands and resources, promoting employee well-being and performance (Bakker & Demerouti, 2006). By identifying and addressing excessive job demands and providing adequate resources, organizations can create a healthier and more conducive work environment, enhancing employees' ability to cope with challenges and thrive in their roles (Bakker & Demerouti, 2006).

2.4 Hypotheses Development

2.4.1 The relationship between emotional intelligence and team effectiveness in the Agile context

When SMTs show a difference in their performance as only 42% of Agile projects are successful (Johnson, 2020; Magpili & Pazos, 2018), it is important to take a look at what intra-team factors influence the effectiveness of these teams. EI is a concept which is proven to positively influence team effectiveness outside of the Agile context (Lee & Wong, 2017) and is defined as "the ability to monitor one's and others' emotions, the ability to distinguish emotions, and the ability to use them to guide their thinking and actions" (Salovey & Mayer, 1990, p. 189).

There seems to be a scarcity of research related to the positive relationship between EI and team effectiveness among SMTs within the Agile context. Because of this, EI is used as the input factor within the conceptual IPO model as it is a resource team members bring into the team (Mathieu et al., 2008). TP and JF are used as outcomes for team effectiveness within the conceptual IPO model, as these concepts have been shown to have a positive relationship with EI among traditional teams (Abdelkreem et al., 2021; A'yuninnisa et al., 2023b; Paik et al., 2019; Shafique & Naz, 2023). TP, which is defined as the extent to which a team achieves its goals, next to the quality and quantity of its outputs and outcomes (Mathieu et al., 2008), is most widely studied as an outcome criterion. JF could also be seen as an outcome of the IPO model of Team Effectiveness, as it is defined as "an individual's positive psychological state of mental health and features psychological, social, and emotional well-being" (A'yuninnisa et al., 2023a, p. 1). Hence, both concepts, TP and JF, are in line with the description of the output component of the IPO model as they are end results and reflect the effectiveness of the team.

The placement of concepts within the conceptual IPO model is supported by the JDR which states that higher job resources reduce the impact of job demands and lead to higher organizational outcomes (Bakker & Demerouti, 2006). Higher levels of EI have proven to help employees to reduce the impacts of job demands (Bakker & de Vries, 2020), which leads to higher organizational outcomes (Bakker & Demerouti, 2006), such as employees achieving their work goals.

To test if EI has a positive effect on team effectiveness within the Agile context, the following hypotheses are formulated:

Hypothesis 1a: Emotional intelligence has a positive effect on team performance of SMTs within the Agile context.

Hypothesis 1b: Emotional intelligence has a positive effect on job flourishing of SMTs within the Agile context.

2.4.2 The process factors influencing the relationship between EI and team effectiveness in the Agile context

Furthermore, it is unclear how the relationship between EI and team effectiveness of SMTs unfolds (Mathieu et al., 2008). Research indicates that possible mediating and moderating factors could be trust (Lalsing et al., 2012; Buvik & Tkalich, 2022a), PS (Buvik & Tkalich, 2022b), and SL (Moe et al., 2009), as these concepts are individually of importance for Agile success.

Process factor: Trust

T is defined as "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer et al., 1995, p. 712). The concept is a key factor in regard to Agile SMT's performance (Lalsing et al., 2012; Buvik & Tkalich, 2022a), as T enables employees to work together more effectively (Mayer et al., 1995). It appears that a lack of T is one of the challenges that Agile SMT's face (Stray et al., 2018; Tyagi et al., 2022). This could be a possible reason for the problem stated in this research, which entails that Agile SMT's differ in their effectiveness and struggle to get to their full potential (Magpili & Pazos, 2018; Johnson, 2020). Because of this, T is an important concept to include within the conceptual IPO model of this study.

When looking at T in relation to EI and team effectiveness, research shows there are some connections. First of all, EI is positively correlated to T within Agile SMT's, which entails that EI promotes T within the team (Luong et al., 2021). Second, research shows that T is positively correlated to team effectiveness in Agile SMT's (Prabhu & Modem, 2022; Strode et al., 2022). Within this research, team effectiveness is seen as TP and JF. T is positively related to TP within general teams (De Jong et al., 2016; Morrissette & Kisamore, 2020). Looking at the Agile context, research has proven that there is an indirect link between T and TP through teamwork engagement (Buvik & Tkalich, 2022a). Contrary, less research has explored the direct relationship between T and TP within the Agile context, while T has proven to be of importance for Agile SMT's performance (Lalsing et al., 2012; Buvik & Tkalich, 2022a). Regarding T and JF, it seems that less research has been done so far on the relationship between T and JF in general teams and teams in the Agile context. However, this relationship could possibly exist as research has proven that a climate of T promotes thriving at work (Spreitzer et al., 2005). Thriving and flourishing are related constructs as both involve a positive state of human functioning (Spreitzer et al., 2005).

Following up on the research findings discussed, the concept of T could be seen as a process factor within the conceptual IPO model which mediates the relationship between EI and team effectiveness within the Agile context. This is supported by research which confirms T to be a mediator between EI and TP in general teams (Rezvani et al., 2019; Shafique & Naz, 2023). Also, the JDR theory complements this statement as T could be seen as a job resource which enhances the organizational outcomes by lowering the job demands (Bakker & Demerouti, 2006).
To test if T mediates the relationship between EI and team effectiveness within the Agile context, the following hypotheses are formulated:

Hypothesis 2a: Trust mediates the relationship between emotional intelligence and team performance of SMTs within the Agile context.

Hypothesis 2b: Trust mediates the relationship between emotional intelligence and job flourishing of SMTs within the Agile context.

Process factor: Shared Leadership

SL is defined as a leadership style in which leadership responsibilities are distributed among the team or organization (Lyndon & Pandey, 2020). As SMTs are based on autonomy, shared responsibility, and collective decision-making (Magpili & Pazos, 2017), effectively developed SL is needed to be successful within the Agile context (Moe et al., 2009). Among general teams outside of the Agile context, EI has a positive effect on SL (Lyndon & Pandey, 2020). Next to this, SL appears to have a positive impact on EI as team members within a SL-framework are encouraged to actively engage in team management and collaboratively seek solutions to challenges (Zhang et al., 2023). This environment inspires team members to shape matching emotional cognition and application (Zhang et al., 2023). This is a compelling rationale that suggests that there could be an interaction effect between EI and SL. Furthermore, research shows that SL has a positive effect on trust within general teams, which eventually leads to a higher team effectiveness (Drescher et al., 2014; Prabhu & Modem, 2022). This leads to the suggestion that SL moderates the relationship between EI and trust. For this reason, SL will be seen as a process factor within the conceptual IPO model of Team Effectiveness in relation to EI and trust within the Agile context. The JDR theory supports this as SL could be seen as a job resource which can lower the job demands and eventually enhances the organizational outcomes (Bakker & Demerouti, 2006). To test if SL moderates the relationship between EI and trust within the Agile context, the following hypothesis is formulated:

Hypothesis 2c: Shared leadership moderates the relationship between emotional intelligence and trust of SMTs within the Agile context.

Process factor: Psychological Safety

Another key factor for the success of Agile SMT's is PS (Buvik & Tkalich, 2022b). PS in a team climate is defined as a "shared belief held by members of a team that the team is safe for interpersonal risk taking" (Edmondson, 1999, p. 350). The importance of PS for Agile success is scientifically proven as research shows that PS has a direct positive effect on TP and JF in SMTs (Buvik & Tkalich, 2022b; Rabiul et al., 2023). Next to this, relationship networks appear to be important determinants of psychological safety at the team level, and contribute to team performance (Newman et al., 2017).

One of the key drivers of psychological safety within these social networks is the quality of social relationships between team members as measured by trust (Gu et al., 2013; Huang and Jiang, 2012; Schulte et al., 2012). As trust has proven to also have a direct positive effect on team effectiveness (Prabhu & Modem, 2022; Strode et al., 2022), there could be suggested that PS plays a big role in mediating corresponding effects of Agile practices as a process factor within the conceptual IPO model of team effectiveness (Mathieu et al., 2008). Research supports this as PS is proven to have a mediating effect between trust and job performance (Chughtai, 2020). Furthermore, it is supported by the JDR theory as PS could be seen as a job resource (Bakker & Demerouti, 2006; Newman et al., 2017). When a higher level of PS positively influences the relationship between trust and team effectiveness, it possibly will enhance the organizational outcomes as it lowers job demands (Bakker & Demerouti, 2006; Newman et al., 2017). To test if PS mediates the relationship between trust and team effectiveness within the Agile context, the following hypothesis is formulated:

Hypothesis 2d: Psychological safety mediates the relationship between trust and team performance of Agile SMTs.

Hypothesis 2e: Psychological safety mediates the relationship between trust and job flourishing of Agile SMTs.

2.5 The conceptual IPO model of team effectiveness in the Agile context

When visualizing the stated hypotheses, the following conceptual IPO model of team effectiveness in the Agile context is constructed:

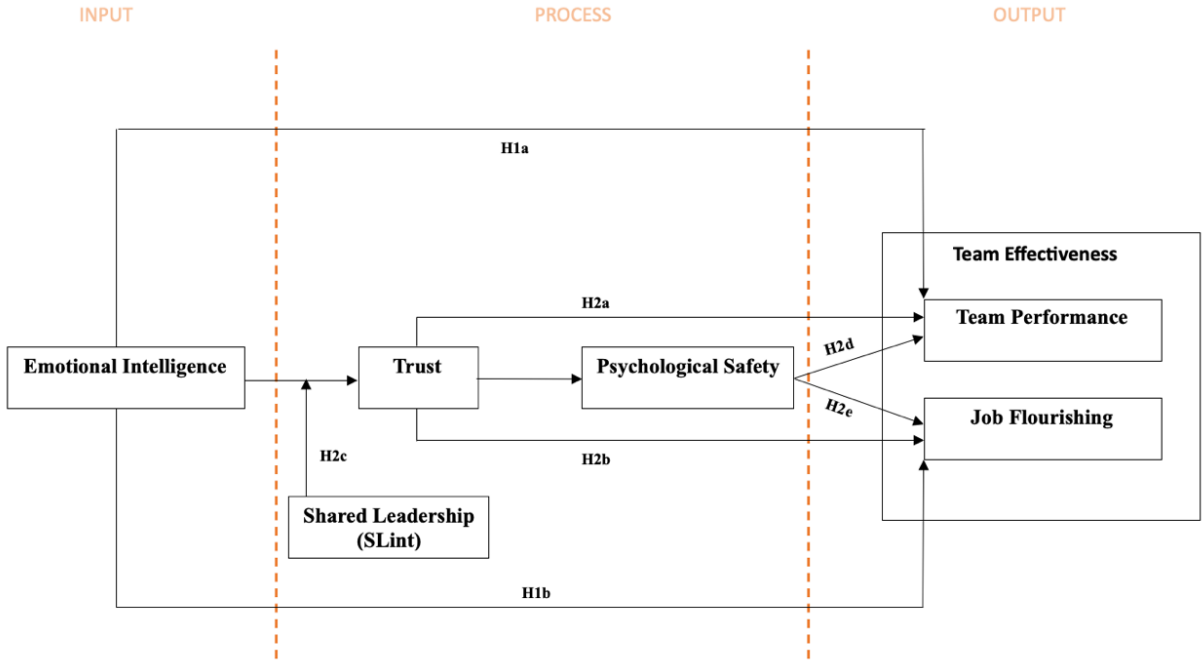

FIGURE 1 | Conceptual IPO model of team effectiveness within the Agile context.

3 METHODOLOGY

3.1 Research Design

To see whether the conceptual model and hypotheses could be supported, a sequential mixed-method study was conducted. In this thesis, the mixed-method study contained of quantitative research, which investigated to which extend the variables are influencing each other (Asamoah, 2014), and qualitative research, which aided with an in-depth exploration of the same phenomenon (Rashid et al., 2019). The mixed-method approach can be seen as a methodological triangulation, in which the weakness of a research method will be counterbalanced through the strengths of the other research method (Jack & Raturi, 2006). Hence, a mixed-method design can be defined as "the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches for the broad purposes of breadth and depth of understanding and corroboration" (Johnson et al., 2007, p. 123). A mixed-method approach has been chosen to expand and strengthen this research (Schoonenboom & Johnson, 2017), since the results of the quantitative and qualitative research can be complementary to one another, as the results of the qualitative research clarify the results of the quantitative research (Schoonenboom & Johnson, 2017). First, quantitative research was needed for the first research objective, which was to determine to what extent the intra-team factors are present and if the relationships occur within the IPO model of Team Effectiveness (Asamoah, 2014). Second, qualitative research was conducted in line with the second research objective, to further explain and offer more in-depth explanations of the quantitative findings (Rashid et al., 2019) on how the intra-team factors are influencing the team effectiveness of Agile SMTs.

3.2 Data Collection, Sampling and Participants

3.2.1 Part 1: Quantitative Research

The target population are SMTs which are working within the Agile context. The sampling methods that were used in this research were both random and convenience sampling (Stratton, 2021). Through the researcher's network, a consultancy company working Agile was contacted, which led to five SMTs participating in the research. Each SMT has an average of nine team members of which each team member has its own expertise. This leaded to a sample size of 45 team members participating in the quantitative research. Table 2 shows the inclusion/exclusion criteria that were used for selecting the participating company and SMTs.

TABLE 2 | Inclusion and exclusion criteria for participating in both quantitative and qualitative research.

Inclusion criteria	Exclusion criteria
SMTs working in the Agile context	SMTs not working in the Agile context
SMTs consisting of nine team members on average	SMTs consisting of less or more than nine team members
SMTs consisting of team members with different expertise	SMTs which do not consist of team members with different expertise
SMTs of a company outside of the software development industry	SMTs of a software development industry

Out of the 45 invited team members, 40 team members participated in the questionnaire (response rate 88.89%). After removing invalid responses, the final sample consisted of 36 team members (80%). On average, each SMT consisted of 7 participating team members (ranging from 6 to 9; SD 1.45). The participating team members were mostly men (72.2%). The ages ranged from 20 to 60, in which the biggest age category was 20-30 years (33.3%). The functions within the company were almost divided equally among the participating team members, namely junior (30.6%), medior (33.3%), and senior (36.1%). In terms of tenure, 16.7% of the team members had been working at the company for more than 5 years, 24.9% for 3 to 5 years, 36.1% for 1 to 3 years, and 22.3% for less than 1 year.

3.2.2 Part 2: Qualitative Research

For the qualitative research, three team members of each SMT were randomly chosen to participate in a focus group. In this manner, each team member had an equal chance of being selected (Noor et al., 2022). This leaded to a sample size of 15 team members participating in the qualitative research. The participating team members were mostly men (66.6%), which corresponds with the gender distribution of the quantitative research.

3.3 Research Instruments

3.3.1 Part 1: Measures for Quantitative Research

The data collection instrument that was used in the quantitative research was a questionnaire. For each variable, a scale was used to assess that particular concept. The internal consistency (Cronbach's alpha) of each scale is shown in Table 3.

Emotional Intelligence. To assess the level of EI within the SMTs, the Wong and Law Emotional Intelligence scale (WLEIS) was used in this research as it was designed for the use in management research (Law et al., 2004). It contains 16 items which are divided into four categories related to the four-dimensional definition of EI, namely Self-Emotions Appraisal (SEA), Others-Emotions Appraisal (OEA), Use of Emotion (UOE), and Regulation of Emotion (ROE) (Law et al., 2004).

The response format of the WLEIS-scale was presented as a 7-point Likert-type scale, in which 1 = totally disagree and 7 = totally agree. Sample items of the WLEIS-scale are: "I have a good sense of why I have certain feelings most of the time" for SEA, "I always know my friends' emotions from their behavior" for OEA, "I always set goals for myself and then try my best to achieve them" for UOE, and "I am able to control my temper so that I can handle difficulties rationally" for ROE (Law et al., 2004). See appendix A for the full WLEIS-scale.

Trust. To assess T within the SMTs, the Behavioral Trust Inventory (BTI) scale of Gillespie (2003) was used, as it specifically measures T in peer relationships at work (Gillespie, 2003). It contains 10 items which take a look at two types of trusting behavior in interpersonal work relationships, which are reliance (relying on others) and disclosure (disclosing personal or sensitive information to others) (Gillespie, 2003). Just like the WLEIS, the response format was presented as a 7-point Likert scale, which presented 1 as 'not at all willing' and 7 as 'completely willing' (Gillespie, 2003). Sample items of the trust scale are: "How willing are you to rely on your team's work-related judgements?" for reliance, and "How willing are you to share your personal feelings with your team?" for disclosure (Gillespie, 2003). See appendix B for the full trust scale.

Psychological Safety. The 4-items PS scale was used to assess PS within the SMTs (Nembhard & Edmondson, 2006), as the scale focuses on the level of PS within teams. The four items are from Edmondson's (1999) PS scale. Also here, the response format was a 7-point Likert scale in which 1 = strongly disagree and 7 = strongly agree (Edmondson, 1999; Nembhard & Edmondson, 2006). Sample items of the PS scale are: "If you make a mistake on this team, it is often haled against you" (reversed scored) and "Members of this team are able to bring up problems and tough issues" (Nembhard & Edmondson, 2006). See appendix C for the full PS scale.

Shared Leadership. To assess SL, the PB-T + PB-S scale was used as it combines proactive team-directed behaviors (PB-T) and self-directed proactive behaviors (PB-S) (Muethel et al., 2012). It consists of 7 items, of which four items are related to PB-T and three items are related to PB-S (Muethel et al., 2012). The response format was based on a scale from 1 (strongly disagree) to 5 (strongly agree). Sample items of the SL scale are: "All team members initiated actions to bring out improved procedures for the team" for PB-T, and "All team members asked other team members for advice" for PB-S (Muethel et al., 2012). See appendix D for the full SL scale.

Team Performance. To assess TP within the SMTs, the TP scale of Gibson et al. (2009) was used as the scale captures the overall sense of how effective the team is, which is in line with the objectives of this research. It consists of four items, which were measured on a scale of 1 (very inaccurate) to 7 (very accurate). Sample items of the TP scale are: "This team is consistently a high performing team" and "This team is effective" (Gibson et al., 2009). See appendix E for the full TP scale.

Job Flourishing. To assess JF within the SMTs, the Flourishing-at-Work Scale – Short Form (FAWS-SF) was used for this research as it is a measurement of three dimensions of well-being at work, namely emotional well-being, psychological well-being, and social well-being (Rautenbach & Rothmann, 2017). The FAWS-SF consists of 16 items divided into the three dimensions of well-being (Rautenbach & Rothmann, 2017). The responses to the FAWS-SF items were scored on a 6-point scale ranging from 1 (never) to 6 (every day) (Rautenbach & Rothmann, 2017). Sample items of the FAWS-SF are: "During the past month at work, how often did you do feel happy?" for emotional well-being, "During the past month at work, how often did you feel confident to think or express your own ideas and opinions?" for psychological well-being, and "During the past month at work, how often did you feel you had something important to contribute to your organization?" for social well-being (Rautenbach & Rothmann, 2017). See appendix F for the full FAWS-SF scale.

3.3.2 Part 2: Focus Group Protocol for Qualitative Research

To collect the qualitative data, focus groups were held. Focus groups can be seen as a supplement to a quantitative survey (Barbour, 2005), which suited this research. The purpose of focus groups is to see what the understandings and perspectives are of the participants in regard to results of the quantitative research (Millward, 2000). A disadvantage of focus groups is that the selection of the participants and moderator determines the quality of the data that will be obtained more than with individual interviews (Greenbaum, 1998). The selection process and preparation of the interviews requires sufficient attention to make sure that it serves the objectives of the research (Greenbaum, 1998). Advantages of focus groups in comparison to individual interviews are that it may encourage individuals to participate which are reluctant to talk one-on-one. Next to this, the group dynamics could generate rich data (Coté-Arsenault & Morrison- Breedy, 2005).

The focus groups were held by asking a set of predefined questions, through semi-structured interviews. Semi-structured interviews are useful in mixed-method research as an adjunct to supplement and add depth (Adams, 2015). The semi-structured interview guide was based on the intra-team factors and outcomes of the IPO model of Team Effectiveness, which consists of TP and JP (see appendix G).

3.4 Data Analysis

3.4.1 Part 1: Quantitative Research

First, a preliminary analysis was performed, in which the descriptive statistics were checked, and the data was cleaned. This means that the variables were given clear and short names, and the data was checked for missing data. Eventually, 4 out of the 40 cases were deleted due to missing data, which leads to a total of N=36. Furthermore, the preliminary analysis shows the reliability of the data (see Table 3) and if there are any outliers which need to be removed. The Cronbach's alpha for each variable is higher than 0.7, which means that the variables are reliable. No extreme outliers were detected in the data. Finally, through stepwise model building, the hypothesized conceptual model was evaluated. Each model in the stepwise model building was evaluated looking at the R-squared values (see Table 4). The R-squared values indicate the proportion of variance in the dependent variable that can be explained by the model (Miles, 2005). Next to the R-squared values, the hypothesized conceptual model (Model 4) was also evaluated by the SRMR, dULS, and dG values (Dijkstra & Henseler, 2015; Hu & Bentler, 1998). The SRMR quantifies how strongly the empirical correlation matrix differs from the model-implied correlation matrix (Hu & Bentler, 1998). The lower the SRMR, the better is the theoretical model's fit in which the cut-off value is 0.08 (Hu & Bentler, 1999). Next to this, the HI95 and HI99 values relate to the SRMR if the theoretical model was true, which means that the model is likely true if the SRMR value does not exceed those values (Hu & Bentler, 1998). The dULS and dG tests are measures that quantify how strongly the empirical correlation matrix differs from the model implied correlation matrix (Dijkstra & Henseler, 2015). The lower the dULS and dG values, the better the theoretical model fit. If the dULS and dG values exceeds the corresponding HI95 and HI99 values, it is unlikely the model is true (Dijkstra & Henseler, 2015).

To analyze the cleaned quantitative data, a correlation analysis was done in SPSS to determine if the variables are correlated (Asamoah, 2014). The statistical techniques called the Pearson's correlation was used, which can be calculated for any two continuous variables and measures the strength of the association between two variables (Limberg et al., 2021). As an extension of the correlation analysis, a regression analysis was performed to provide the predictive power of the independent variable to the dependent variable (Limberg et al., 2021). Next to this, structural equation modelling (SEM) was performed to describe the relationship among the observed variables and determine the model fit of the conceptual IPO model of team effectiveness in the Agile context (Thakkar, 2020). Through the use of the statistical techniques, the hypotheses were supported or not supported.

3.4.2 Part 2: Qualitative Research

To analyze the qualitative data, the semi-structured interviews of the focus groups were transcribed. After this, a thematic analysis was done, which is "a method for analyzing qualitative data that involves searching for recurring ideas in the data set" (Riger & Sigurvinsdottir, 2016, p. 33). The coding process has a particular set of stages, namely to immerse oneself in the data (step 1), to generate initial codes (step 2), search for themes (step 3), review the themes (step 4), define and name the themes (step 5), and produce the report (step 6) (Braun & Clarke, 2006). This is related to the Gioia structure of data in which the first-order codes (informant-centric terms) lead to second-order (theory-centric) themes, and eventually to aggregate dimensions (Gioia et al., 2012). Afterwards, the aggregate dimensions were structured into a dynamic grounded theory model (Gioia et al., 2012).

4 FINDINGS

4.1 Quantitative findings

This chapter presents the quantitative findings of this research. First of all, the descriptive statistics of the main variables are discussed, together with the Pearson's correlations. Following up on this, the results will be presented in several stages including different regression models through SEM. The fist model shows the relationships between the income variable, EI, and the outcome variables, TP and JF. The second model includes T as a mediating variable. The third model shows the effect of SL as a moderator on the relationship between EI and T. The fourth and final model includes PS which mediates the relationship between trust and the outcome variables, TP and JF. Next to this, the model fit will show if the sample data may indeed stem from a population that functions according to the hypothesized model. Hypothesis testing will show if the hypotheses of this research will be supported.

4.1.1 Descriptive statistics

With regard to the central variables in this study, Table 3 presents the descriptive statistics, including the Pearson's correlations between the research variables. The Pearson's correlations show that all relationships have some positive correlation in which they differ in strength. Furthermore, Table 3 shows significant relationships between most of the variables, which is in line with mentioned scientific literature and the hypotheses mentioned in this thesis.

TABLE 3 | Descriptive statistics and Pearson's correlations for the study variables.

Variable	Mean	SD	EI	T	SL	PS	TP	JF
EI	5.193	0.575	(0.811)					
T	5.292	0.798	0.464**	(0.866)				
SL	2.905	0.879	0.055	0.406*	(0.928)			
PS	5.611	0.911	0.246	0.594**	0.401*	(0.746)		
TP	4.854	0.895	0.198	0.657**	0.368*	0.682**	(0.809)	
JF	4.280	0.652	0.459**	0.584**	0.358*	0.491**	0.567**	(0.897)
**. Correlation is significant at the 0.01 level (2-tailed).								
*. Correlation is significant at the 0.05 level (2-tailed).								

4.1.2 Regression models and hypotheses testing

Table 4 depicts the hypotheses testing results which includes the direct path coefficients, standard error, significance level, and the model fit.

Hypotheses 1a and 1b state that EI has a positive effect on TP and JF, respectively, of SMTs within the Agile context. As can be seen in Model 1 (Table 4), EI was entered as the predictor of TP and JF. The model fit is not good looking at the SRMR and adjusted R^2. The results implied that EI had significant direct effect on JF ($\beta = .0.460$, $p < .05$), but not TP ($\beta = .198$, $p = .330$). Thus, hypothesis 1a was not supported, while hypothesis 1b was supported.

Hypotheses 2a and 2b look at the mediating effect of T between EI and the outcome variables. When T was introduced to the model as a mediator between EI and the outcome variables TP and JF, Model 2 (Table 4), the model fit improved. The results demonstrated significant indirect effect of EI on TP ($\beta = .333$, $p < .01$, 95% CI [.115 to .533]) and JF ($\beta = .219$, $p < .05$, 95% CI [.021 to .417]). Thus, hypotheses 2a and 2b were supported. Furthermore, the results implied that EI did not have a significant direct effect on JF anymore in Model 2 ($\beta = .241$, $p = .221$). Hence, hypothesis 1b was not supported in Model 2.

Hypothesis 2c suggests that SL moderates the relationship between EI and T of SMTs within the Agile context. After introducing SL in the model as a moderator between EI and T, Model 3 (Table 4) shows an improvement of the model fit as the adjusted R^2 values became higher in comparison to Model 2. The results indicate significant direct effects of EI on T ($\beta = .419$, $p < .01$), and SL on T ($\beta = .442$, $p < .001$). An insignificant direct effect is seen of EIxSL on T (($\beta = .150$, $p = .282$). Thus, hypothesis 2c was not supported.

To complete the hypothesized model, PS is added as a mediator between T and the outcome variables TP and JF in Model 4 (Table 4). When PS was introduced in Model 4, the model fit improved as the adjusted R^2 values became higher and the SRMR value showed that the model is likely true. The results demonstrated insignificant indirect effect of T on TP ($\beta = .264$, $p = .058$, 95% CI [.037 to .566]) and JF ($\beta = .139$, $p = 346$, 95% CI [-.269 to .329]). Thus, hypotheses 2d and 2e were not supported.

Figure 2 shows the full hypothesized model and its paths coefficients.

TABLE 4 | Hypotheses testing results.

	Model 1		Model 2			Model 3			Model 4			
	TP	**JF**	**T**	**TP**	**JF**	**T**	**TP**	**JF**	**T**	**PS**	**TP**	**JF**
EI	0.198 (0.203)	0.460** (0.168)	0.463*** (0.131)	-0.135 (0.182)	0.241 (0.197)	0.419** (0.152)	-0.135 (0.182)	0.241 (0.197)	0.419** (0.152)		0.119 (0.154)	0.250 (0.201)
T				0.720*** (0.091)	0.473* (0.186)		0.720*** (0.091)	0.473* (0.186)		0.594*** (0.137)	0.447* (0.176)	0.330 (0.262)
SL						0.442*** (0.120)			0.442*** (0.120)			
EI x SL						0.150 (0.139)			0.150 (0.139)			
PS											0.445* (0.177)	0.234 (0.234)
Adjusted R^2	0.011	0.188	0.191	0.412	0.350	0.319	0.412	0.350	0.319	0.334	0.534	0.368
SRMR	0.194		0.066[+]			0.107			0.114			
dULS	0.226		0.043			0.239			0.361			
dG	0.077		0.027			0.072			0.087			

*p < .05, **p < .01, ***p < .001. Standard errors in parentheses.
[+] SRMR < 0.08

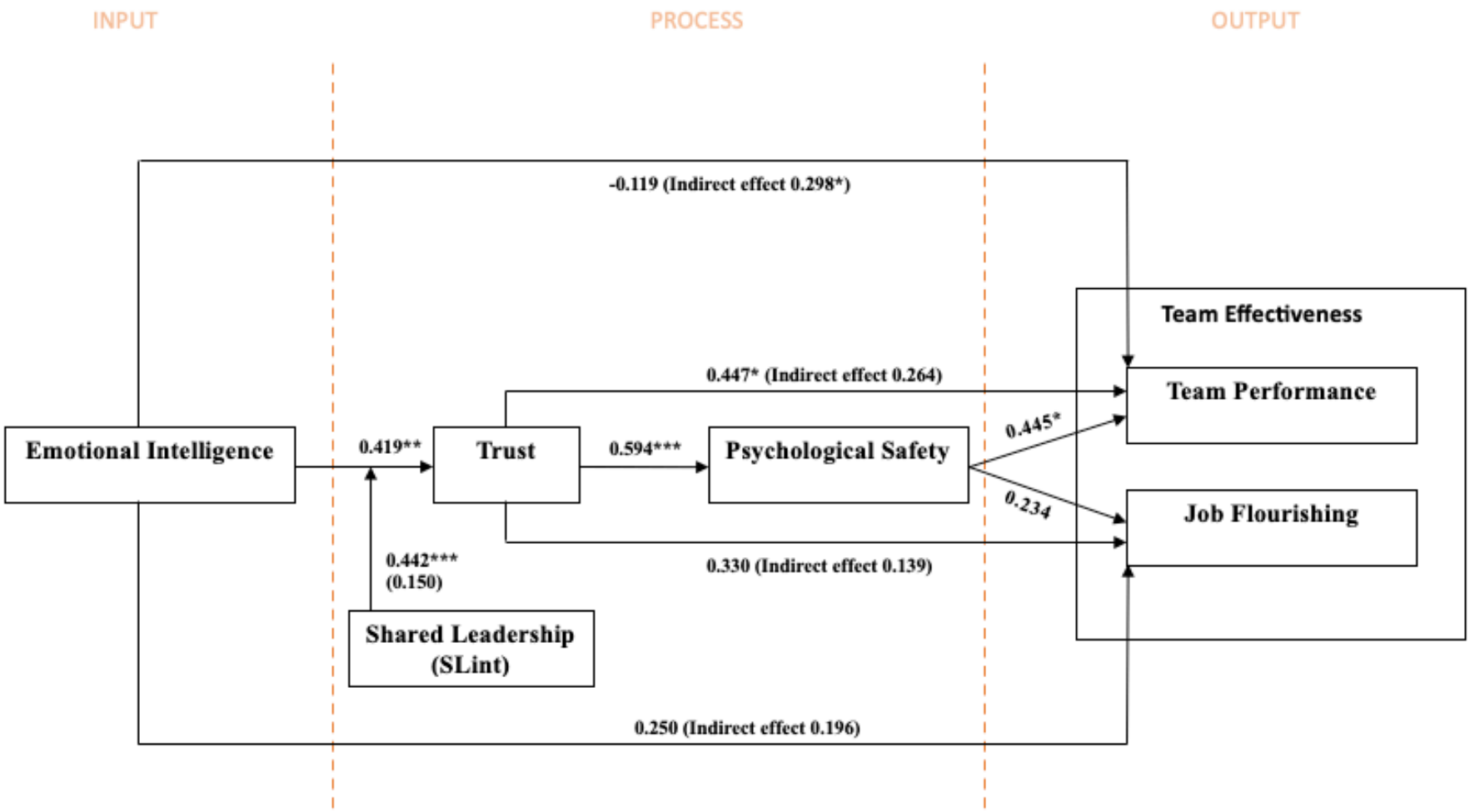

FIGURE 2 | graphical representation of the hypothesized model on Agile SMTs effectiveness.

4.2 Qualitative findings

After coding the qualitative data by using the Gioia method, three aggregated dimensions showed up, namely intra-team factors, team outcomes and organizational design. See Figure 3 for an overview of the data structure.

A closer look will be taken on the first-order concepts and second-order themes which belong to the aggregated dimensions of intra-team factors and team outcomes, as this information is directly related to the research variables. All second-order themes will be discussed below together with some illustrative quotes. The qualitative data related to the aggregated dimension of organizational design can be found in Appendix H, as this data is not directly related to the variables being researched. This data is complementary to the other two overarching dimensions and provides contextual information on the effect of the organizational design on the effectiveness of Agile SMTs.

4.2.1 Aggregated dimension: Intra-team factors

The first aggregated dimension is called intra-team factors and is divided into four second-order themes, namely emotional intelligence (EI), psychological safety (PS), shared leadership (SL), and trust (T). The second-order themes have in common that they can influence the processes within the team, and the team outcomes. For this reason, the aggregated dimension is called intra-team factors.

Emotional Intelligence

The second-order theme EI is represented by four first-order concepts, namely (1) team members being aware of their own and others' emotions, (2) team members being able to control their emotions, (3) team members being able to express their emotions, and (4) team members having empathy for one another. All four first-order concepts are related to dealing with emotions and interpersonal relationships. This is why this second-order theme is called EI.

Most of the time, team members appear to be aware of their own and others' emotions as it can often be seen by someone's facial expression and team members frequently asking each other how they are doing. The following quotes illustrate this: "Before she says it, you can see it on her face", "Most of the time it is very clear that someone is frustrated without that person saying he or she is frustrated", "We always ask that, how busy you are and then you often get a sense of what they are feeling", "I think we have a healthy level of emotional involvement."

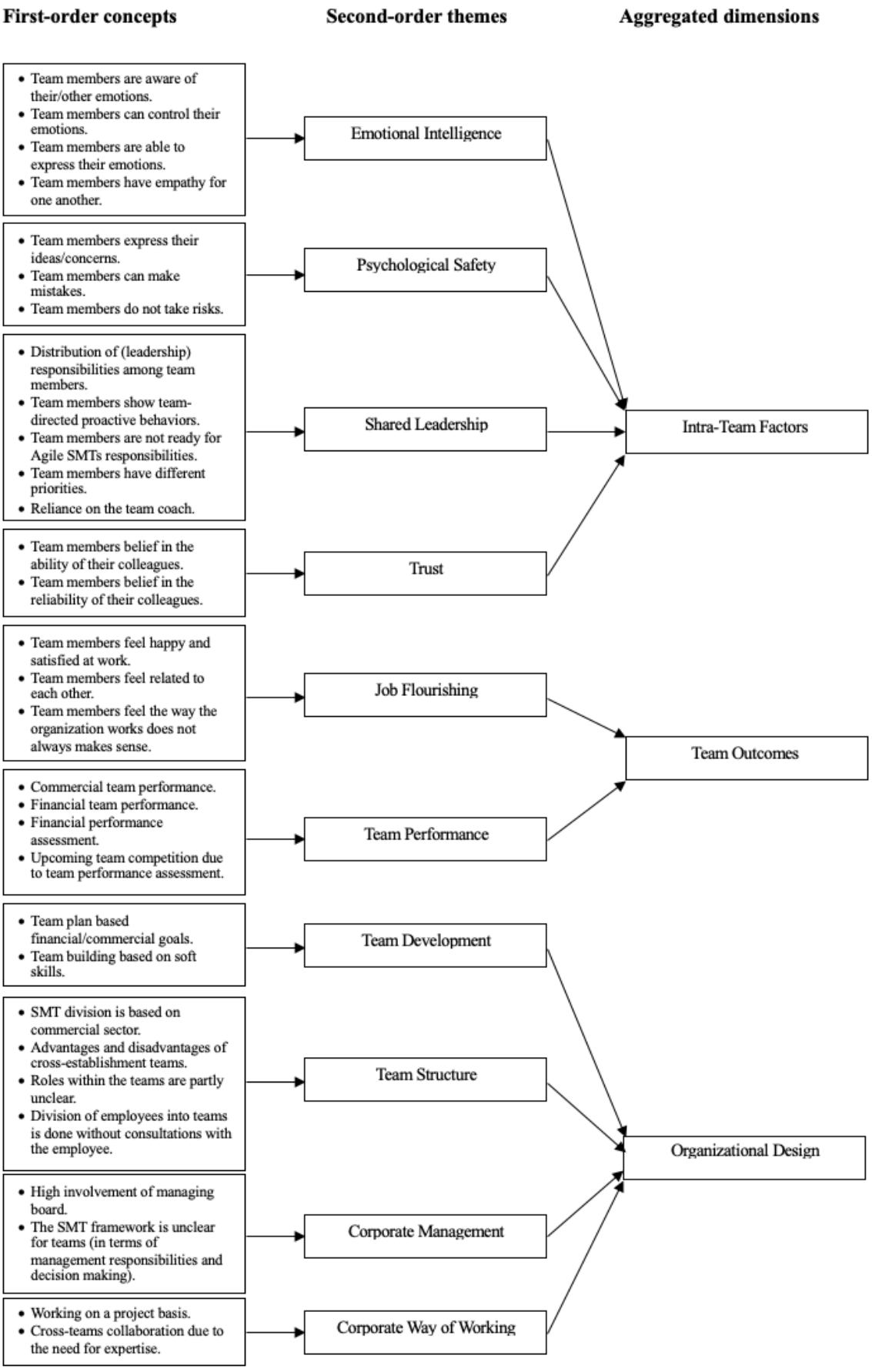

FIGURE 3 | Data structure.

In very few situations it happens that team members are not aware of the emotions of others due to the cross-establishment team setting, where team members of the same Agile SMT are situated at different offices throughout the country. One of the participants, for instance, noted: “Anyway, a market team [Agile SMT] can be spread over different locations, so you don’t see each other at all. Then you see each other twice a year or so. If you are lucky. Then you don’t know how someone feels on a daily basis.”

Following up on being aware of emotions within the Agile SMTs, team members also appear to be able to control their emotions. Team members tend to accept situations as they are without getting really emotional and team members do not express their emotions in an intense manner. Consequently, team members feel like the Agile SMTs are overall not that emotional, for example: “So then you can better just accept that it is as it is”, “No, not really within our team, no emotional outbursts”, “But I don’t think we are a very emotional team at all”.

Furthermore, team members are able to express their emotions. What stands out is that most of the time, team members do not do so within their own Agile SMT but towards other colleagues. This happens because team members of the same Agile SMTs generally do not sit together at the office. Most of the time, they sit together with co-workers with the same expertise.

The following quotes illustrate this: “That is more about everyday things and incidents in your life. You don’t say that during a meeting [with your Agile SMT], you do so more in your room/workplace”, “I also think that within the expertise teams, or at least at your room or workplace, you show your emotions more than within your team.”

Finally, team members appear to have empathy for one another, which manifests itself in wanting to help each other and provide support when needed. The following quote illustrate this: “We pay attention to this and if there is something going on, we will provide some support or send flowers or something like that. I think we try to look out for each other. How you function, how you feel.”

When going into more detail, it becomes evident that having empathy has its limits and does not generally happen on a team basis but through cross-team collaboration. When work needs to be handed over to another colleague, this colleague needs to have the same expertise. Employees with the same expertise are divided among the Agile SMTs, which makes that the work that is handed over needs to be done by a colleague from another Agile SMT. This is illustrated by the following quote: “The work that we are talking about came from team X and not from our team. So, as a team, we could support him by listening to him and maybe by giving advice or tips. But other than that, as a team you can hardly do anything more.”

Psychological Safety

PS as a second-order theme is represented by three first-order concepts, which are (1) team members express their ideas/concerns, (2) team members can make mistakes, (3) team members do not take risks. All three first-order concepts relate to actions which can be performed by team members when there is a safe team environment. This is why this second-order theme is called PS.

It appears that team members feel comfortable to express their ideas and concerns within the Agile SMTs: “I think everyone speaks up within the team”, “I think everyone has the courage to say what they think.” Although, there are a few dependencies which came from the qualitative data. First, Agile SMTs with cross-establishment team members feel that the ideas and concerns they have might be discussed in less detail due to the distance and online meetings. This is illustrated by the following quotes: “That you are a team, but yes, I also think that when you are physically together, you have deeper conversations. You are more likely to discuss something with each other”, “Yes, you delve deeper into issues because you have better interaction with each other. With a MS Teams meeting it is more difficult to intervene.” Second, how often and how easy team members share their ideas and concerns depends on the experience team members have. “In any case, the people who have been in the team for a longer time, they don’t keep anything from each other, they just discuss what they want to discuss”, “Well, in the past, I had projects and then they [younger employees] indicated that they could do it. I would check it out every now and then and everything seemed to go well. And later, it turned out that the projects were going three times over in terms of finances and that there were far too many costs involved. Well, then it appeared that they would not dare to report it. You’ll hear that later.” Third, ideas and concerns that team members have are not that often expressed towards the managing board due to events in the past which have created a feeling among the Agile SMTs that it is not safe to express them. The following quotes illustrate this: “Not within the company, but we can within the teams”, “Well, I guess if you comment to much, you’ll end up getting fired or something. This feeling exists among many people, that you will be kicked out of the company in some way or another”, “In the past, I have seen that people who put their heads out to much were being silenced. So, to some extend I say things, but I don’t say everything.” In addition to this, the managing board shows disapproving behavior when team members do express their ideas and concerns: “With such meetings, what it starts with, with such a presentation. One of the board members, he is always nodding no, he doesn’t want to hear it at all.”

Looking at team members making mistakes, the Agile SMTs offer a safe environment for this. When mistakes are being made, team members try to learn from them. This can be seen from the following quote: “In fact, I make plenty of them. Yes, of course, that’s part of it. You don’t want that, but it happens. And the only thing you can do is learn from it. And look, at a certain point, if you can’t figure it out anymore due to a mistake you made yourself, then I see room within our team to say: help.”

Furthermore, team members avoid taking risks and the organizational rules create an environment in which risk taking is limited. Employees check each other's work and multiple signatures are needed for external documents. The following quotes illustrate this: "I would always discuss risks, yes", "This has been covered in a different way by the secretariat. They have to check whether there are two signatures underneath.", "It is my project, my responsibility, I write the quotation as I think it is right. Then I have it checked by a colleague and if I have forgotten something, they see it."

Shared Leadership

The second-order theme SL is divided into five first-order concepts, namely (1) distribution of (leadership) responsibilities among team members, (2) team members show team-directed proactive behaviors, (3) team members are not ready for Agile SMTs responsibilities, (4) own projects are prioritized over shared responsibilities, (5) Reliance on the team coach. As these five first-order concepts relate to sharing and taking ownership of the responsibilities, this second-order theme is called SL.

It appears from the qualitative data that the distribution of responsibilities among team members differs per Agile SMT. As the following quotes illustrate, some Agile SMTs experience a good balance in the distribution because of a diversity of talents and characteristics within the team: "We have a very diverse team, so for each matter that you stand for as a team is one person who plays a leading role. For example, there is someone who focuses very much on articles. She enjoys doing that and if we don't have the time to write an article ourselves, she conducts an interview with us to get the information and finalized the article", "We do indeed have a number of members who are more of the driving force and other people who are naturally feel more like a supporting role. But yes, I think that's what makes us work." The Agile SMTs who do not have an equal distribution of responsibilities say that it is because not everyone feels equally responsible and that the years of experience of team members have an influence on this division. This is illustrated by the following quotes: "If you have a commercial action yourself but you say 'I'm very busy', it's always the same ones who jump up and offer to help. And there are also people who never do that", "As a junior employee you don't really have a choice. And as a medior employee, senior employee, you have much more choice: I want this project, then I would like to work with that junior employee, or I will work with that medior employee, or I will do it myself. I think that as a more experienced employee, you can exercise more self-management and as a junior employee you are more task-oriented."

What is also linked to the distribution of responsibilities is that it is sometimes unclear for the team members who should actually take the responsibility for certain tasks or situations. The following quotes illustrate this: "Then the question is who is, who covers up that work [when somebody leaves the company]? Are we responsible for this as a team or the managing board?", "For example, if we would suddenly lose that client, I don't know whether we or the person responsible for the client should do something about it? I would say the person responsible, because he has always been in contact with

the client.", "There are large projects for which a senior and a member of the managing board have made a quotation, and then I'm being called to arrange the implementation, the preparations and you name it. And then everything is left to me, and the questions are also directed to me, because I apparently know everything about it. And then I think: that's too easy. First of all, for my function and salary, I personally do not think that the responsibility I have to take for that project is in line… to ensure the project runs smoothly. While there is also someone behind the project with 30, 40 years of experience who ten passes it on to me."

What stands out in correlation to team-directed proactive behaviors is that some Agile SMTs give suggestions on how they could improve how things operate within the team. For example: "I think the most important thing we can still work on is giving feedback and getting people who are hiding at the moment to become more active in the team." Despite knowing what they could improve, the suggestions do not lead to actual actions according to the following quote: "The company does not give the team that responsibility. The team is not encouraged to tackle it within the team... So, we are actually commercially self-managing and not at all solution-oriented at a management level."

Also, it appears that some team members are not ready to have such responsibilities as it is out of their comfort zone. The following quotes illustrate this: "But I also think that some people, companywide, are not ready to bear that degree of independence.", "I think everyone also realized that it is part of a self-managing team to be able to bear such responsibilities, but perhaps it was a bit scary for everyone.", "I think that for many people, and I think that is very logical, that it is out of their comfort zone. I mean, it might be a lot of freedom in that sense." In addition, some team members do not see the added value of the given responsibilities and say: "I'm not really into the team either. What I have often stated, that if there is a team or not, I have the feeling that it doesn't really change much."

Furthermore, team members within Agile SMTs appear to prioritize their own project activities over the shared Agile SMTs responsibilities. The following quotes illustrate this: "I think most people on our team have different priorities, and most of us are extremely busy and work always comes first. So, then a team meeting is something that has to happen quickly in between the regular work activities. And the things that we actually need to talk about are never discussed at all.", "That is in principle the priority, and these are important aspects to make self-management work. But if the team does not know that this is important, or it does not add anything to those projects…"

Finally, the Agile SMTs seem to rely on the team coach and shift a part of their team responsibilities on them. The data shows that the team coaches make sure that everything is done and address tasks that still need to happen: "The coach ensures that everything is done.", "The coach gives good feedback and also points out areas for improvement.", "But perhaps, we can ask the coach to focus more specifically on things that we believe the team can improve."

Trust

T as a second-order theme is represented by two first-order concepts. These are called (1) team members belief in the ability of their colleagues, and (2) team members belief in the reliability of their colleagues. As both first-order concepts are related to believing in team members, this second-order theme is called T.

In general, team members of the Agile SMT's trust each other: "I trust everyone, unless proven otherwise.", "100%", "But I don't think it's specifically the team. I think that it's companywide, that you just simply trust your colleagues."

The qualitative data shows that this T is built in two ways, namely through the ability and reliability of team members. By having good experiences in the past and building relationships, team members learn to know what the capabilities are of others: "Yes, and that is of course and advantage of such a team, that you get to know each other better and also what each other's competencies are." This is substantiated by the fact that when working with new junior employees, with whom the team members do not have precious experiences, they are checked ones in a while to see if things go well: "When I give someone a project, I have to be able to trust that it will turn out well. And ultimately, with juniors, you do a quick check and then things are going well. That you can actually let it go."

Also, the team members know they can rely on one another: "If I had to, I have confidence that you [the team] would handle my projects well, just as managing the customer contacts and things like that.", "There is transparency within the team, so people do not have hidden or double agendas." When team members appear to be unreliable, the trust is damaged and the work is given to someone else: "Of course, it sometimes goes the other way around, that you trust people and eventually things go wrong. Next time, it will go wrong again. Yes, then you say: well, I'll chose someone else. Ultimately, you no longer trust that everything will turn out well. So, then I choose another person instead of that person."

4.2.2 Aggregated dimension: Team outcomes

The second aggregated dimension is called team outcomes. It is divided into two second-order themes, namely job flourishing (JF), and team performance (TP). Both second-order themes represent business outcomes and reflect team effectiveness. This is why the aggregated dimension is called team outcomes.

Job Flourishing

The first second-order theme which belongs to the aggregated dimension of team outcomes is JF. JF is divided into three first-order concepts, which are (1) team members feel happy and satisfied at work, (2) team members feel related to each other, (3) team members feel the way the organization works does not always make sense. As these three first-order concepts are related to emotional well-being, psychological well-being, and social well-being, this second-order theme is referred to as JF.

The qualitative data shows that the team members of the Agile SMTs feel happy and satisfied with their work: “So, that reinforces, that there is a lot of joy at work.”, “Within our team, yes, people are satisfied with their job.”, “Yes, satisfied with the work. Sometimes not that much with how things are going, but this has nothing to do with the teams.”

The last quote also relates to the fact that team members feel that the way the organization works does not always makes sense to them. The following quote illustrate this in more detail: “Yes, but it depends on how you think. Because I actually almost never think in market teams [Agile SMTs practices]. Just what is best and who is best for the job. Coincidentally, we are in market team, but I never think in market teams.”, “People don’t agree with that, or people don’t think it makes sense [the team plan], so they will have less contribution in that.”

Furthermore, team members seem to feel connected with each other through the Agile SMTs: “What the team has really brought me is that I have the feeling that I belong somewhere.”, “But now, through the team, I have more contact with other colleagues.”

Team Performance

The second-order theme called TP is divided into four first-order concepts: (1) commercial team performance, (2) financial team performance, (3) financial performance assessment, (4) upcoming team competition due to team performance assessment. All four first-order concepts are related to the performance of the Agile SMTs, which is why this second-order code is called team performance.

The commercial team performance appears to be lacking a bit within the Agile SMTs by not carrying out commercial actions. This is illustrated by the following quotes: “There were only discussions during the commercial meetings, but nothing came out of it.”, “But I just miss doing thing for our sector together. Yes, the commercial actions in particular.” The reason for the commercial actions not being carried out is because team members are busy with their daily work activities, plus the Agile SMTs do not have much team members with commercial talents, as the following quotes illustrate: “But with other people I was like: Come on, let’s give it a go, let’s go outside together. So, we sit in a meeting and it’s about how busy everyone is. But what this should be about, that’s what I miss.”, “Yes, so deploy the commercial talents more widely instead of just for their own team.”, “There are some commercial team members in that team, and you are commercial, but other than that, there aren’t really much more commercials.”

Looking at the financial team performance, the Agile SMTs are satisfied with the current financial numbers, as team members say: “Yes, I think we are doing fine financially.” Also, they show to feel responsible for their financial team performance: “Ultimately, we as a team are responsible for achieving that turnover within our sector.”

The performance assessment of the Agile SMTs appears to be complex as the projects that are commercially brought in by an Agile SMT is not necessarily carried out by the same Agile SMT. The Agile SMT tries to find the best person for the job and if a particular expertise is needed from outside the SMT, the work is done by someone from another Agile SMT. This cross-team collaboration is illustrated by the following quote: “Yes, because everyone is just looking for colleagues who belong to the project and then it is not the sector that determines who you work with, but simply the subject of the project actually. Because you try to find people with a matching expertise and you don’t look if that person is in the same team as you, because that doesn’t matter.” The financial gains generated by that project are not registered with the Agile SMT that carries out the work, but the Agile SMT that brought in the project. The team members state: “If you have projects from another team, then you are actually generating revenue for another team.”, “Ultimately, this falls under one team from a financial point of view. They may include it in their annual financial statement.”, “Yes, it does count for your personal things, of course, because you also have a personal financial goal that you want to reach. But, ultimately, it [the revenue] falls within another team.”

This way of assessing the financial performance of the Agile SMTs in combination with the cross-teams collaboration seems to create feelings of unfairness and competition among the team members. This is illustrated by the following quotes: “Yes, and sometimes that feels a bit unfair. We are all working very hard, and everyone works for the same common goal. But because you are not in the ‘right’ team, you are in a team that performs less, so to speak. That feels a bit distorted.”, “That there is competition between the teams, that is not good of course.”, “I find it difficult. I am part of a team but I do most of my work for another team. Then I would say, if it really goes to a full team performance assessment, as I do nothing for my team, I will no longer be a part of it. Then I’ll choose a team in another way.”, “And because of this, if you really have to go for your own team, sometimes you just miss opportunities. Or things are not done that should have been done. But you don’t do them because it is not beneficial for your own team. And I think that it is a great shame and then you end up with all kinds of islands.”

5 DISCUSSION

5.1 Theoretical implications

The findings of this research contribute to the Agile literature in two ways. First, this research shows what intra-team factors influence team effectiveness in the Agile context, and to what extent. Second, this research sheds light on the dynamics that can explain how the intra-team factors shape the overall effectiveness of SMTs in the Agile context.

Drawing on the IPO model of team effectiveness and the JDR theory (Bakker & Demerouti, 2006; Mathieu et al., 2008), we show that the occurrence of team effectiveness in the Agile context can be explained by team processes instigated by EI as a crucial job resource. EI can induce T which, in turn, positively affects TP and JF. In other words, T has a mediating effect on the relationship between EI and the outcome factors, TP and JF. SL and PS, respectively, do not have a moderating and mediating effect within the IPO model of team effectiveness in the Agile context. This does not mean that the two intra-team factors have no influence at all. On the contrary, SL has a direct positive effect on T, and PS has a direct positive effect on TP.

5.1.1 The relationship between emotional intelligence and team effectiveness in the Agile context

The first two hypotheses, H1a and H1b, suggested that EI has a direct positive effect on the outcome factors, TP and JF. Looking at the quantitative results, no significant direct relationship was seen between EI and TP. This contradicts with current scientific literature which shows that EI has a positive effect on TP within traditional teams (Paik et al., 2019; Shafique & Naz, 2023). There are three ways to explain why the results of this research contradict with the literature. First, the small sample size could have led to the contradicting result (Noordzij et al., 2011). A research with a sample that is too small, will not be able to detect an effect (Noordzij et al., 2011). The rule of thumb for regression analyses is 20:1 which means that the ratio of the sample size to the number of variables in a regression model should be at least 20 to 1 (Burmeister & Aitken, 2012). As this research used six variables, the sample size should at least consisted out of a 120 participants. The sample size for the regression analysis of this research was 36, which could be considered as too small (Burmeister & Aitken, 2012). Second, the relationship between EI and TP could be influenced by other intra-team factors in the Agile context, which possibly leads to the unsignificant direct relationship between EI and TP (Mathieu et al., 2008). The IPO model of team effectiveness suggests that process factors influence the relationship between the input and output factors (Mathieu et al., 2008). The process factors determine how the inputs are utilized which, in turn, influences the output (Mathieu et al., 2008; Wang, 2018).

Third, looking at the qualitative results, it does not always make sense for team members how the organization operates. This negatively effects TP, as the qualitative data shows that team members are less contributing to the team plan, and the commercial actions appear to be lacking. If you cannot emotionally relate to the way of working, EI as a job resource does not buffer the negative effects of the high job demands, and decreases the performance according to the JDR theory (Bakker & Demerouti, 2006).

The quantitative data did establish a significant relationship between EI and JF in the Agile context, which is in line with scientific literature noting that EI positively influences JF in teams (Abdelkreem et al., 2021; A'yuninnisa et al., 2023b). The qualitative data related to JF provides an explanation on why the direct relationship between EI and JF is significant. First, the team members have more contact with other colleagues through the Agile SMT and are able to express their emotions, through which they feel related to each other. As being able to express emotions is a part of EI and feeling related to each other is a component of JF, the positive direct relationship is illustrated by this example. Second, the qualitative data shows that team members feel happy and satisfied at work, which are components of JF. The JDR theory proposes that when a job resource, like EI, is effectively utilized, it can foster positive outcomes as job satisfaction and well-being (Bakker & Demerouti, 2006).

These observations lead to two new insights, which are that (1) EI has a positive direct effect on JF of SMTs within the Agile context, (2) the relationship between EI and TP might be influenced by other process factors regarding the IPO model of team effectiveness (Mathieu et al., 2008).

5.1.2 The process factors influencing the relationship between emotional intelligence and team effectiveness in the Agile context

Trust as a mediator

Hypotheses H2a and H2b suggest that T mediates the relationship between EI and the outcome factors, TP and JF, of SMTs in the Agile context. The direct relationships between EI and T, T and TP, and T and JF are significant following the quantitative data. This aligns with previous research which underlines direct relationships between EI and T in Agile SMTs (Luong et al., 2021), a direct relationship between T and TP within traditional teams (De Jong et al., 2016; Morrissette & Kisamore, 2020), and a direct relationship between T and thriving at work (Spreitzer et al., 2005). More importantly, the quantitative data determines significant indirect relationships between EI and TP, and EI and JF, through T. This indicates that T fully mediates the relationship between EI and the outcome factors, TP and JF, of SMTs within the Agile context. Hereby, the reasoning according to the IPO model of team effectiveness, that the relationship between EI and TP is influenced by a process factor, is confirmed (Mathieu et al., 2008). Also, because the direct relationship between EI and JF became insignificant when T was added to the model.

The mediation of T between EI and the outcome factors can be clarified by the JDR theory as well. EI and T function as job resources which reduce the impact of job demands and, in turn, foster the positive outcomes of TP and JF (Bakker & Demerouti, 2006).

In contrast to this outcome, previous research regarding T shows that vulnerability, which is used in this research for defining T, is often related to suffering and risk of exposure to harm (Mackenzie, 2020). These negative associations are sought to be countered in recent literature that tries to draw attention to the ambivalence of vulnerability and state that the positive dimensions of vulnerability should not be ignored (Bagnoli, 2018; Gilson, 2011). This research contributes to this change in perception of vulnerability by arguing that vulnerability is crucial for TP and JF of Agile SMTs.

The qualitative data supports this argument as the team members dare to be vulnerable by believing in the ability and reliability of other team members. The assessments of team members' trustworthiness are attempts to navigate the ambivalences of the vulnerability involved in trust (Mackenzie, 2020).

All these observations lead to two new insights, namely (1) T mediates the relationship between EI and the outcome factors, TP and JF, in Agile SMT, and (2) vulnerability is crucial for Agile SMTs to flourish and perform well.

Shared leadership as a moderator

Another process factor which could influence the relationship between EI and the outcome factors of Agile SMTs team effectiveness is SL. H2c suggests that SL moderates the relationship between EI and T of SMTs within the Agile context. The quantitative analysis leaded to the conclusion that SL is not a moderator between EI and T as the relationship between the interaction effect of SL and T is insignificant. On the other hand, the quantitative data did support the direct relationship between SL and T, which indicates that SL does have a positive influence on T within the Agile SMTs. Previous work has indeed highlighted that SL has an effect on T within traditional teams, which eventually leads to a higher team effectiveness (Drescher et al., 2014; Prabhu & Modem, 2022).

Although the quantitative data established a direct positive effect of SL on T within Agile SMTs, the question remains why SL is not a moderator in the IPO model of team effectiveness. According to the qualitative data on SL, it is unclear for team members who is responsible for certain tasks or situations, and not all team members feel equally responsible. This can be explained by the qualitative data on the subject of organizational design. It appears that the team members do not have that much autonomy, as the managing board is still highly involved, and the Agile framework is unclear for teams in terms of management responsibilities and decision making. Autonomy to plan, execute, and manage the work is an important part of the Agile methodology (Magpili & Pazos, 2017), which seems to be low within the Agile SMTs. As a high degree of autonomy is inherent to sharing leadership within a team, a low degree of autonomy negatively affects SL (Din et al., 2022). For this reason, we argue that if the organizational design of the company is not in line with the Agile methodology and its values, the intra-team factor SL cannot be executed correctly by the Agile SMTs.

These observations lead to two new insights, which are that (1) SL has a direct effect on T in Agile SMTs, and (2) the organizational design is a contextual condition for SL to have an influence on the effectiveness of Agile SMTs.

Psychological safety as a mediator

Next to SL, PS could also influence the relationship between EI and the outcome factors of Agile SMTs team effectiveness. H2d and H2e suggest that PS mediates the relationship between T and the outcome factors, TP and JF, within the Agile context. On the contrary, the quantitative results do not support these two hypotheses.

Even though hypothesis 2d and 2e are not supported, the quantitative results report a significant direct relationship between PS and TP. This is in line with previous literature (Buvik & Tkalich, 2022b). No direct relationship between PS and JF was determined by the quantitative results, which is divergent from the literature which confirmed the direct relationship between PS and JF (Rabiul et al., 2023). This could be explained by the definitions and measurements used in this research for PS, TP and JF. In this research, PS and TP are defined and measured on a team level (Gibson et al., 2009; Nembhard & Edmondson, 2006) while JF was defined and measured on an individual level (Rautenbach & Rothmann, 2017). Possibly, this is why there is a direct relationship between PS and TP, and no direct relationship between PS and JF (Chan, 2019). In addition, the qualitative data shows that team members feel safe within their team, and state that there is a safe team environment in which ideas and concerns can be expressed. Outside of the team, on an individual level, people do not always feel safe related to the performance assessment within the company, and with expressing ideas or concerns towards the managing board. In order to enable sufficient well-being and facilitate flourishing at work, it is crucial to ensure psychological safety (Sjöblom et al., 2022). This indicates that, when team members do not feel safe, this can negatively influence their well-being and job flourishing (Sjöblom et al., 2022). This might explain the insignificant direct relationship between PS and JF in the model, as PS does not have a direct positive influence on JF in this case.

Another reason why PS might not be mediating the relationship between T and the outcome factors, TP and JF, is that the effect of T as an intra-team factor could possibly be enough in relation to the team effectiveness of Agile SMTs. Vulnerability, which is an important aspect of T (Mayer et al., 1995), is also a key ingredient for creating a psychologically safe work environment (Sapra & Kumar, 2020). As there is vulnerability in the model through T, there could be overlap with PS. This is also illustrated by the stepwise model building. When PS is added to the model, it seems that the influence of T is partly taken over by PS as the relationship between T and JF becomes insignificant.

These observations lead to three new insights, namely (1) PS has a direct effect on TP of Agile SMTs, (2) the organizational design appears to have an influence on the effect of PS on the effectiveness of Agile SMTs, and (3) T as an intra-team factor could possibly be enough in relation to the team effectiveness of Agile SMTs.

5.2 Practical implications and recommendations

This thesis provides some practical implications for businesses that are thinking about implementing or already have implemented SMTs to higher their business performance. The IPO model of Agile SMTs effectiveness shows some of those intra-team factors that need particular attention for Agile SMTs to have a high team effectiveness.

First of all, businesses should have a clear vision on the organizational design in terms of team structure, corporate management, and corporate way of working, as this effects the intra-team factors and the team outcomes in the model. They can do so by implementing the Agile values and principles into their vision, so the organizational design aligns with the Agile methodology. Looking at the team structure, businesses are advised to create clear roles within the Agile SMTs, so every team member knows what he or she contributes to, and limit cross-establishment team structures, as this reduces the collaboration. In regard to the corporate management, the businesses should have a clear Agile SMT framework in terms of management responsibilities and decision making. Also, the involvement of the managing board should be brought to a minimum so much that the managing board has a supporting role instead of an hierarchical role.

Second, businesses should take into account the intra-team factors, namely EI, T, SL, and PS, and their dynamic nature. This research has shown that those intra-team factors have an effect on one another, and are of importance for the effectiveness of Agile SMT's. Businesses can do so by structurally evaluating the levels of the intra-team factors within the SMTs to see which intra-team factors need more attention.

Furthermore, businesses can take into account the results of this research in their selection, training, and evaluation systems. As the IPO model of Agile SMTs effectiveness shows what intra-team factors need particular attention for Agile SMTs to have a high team effectiveness, prospective employees can be tested on these intra-team factors. In this way, the business can see what the employee could offer to the Agile SMTs and place them in an Agile SMT that needs more of a certain intra-team factor. Also, when an employee struggles with certain intra-team factors, for example trusting other team members, trainings or counseling could be offered by the business.

Finally, the outcomes of this research could be of use for employees working in Agile SMTs as they can find out which factor needs more personal or team development to get a higher team performance in the end. Through the self-managing nature of the Agile SMTs, the team members will think of ways to improve, and this could be a part of that.

5.3 Limitations and future research

As all research, this research has also a few limitations. First of all, looking at the number of variables being measured, the sample size was small. The research included six variables, five Agile SMTs, and 36 employees participated in the end. It was chosen to proceed with the research due to the rich and qualitatively good data that came from the sample group. Future research could be done with a more suiting sample size to further corroborate the results of this research and strengthen its reliability.

Second, software limitations leaded to not being able to perform the CFA analysis. CFA analysis is of importance for the research as it provides a more parsimonious understanding of the covariation among a set of indicators (Brown & Moore, 2012). The researcher used ADANCO for the data analysis as this program was offered by the university during the quantitative design course. Unfortunately, ADANCO does not offer the option to perform a CFA analysis. Although other programmes could run CFA, the researcher did not have access to them. Future research could be done in relation to the CFA analysis with the use of IBM SPSS Amos to strengthen the accuracy of the measures, or in other words, the validity of this research.

Third, all six variables were measured by using the same people and/or Agile SMTs, which could lead to the common-method bias (Podsakoff et al., 2003). Due to time constraints and organizational constraints with the participating company, it was not possible to create time lags between the measurements of the independent and dependent variables. The researcher did create a questionnaire set up in which the variables could not be recognized by the participants, plus the independent and dependent variables were placed in an inconsequent order (Podsakoff et al., 2012). Future research could employ a longitudinal design in which the independent and dependent variables are measured separately.

6 CONCLUSION

As Agile SMTs show a difference in their effectiveness (Magpili & Pazos, 2018), such that only 42% of Agile projects are successful (Johnson, 2020), this research tried to obtain insights on how intra-team factors could influence the effectiveness of Agile SMTs. The IPO model of Agile SMTs effectiveness shows the importance of EI as an input factor, and the effect of the process factors T, SL, and PS on the outcome factors, TP and JF. This leads to three key takeaway messages.

First, more attention should be paid to intra-team factors in relation to the effectiveness of Agile SMTs. Businesses tend to look at hard measures, like financial performance, to get an image of their business performance, while the intra-team factors appear to be just as important.

In addition, businesses should not only look at an outcome factor, like team performance, when they want to look at or improve their business performance, but also at process factors to understand where the outcome factor stems from.

Ultimately, it is good to know what relationships are supported in the IPO-model of Agile SMTs effectiveness. But, more importantly, seeing how the model changes when factors are included or excluded from the model. It is about understanding the dynamic characteristic of the IPO model of Agile SMTs effectiveness.

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APPENDIX

Appendix A: WLEIS-scale (Law et al., 2004)

	Items
	Self-Emotions Appraisal (SEA)
1.	I have a good sense of why I have certain feelings most of the time.
2.	I have good understanding of my own emotions.
3.	I really understand what I feel.
4.	I always know whether or not I am happy.
	Others-Emotions Appraisal (OEA)
5.	I always know my friends' emotions from their behavior.
6.	I am a good observer of others' emotions.
7.	I am sensitive to the feelings and emotions of others.
8.	I have good understanding of the emotions of people around me.
	Use of Emotion (UOE)
9.	I always set goals for myself and then try my best to achieve them.
10.	I always tell myself I am a competent person.
11.	I am a self-motivating person.
12.	I would always encourage myself to try my best.
	Regulation of Emotion (ROE)
13.	I am able to control my temper so that I can handle difficulties rationally.
14.	I am quite capable of controlling my own emotions.
15.	I can always calm down quickly when I am very angry.
16	I have good control of my own emotions.

Appendix B: Behavioral Trust Inventory (Gillespie, 2003)

	Items
	Reliance
1.	How willing are you to rely on your team's work-related judgements?
2.	How willing are you to rely on your team's task-related skills and abilities?
3.	How willing are you to depend on your team to handle an important issue on your behalf?
4.	How willing are you to rely on your team to represent your work accurately to others?
5.	How willing are you to depend on your team to back you up in difficult situations?
	Disclosure
6.	How willing are you to share your personal feelings with your team?
7.	How willing are you to confide in your team about personal issues that are affecting your work?
8.	How willing are you to discuss honestly how your feel about your work, even negative feelings and frustration?
9.	How willing are you to discuss work-related problems or difficulties that could potentially be used to disadvantage you?
10.	How willing are you to share your personal beliefs with your team?

Appendix C: PS-scale (Nembhard & Edmondson, 2006)

	Items
1.	If you make a mistake on this team, it is often held against you.
2.	People in this team are comfortable checking with each other if they have questions about the right way to do something.
3.	The people in our team value other's unique skills and talents.
4.	Members of this team are able to bring up problems and tough issues.

Appendix D: PB-T + PB-S scale (Muethel et al., 2012)

	Items
	PB-T
1.	All team members initiated actions to bring out improved procedures for the team.
2.	All team members proactively instituted new work methods to improve team performance.
3.	All team members proactively made constructive suggestions for improving how things operate within the team.
4.	All team members initiated actions to make the team more effective.
	PB-S
5.	All team members asked other team members for advice.
6.	All team members sought information from other team members about external influences that could affect their own work.
7.	All team members sought information from other team members about aspects of their work accomplishment that could affect their own work.

Appendix E: TP-scale (Gibson et al., 2009)

	Items
1.	This team is consistently a high performing team.
2.	This team is effective.
3.	This team makes few mistakes.
4.	This team does high quality work.

Appendix F: FAWS-SF scale (Rautenbach & Rothmann, 2017)

	Items
	Emotional well-being
1.	Job satisfaction: During the past month at work, how often did you experience satisfaction with your job?
2.	Positive affect: During the past month at work, how often did you feel happy?
	Psychological well-being
3.	Autonomy: During the past month at work, how often did you feel confident to think or express your own ideas and opinions?
4.	Competence: During the past month at work, how often did you feel good at managing the responsibilities of your job?
5.	Relatedness: During the past month at work, how often did you feel really connected with other people at your job?
6.	Meaning: During the past month at work, how often did you feel your work is meaningful?
7.	Purpose: During the past month at work, how often did you feel that the work you do serves a greater purpose?
8.	Cognitive engagement: During the past month at work, how often did you focus a great deal of attention on your work?
9.	Emotional engagement: During the past month at work, how often did you get excited when you perform well on your job?
10.	Physical engagement: During the past month at work, how often did you feel energized when you work?
11.	Learning: During the past month at work, how often did you find yourself learning?
	Social well-being
12.	Social contribution: During the past month at work, how often did you feel you had something important to contribute to your organization?
13.	Social acceptance: During the past month at work, how often did you feel that you really belong to your organization?
14.	Social growth: During the past month at work, how often did you feel that your organization is becoming a better place for people like you?
15.	Social integration: During the past month at work, how often did you feel that people in our organization are basically good?
16	Social comprehension: During the past month at work, how often did you feel that the way your organization works, makes sense to you?

Appendix G: Semi-Structured Interview Guide

Topics	
Team Performance	What do you perceive the performance of your team?
	Why do you think that your team is performing the way it is?
Job Flourishing	How do you perceive the psychological, social, and emotional well-being of members within you team?
	Why do you think that is the case?
Trust	To what extent do the members of your team trust each other?
	Why do you think that is the case?
Shared Leadership	To what extend do team members equally take ownership and responsibility within the SMT?
	Why do you think that is the case?
Psychological Safety	To what extend can team members express their opinions/ideas safely, and take risks?
	Why do you think that is the case?
Emotional Intelligence	To what extend can team members control and express their emotions, and handle interpersonal relationships empathetically within the team?
	Why do you think that is the case?
General	Are there any other factors that are positively or negatively influencing the SMTs effectiveness?
'Probing'- Questions	
	This is interesting/fascinating, can you elaborate a bit more?
	What do you mean why that? And why?
	Do you agree/disagree with your team member?
	Do you want to add anything that your team member just said?

Appendix H: Aggregated dimension – Organizational Design

The last aggregated dimension is called organizational design. It is divided into four second-order themes, called team development, team structure, corporate management, and corporate way of working. All are related to the design of the organization, which is why the aggregated dimension is called organizational design.

Team Development

Team development as a second-order theme is related to two first-order concepts which are (1) team plan based on financial/commercial goals, and (2) team building based on soft skills. As both first-order concepts have an influence on the development of the team, the second-order theme is called team development.

Every Agile SMT creates a team plan once a year. This team plan consists of financial and commercial team goals, or in other words, hard metrics. The qualitative data shows that the Agile SMTs see the creation of a team plan as an obligation which takes too much time: "It really feels like an obligation and it's something you actually don't have the time for and don't feel like doing." Also, team members don't see the point as the team plan is mostly related to the finances: "I don't think it's something we see the point of ourselves. Yes, if you have goals, you should really have them in mind, and they should be something you can work towards. But if they are only financial lists, then the essence is a bit lost for me." Because of this, multiple team members state that after the team plan is finished, they hardly look at it again through the rest of the year: "The team plan contains financial things which we are actually going to achieve that year. And well, I don't look at the team plan for the rest of the year.", "We do make a team plan, but we don't really look at it anymore." The Agile SMTs receive a format for the team plan, which indicates what should be included. Not all Agile SMTs are happy with this as it limits their own input: "What is included in the team plan? I always think it's a lot of nonsense and a few little points at the bottom that make you think: 'Well, we came up with those ourselves.'"

In comparison with the team development based on hard metrics, the qualitative data shows there are also goals in relation to soft skills within the Agile SMTs: "Of course, you also have soft KPIs or goals, so to speak, which are a bit more difficult to monitor, such as collaboration.", "But also the soft things, what we indeed mean with the contributions in the team, things like that, those are the soft sides. These are somewhat hard to measure." These soft team skills are harder to measure, and it appears that there are skills the teams would like to improve, like collaboration and feedback skills. This is illustrated by the following quotes: "Yes, I think we could collaborate better. But well, that's not only the case for our team but also the other teams.", "Maybe we are indeed too nice sometimes. We could give more clear feedback sometimes.". Also, for the cross-establishment team members it appears to be harder to bond: "For team building, it would be better to sit together."

Furthermore, it is unclear what the importance is of the soft skills and not much is done with the soft skill after the goals are set. This is illustrated by the following quotes: “I think it is very good for the team feeling, but whether you ultimately achieve more, I don’t know.”, “You had to set three goals this year, but nothing was ever asked by the managing board or HR. What are your goals or should be help with them?”

Team Structure

The second-order team called team structure is related to four first-order concepts, namely (1) SMT division based on commercial sector, (2) advantages and disadvantages of cross-establishment teams, (3) roles within the teams are partly unclear, and (4) division of employees into teams is done without consultation with the employee. The four first-order concepts have in common that they show the relationships between activities and team members. Because of this, the second-order theme is called team structure.

The team division, which is made for the Agile SMTs, is based on commercial sectors. This indicates that the main priority of the teams is to be commercially active within that sector and know the trends within that sector. However, in practice, this appears not to be the case. As the daily activities revolve around the projects, the projects are given priority: “I think the most important thing is: your project, then your client, then your sector. And that is de daily routine, your projects, that is what you work on every day. And then the clients. These are of course divided per sector, but everyone has their own clients. And if you see something that is falling behind in regard to the clients, you will focus on that and only then you will oversee the whole sector. As an SMT, you are responsible for this. So, actually, that’s the third step you would worry about.” This leads to team members believing that the self-managing aspect does not only lie within the Agile SMT but also within the project work: “You are actually also self-managing in your projects, and I think that is much more important and that is also what you do on a daily basis. Ultimately, it is the SMT that have the self-managing character on paper. But I think it comes back much more in your daily work, which is more on a project basis and that you are self-managing in that.” Also, team members of the Agile SMTs are assigned to other teams, the so-called expertise teams. In this way, the Agile SMTs represent different knowledge areas: “A lot of people are in multiple teams. So, you have your commercial SMT, so to speak. But in terms of knowledge teams, you can choose multiple knowledge teams because you can have an affinity with multiple knowledge areas.”

The qualitative data shows that some Agile SMTs only have team members from the same establishment but there are also Agile SMTs with team members from both establishments, called cross-establishment teams. Those teams have some advantages and disadvantages. The advantages are that the establishments work better together.

Also, people get to know each other better: “The intention was really to have both establishments function together. So, at least, for all establishments, to get some kind of team spirit there. Previously, it wasn’t like that at all. I didn’t even know who worked at the other establishment. Yes, that has changed a lot lately and that is partly to those teams, that you get to know people better.”

The disadvantages of the cross-establishment Agile SMTs are the big distance between the establishments which has an impact on the collaboration, and that the work mentality differs among the establishments. “Yes, I think the distance is an obstacle, the other establishment is far away.”, “The point is indeed that if you are a cross-establishment team, the collaboration is sometimes difficult, because you mainly speak to each other digitally. There are occasional physical meetings. But that is always very complicated to plan as everyone is always busy.”, “Here, everybody knows everybody, and people easily call each other and then things are arranged. But it doesn’t work that way over there. I think it’s more businesslike there. More about the price perhaps.”, “In the south, they work in a different way, a different mentality, different prices are charged. Really a completely different way of working.”

Looking at the roles within the Agile SMTs, the qualitative data shows that every Agile SMT has a team member who has a commercial role, a financial role, and a communicative role. The remaining team members appear to have a general role. This is illustrated by the following quote: “The teams got three clear roles. There is a commercial, financial and communicative role. And the other team members are general members.” It seems to be a bit unclear what is expected from team members within those roles and what their added value is to the Agile SMT, especially when you are a general team member: “But yes, that ties in with what you said at the beginning: you have three roles that have been assigned and if you are a general team member, then your contribution is not really recorded.”

When people start working at the company, every employee performs the Belbin test to determine what team role suits them best and which team they could best assist with that role. There are mixed opinions about the effectiveness of the Belbin test, also because the results are not updated: “I do think it’s important to have a mix of roles, but it should not be leading in the team.”, “I filled that thing in two years ago. But in the meantime, I have also developed myself. So now I have a different view on it. But I have never been updated.”

Finally, the qualitative data shows insights on the division of new employees into the Agile SMTs. When the Agile SMTs were implemented into the company, the employees could indicate their preference for a specific Agile SMT based on sector: “We were allowed to choose at the very beginning, when the teams were divided, a first choice and a second choice. You were allowed to stick notes somewhere, like I would prefer that team, and if I can’t join that team, then I would prefer that other’s team. And then you were simply divided into a team.” At the moment, the division of new employees into the Agile SMTs seems to go without consultation with the employee in question: “You don’t have a choice as to which team you join. Go to that team, they said. While I actually do everything for another team.”

Corporate Management

Corporate management as a second-order theme is divided into two first-order concepts which are (1) high involvement of the managing board, and (2) the Agile SMTs framework is unclear in terms of management responsibilities and decision making. As both are related to the management within the company, this second-order theme is called corporate management.

The qualitative data shows that the Agile SMTs feel that the managing board still has a high involvement and is afraid to let go control. The following quote illustrates this: “Plus, what I also think about the self-managing aspect of a team, we should indeed al be self-managing. I think that means that if we have to direct ourselves, they have to let go. All the management board does is to keep in control. And that really bothers me.”, “Yes, I think we can bear that responsibility as a team quite well, but I think that the managing board, which claims that we are a self-managing team, does not dare to let go completely.” The managing board keeping in control is illustrated by the following example in which an Agile SMT would like to buy a gift for a big client from their own budget: “It was related to a project. They said it was a very nice idea. So that budget was already reserved by us, but they still had to decide separately within the managing board whether we could do it. Yes, then I thought: ‘Knock it off, that’s not self-managing. That really is the biggest joke ever.’” This leads to feeling of distrust and deception among the Agile SMTs: “Then you think: do they even trust us?”, “It is kind of an artificial management, so to speak.”

Furthermore, the Agile SMTs framework appears to be unclear to the team members, as they state: “That is the key question: what do we actually have? Do we have a commercial team or a self-managing team? How does the managing board see this?”, “Because then I thought: yes, but what is a commercial team? And then they talked about the self-managing team again. What is it actually? Is it a self-managing commercial team?”. Next to this, team member give seem to define the self-managing concepts differently: “Well, are we a commercial team? And that is what various colleagues here say… one is with a SMT, the other says we are a commercial team, and there we are a self-managing team. Yes, it depends on how you define all the concepts.”, “yes, but I think the definition of a sector team, or a self-managing team, might be very different in your mind than in the minds of the managing board.”

Also, the scope in which the Agile SMTs operate is unclear in terms of task responsibilities and decision making. The following quotes illustrate this in regard to the task responsibilities: “I don’t know to what extend we should actually interfere with this, but I don’t have the scope completely, still not completely 100% in mind. Whether we should get involved in that or not. Now I actually just look at the financial goal and if it’s in line with the prognoses.”, “But then the managing board would like for us to speak up to each other, like your EP is low or you have many general hours. And then I think, that is not the goal of such a SMT right? In my view, a commercial SMT is directed outwards and not that you address each other as if something could be improved.” In regard to decision making: “When it really comes down to a decision it definitely doesn’t work. Then it is not self-managing, let me put it this way.”

Corporate Way of Working

The last second-order theme is called corporate way of working and is related to the following first-order concepts: (1) working on a project basis, and (2) cross-teams collaboration due to the need for expertise. As both have an influence on the way the Agile SMTs work, this second-order theme is called corporate way of working.

It appears from the qualitative data that the corporate way of working is based on projects. The implementation of the Agile SMTs don't seem to have an influence on this corporate way of working: "The way of working is not changed through the implementation of the Agile SMTs, because you work on a project basis anyway.", "But when I look at the work itself and the sector, if the Agile SMT was not there, nothing would change for me."

As these projects need multiple employees with the same expertise or multiple employees with different expertise, cross-teams collaboration is needed. This cross-teams collaboration arises as the teams are not able to organize everything within their own team: "I think we as a team, or at least I think we are way too small. we cannot organize everything in such a way that we can run the projects within our team or organize the expertise within our team." As Agile SMTs need to go outside their own teams to comply with the corporate way of working and be able to work on all the projects, the teams appear to work for one another: "A large part of that turnover is achieved outside our own team. All kinds of people in other Agile SMTs also work for our team."