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EXPLORING THE IMPACT OF AGILE  
METHODOLOGY ON PROJECT EFFI-  
CIENCY IN SMALL AND MEDIUM-  
SIZED ENTERPRISES

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## ABSTRACT

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Small and medium-sized enterprises (SMEs) play a key role in economic development, yet they often face constraints related to time, resources, and market unpredictability. This study explores how the Agile methodology enhances project efficiency in SMEs. The research aims to identify the key benefits and challenges of Agile adoption and propose best practices to improve team collaboration and client satisfaction in rapidly changing business environments.

The study draws on the Agile Manifesto, Lean thinking, change management readiness, and the theory of dynamic capabilities as its theoretical framework. A qualitative research approach was applied, using secondary data collected from peer-reviewed academic sources, industry reports, and SME case studies. Thematic analysis was employed to identify recurring patterns related to Agile implementation across various sectors.

The findings show that Agile promotes faster delivery, stronger teamwork, and higher client satisfaction. However, challenges such as resistance to change, limited training, and budget constraints remain. The study concludes that leadership support, clear communication, and step-by-step integration improve Agile success in SMEs. The research provides a practical roadmap for firms and adds valuable insights to existing Agile literature.

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Keywords Agile methodology, small and medium-sized enterprises, project efficiency, Lean thinking, team collaboration, change management, client satisfaction, dynamic capabilities

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# 1 INTRODUCTION

## 1.1 Background and Context

Small and medium enterprises (SMEs) drive global economic progress as they make up most employment and business operations. SME operations thrive when they can quickly adjust to changing business conditions while working with minimal resources. SMEs are adopting Agile project management as their solution because it helps them succeed in their changing work environments (Gustavsson 2016). Agile proves ideal for small businesses that want to work better and compete for stronger thanks to its flexible teamwork and frequent continuous improvement.

In contrast to standard project management which requires fixed plans and top-down control, Agile supports teams to adjust quickly to shifting needs. Because of market uncertainty and limited resources, SMEs find this flexibility very helpful according to studies done by Serrador and Pinto (2015). SMEs benefit from Agile due to its proactive customer-centred approach that helps them create value through team collaboration and frequent feedback. SMEs beyond the software sector when they apply Agile methods including manufacturing and education industries revealed better productivity results and happier customers in research by Žužek et al. (2020).

Implementing Agile approaches presents specific hurdles for Small and Medium-sized Enterprises. Organisations need to transform their way of working and think differently to successfully switch from traditional project management to Agile practices. Small and medium enterprises find it difficult to succeed with Agile implementation because they have limited resources, know-how problems, and resistance to change according to Leite et al. (2016). To reach the full benefits of Agile methodology SMEs need to overcome their specific adoption challenges.

This research examines how Agile methodology affects project efficiency in small and medium-sized enterprises while exploring its advantages and obstacles alongside proven implementation strategies. The research studies Agile from theoretical perspectives and implements it in practice to give in-depth insights about its operations improvement benefits for small and medium-sized businesses.

## **1.2 Purpose and Objectives**

The purpose of this study is to investigate how Agile methodology influences project efficiency in SMEs, emphasizing its potential to improve adaptability, collaboration, and project outcomes. Agile's iterative approach allows SMEs to optimize their operations while maintaining flexibility, which is critical in dynamic markets (Rajan & Santhosh, 2021).

### **Research Objectives:**

1. To examine the benefits of Agile methodology for improving project efficiency in SMEs.
2. To identify the challenges SMEs face when implementing Agile methodology.
3. To analyse best practices for successful Agile adoption in SMEs.
4. To assess the overall impact of Agile methodology on team collaboration and client satisfaction in SMEs.

### **Research Questions:**

1. What are the benefits of Agile methodology for improving project efficiency in SMEs?
2. What challenges do SMEs face during Agile implementation?

3. What are the best practices for successfully adopting Agile methodology in SMEs?
4. How does Agile methodology impact team collaboration and client satisfaction in SMEs?

### **1.3 Key Concepts and Framework**

The agile methodology follows the core values set by the Agile Manifesto to prioritise people connections over process systems customer input over formal agreements rapid adaptation to change above strict planning. The basic Agile principles initially created for software development projects now apply across industries including small non-software companies. Agile methods Scrum, Kanban, and Extreme Programming help companies implement Lean and Agile principles through specific structures that work across diverse organisational settings (Celestin et al. 2024).

SMEs measure project efficiency as their ability to meet project requirements and stakeholder needs through effective use of time resources and budget spending. Agile teams follow a process that matches this approach by delivering pieces of work that can bring immediate value and using feedback to keep improving it (Rajan & Santhosh, 2021). This research considers specific traits of SMEs such as their limited resources and compact organisational setup as outlined by Žužek et al. (2020).

This research uses Agile Manifesto principles combined with Agile implementation findings in SMEs to create its foundation. Through this framework, the research identifies what makes Agile adoption successful for small businesses while showing their distinctive implementation hurdles.

## 1.4 Justification and Significance

Agile methodology delivers exceptional value to SMEs because it solves their most significant operational problems. Research shows Agile methods enable teams to finish projects sooner while getting better value from their resources and making clients happier (Celestin et al., 2024). Manufacturing SMEs who adopted Agile methods cut their production cycles short and performed better according to Žužek et al. (2020). Agile delivers enhanced business performance that helps small and medium companies stay ahead in their market sector.

Despite offering advantages Agile faces numerous implementation challenges when adopted by SMEs. Small businesses almost always encounter problems with their resources and staff capabilities plus meet pushback from their employees (Bin-Hezam et al., 2018). Small and medium-sized enterprises require specific solutions that adapt Agile practises to their management style and team dynamics as outlined by research from Modransky et al. (2020). This research delivers practical guidance to help small businesses overcome Agile implementation issues and benefit from this methodology.

This research adds to academic knowledge by showing how Agile methods work in SMEs and beyond basic software development. Recent studies mainly looked at big businesses and IT development without showing us how SME owners can use Agile effectively (Gustavsson, 2016). By analysing this research space, the study builds existing knowledge and gives practical guidance to both SME leaders and policy makers.

This study benefits researchers by expanding knowledge while helping professionals improve their project management abilities through real-world insights. Knowledge of Agile basics and their use in small businesses helps managers achieve better outcomes through ongoing process refinement and quick response. This study supports our long-term objective to help small businesses succeed in today's market challenges.

## **1.5 Methodology Overview**

This research uses a secondary qualitative approach. The study reviews existing data from published sources. These sources include books, journal articles, and reports. The aim is to understand Agile adoption in SMEs. Secondary data helps explore how Agile impacts SMEs. It provides insights into challenges and best practices. The data will be gathered from reliable academic sources. This will include case studies, industry reports, and research papers.

Secondary qualitative research helps save time and resources. It allows for in-depth analysis of existing findings. The research focuses on extracting relevant themes. These themes will address the research questions. Themes will be analyzed to draw conclusions about Agile. The study will also compare findings from different sources. This comparison will highlight any differences or similarities. It will help provide a balanced view of Agile practices. No new data will be collected for this study. The existing literature is rich in insights about Agile methods. By analyzing this data, the study aims to provide valuable insights. This approach allows for a comprehensive understanding of Agile's impact. It also helps identify key factors for successful Agile adoption in SMEs.

## **2 THEORETICAL FRAMEWORK AND LITERATURE REVIEW**

### **2.1 Introduction**

Agile methods are now used in many industries because they improve teamwork and help finish tasks faster. These methods were first made for software projects. But now, other sectors use them because they need flexible plans and quick action (Gustavsson, 2016). Agile allows firms to share ideas quickly and adjust to customer needs. This is very helpful for small teams with limited tools. Agile uses short work cycles and frequent feedback. These steps help firms stay updated with fast market changes (Cobb, 2023).

However, using Agile is not easy for all. Teams need new skills and training to follow the process well. Firms also need to change how leaders guide people and how work is shared. Many employees may fear these changes. Small firms face bigger problems because they have fewer people and funds. This chapter reviews key Agile ideas. It shows how small firms can use Agile to improve project results in real work settings.

### **2.2 Foundational Perspectives and Their Relevance to Agile**

According to Popoola et al. (2024), Agile development should be seen in combination with other digital transformation strategies, which support the implementation of structural changes in small iterations and frequent communication with the stakeholders. According to Cobb (2023), the principal signatories of the Agile Manifesto include customer collaboration, openness to change, working deliverables, and implemented teams which are much different from plan-driven, requirements-based, and phased methods. Despite having originated in software engineering,

these values have been successfully carried out in various fields as sectors like education, health, manufacturing finance etc proving that in the art of functionality, the need to adapt is pervasive.

As the system has been derived from the Toyota Production System, lean thinking explains how and why, constant enhancement and eliminating waste can complement the technique of Agile which is iterative (Stern, 2020). Through the identification and elimination of waste activities, the methodologies of Lean contribute to reducing costs and growth of non-value-added time for those firms where resources are scarce. Kišš and Rossi (2018) highlight a relatively new approach known as Lean-Agile, which combines the short iterative cycles of Agile with the Lean flavor of efficiency. According to Tripp et al (2018), this synergy is also positive for large enterprises while small and similarly established businesses require optimized processes to stay relevant this synergy is advantageous. Lean-Agile combines flexibility with disciplined waste reduction through shorter development cycles, recurrent feedback, and focus on the improvement of the value delivery process.

Organizational change management theories provide insights on how structural as well as cultural readiness can impact the ability and direction of Agile adoption. According to Weiner (2020), organisational readiness is defined as the willingness of people to change and value new practices. At the firm level, this commitment may depend on the leadership's message and communication and the level of risk tolerance that allows employees to try out new forms of work organization (Olafsen et al., 2021). That is why they dislike Agile's repetitions and feedback unilaterally, and managers who do not want to delegate decision-making to self-organizing teams (Rad and Rad, 2021; Alqudah et al., 2022). These issues are eliminated by guaranteeing that the employees have an understanding of Agile, coupled with proper training and pointers on attitude and approaches to the specific operation of iterative planning, daily stand-up, and retrospective meetings.

Complex adaptive systems can also help examine the role of Agile in organisations that operate in complex environments. San Cristóbal et al. (2018) assert that many organisations are complex, and the interactions among elements within and outside the organisations make interactions dynamic and hard to predict. The authors in Matveev et al. (2021) agree with this claim because linear, stage-gate planning processes are not as effective at addressing emergent projects due to their inability to adapt to a schedule inflexible to the fast pace of change in requirements and stakeholders' demands. In an agile framework, there is frequent communication and synchronization on how the changing requirements are going to be addressed concerning the project work. The daily scrum meetings ensure that the teams are informed of the most recent events while the reviews enable the teams to adjust the goals regularly. Boonstra and Reezigt (2023) added that one of the Agility characteristics is decentralised decision-making which again helps organisational complex systems to respond locally to new info, unlike the hierarchy system that waits for directions from the top.

Thus, the resource-based view (RBV) and the related concept of dynamic capabilities make it clear how staking may improve competitive advantage. According to Ashill et al. (2020), small businesses cannot always afford physical or financial capital so they have to settle for human capital, customer and innovation assets. Mansour et al. (2022) have stated that dynamic capabilities which are the organization's ability to recognize opportunities, capture them, and reconfigure resources are crucial in visible markets. They can be achieved easily by incorporating agile values such as the use of iterative plans, rapid prototyping, and communication with customers. Choi et al. (2018) explained that sprints and retrospectives serve as systems that enable ongoing identification of both internal and external changes, self-organized teams enable the organization to take advantage of opportunities without a rigid structure that is usually accompanied by control mechanisms. Over time, these

continued adjustments contribute to change processes at the operational and strategic managing levels thus strengthening the dynamic capabilities of the firm.

According to Popoola et al. (2024), Agile is a concept that incorporates Lean efficiency, it is a change management framework used to facilitate the adoption of agile, and the theoretical rationale for responding iteratively. This philosophical inclination is especially important for SMEs who suffer more losses in case the project fails or money is spent. Combined with these theoretical currents, the researchers and practitioners obtain a holistic picture of why and when Agile methods may be effective and when they can fail in the resource-scarce yet, flexible environments. This view all speaks for process enhancement, cultural fit, emergent chaos, or resource optimization aspect but together that invokes the reason why Agile is applied to improve organizations in the first place.

### **2.3 Agile in SMEs: Adoption, Challenges, and Integrative Insights**

Popoola et al. (2024) mention that small and medium-sized enterprises especially find the Agile practises easy because the structure of the organisation is not as complex as that of large-scale organisations and they involve less hierarchical levels and close cooperation between the stakeholders. SMEs prefer such values as flexibility in partnership with close communication and trust between all the project counterparts, which corresponds to the main principles of Agile, such as speed and successive improvements. But still, the transition can be quite problematic and it seems that this integration has gone through many problems. According to Rao and Kumar (2019), SMEs can leap from the concept to the market when they apply proper project management frameworks. While not having formal Agile structures can be a sign of a young firm, these firms may degenerate into superior inferiority structures which are detrimental to growth and development.

Heilmann et al. (2020) have pointed out that one of the important benefits of Agile in SMEs is the available option for efficient usage of resources. Since such businesses do not have large amounts of capital or extensive human resources, they must leverage every employee. Daily meetings, also known as 'stand-ups', or other regular meetings, like sprint retrospectives, allow for problems to be easily detected and solved together. Whereas in large organisations bureaucratic processes may even slow down the decision-making process in an SME, a daily stand-up meeting just for a few minutes is enough to change tasks assigned or incorporate new customer input. However, as Modransky et al. (2020) note, this flexibility may bring increased danger for SMEs if managers do not follow Agile systematically. Lack of standard training or idea of how the iterative process is carried out can lead to incomplete or fake—stand-up meetings conducted without actual feedback sharing, or sprints with no clearly defined goals.

Popoola et al. (2024) further concluded that these SME leaders identified increased market sensitivity as the major motivation for implementing Agile. In unclear or competitive markets, the number of sprints is higher because it will allow a team to shift the direction in case the current one is not suitable for customers. Sharma et al. (2022) have emphatically agreed with the observation as such are optimal with iterative approaches that reduce the "time-to-learn" implying that errors are detected earlier allowing for correction before they become costly rework or lost business opportunities. In Hidalgo (2019) this is explained by an example of a research project where the distributed teams coordinated complex scientific activities using Agile and significantly minimized delays in work and improved the quality of results. In general, such an impact of time compaction can be especially beneficial to an SME in gaining or maintaining a market share.

However, challenges also exist, as detailed below. According to Alqudah et al. (2022), resistance to change in an organisation poses a threat to Agile adoption if employees feel that their roles and responsibilities will

change or if managers are resistant to relinquishing power. If an SME's leadership perceives power and empowerment as threatening to authority, then daily stand-ups and empowered backlogs are unlikely to be more than checkbox exercises (Olafsen et al., 2021). Similarly, some employees may find it challenging to a self-organising aspect of Agile where one must communicate threats and assist in repurposing goals as necessary (Errida & Lotfi, 2021) According to Rad and Rad (2021), one solution to managing such tensions is to ensure openness of the process and that support from the top management is expressed verbally.

Training is often constrained by the lack of resources that is worse off in SMEs according to Modransky et al. (2020). Sometimes due to time and financial constraints, one can rarely afford an external Agile coach or to train the employees in intensive workshops. Therefore, employee enthusiasts on Scrum or a Kanban system – having read about these methodologies – try to introduce them on a pilot basis within the organisation. However, such an approach may be rather effective only if it is supported by the leaders, for otherwise changing understanding may lead to contradictory practices. It became evident that a dedicated fan cannot perform multiple cycles with numerous teams if the other part of the organisation is unengaged or has merely limited understanding of Agile rituals (Heilmann et al., 2020). But it can seem quite unrealistic to carry it out in such a half-hearted manner, in this vein, gradual erosion threatens to reinvigorate cynicism about iterative practice.

Furlan et al. (2023) and Stern (2020) equal to revealed that Lean and Agile work in parallel and are beneficial, especially for SMEs. Lean's approaches to waste reduction are implemented in a manner that overlays them onto the iterative sprints underlining the importance of value creation and at the same time keeping an eye out for possible realignments. Kišš and Rossi (2018) describe it as a 'powerful blend' arguing that Agile counterbalances the risk of Lean turning into rigid processes and vice versa because Agile can be seen as a process of sustained experimen-

tation. Similar to Pata et al., (2021) value stream mapping, a Lean technique, helps in the identification of process bottlenecks that may be eliminated in Agile cycles of work. It is most useful in little businesses where any drag in the speed, however minute, will have a dramatic improvement on the overall efficiency.

Which is to mean that Lean-Agile integration is not necessarily successful. According to Rodríguez et al. (2019) Lean in the past presumes that work is stable and repetitive, while Agile presupposes volatility of the requirement and fluctuation of the teams. This is especially so where the process involves a high level of documentation and this is required to be standardised, especially in the case of industries that have a lot of regulation (Tripp et al., 2018). Mousavi et al., (2020) emphasise that Lean Agile require some processes that should not be changed frequently, such as regulatory compliance documentation, as well as those that go through iterative development. Thus, the final message of this chapter is that, while many aspects of a business may be amenable to an Agile approach, certain parts of a developing SME in a specialised field are by necessity much more rigid in their predictability.

Younus and Abumandil (2021) also underline the importance of risk management in the adoption of Agile, arguing that SMEs are at a higher risk due to possible financial or operational disruptions. Because such firms do not have the kind of financial reserves that large corporations have, any error in an iterative cycle may lead to a loss of profits or may give rise to a loss of contact with key clients. Bugarová and Šimíčková (2019) have yet another interesting scheduling suggestion – to incorporate risk assessments into each sprint to have potential threats identified and negated on an ongoing basis rather than being concealed by the desire to get through more sprints. Ciric et al. (2019) also concur with this view stating that factors such as the inclusion of risk assessments in stand-up meetings or during retrospectives may help to integrate risk awareness into Agile processes.

Another point of interest is the definition of a hybrid type of project management approach. Zasa et al. (2020) state that SMEs should implement only the parts of Agile that could be helpful and continue with the rest as before, for example, budget approval processes or supplier negotiations. Betta and Boronina (2018) stress that transparency is critical in any hybrid model organisation and suggest implementing clear planning dashboards that combine Agile results and long-term visions. This can help stakeholders to know what part of the system cannot be changed, and which part is flexible. Hidalgo (2019) identifies that such collaborations were enhanced by adopting the formality in publication deadlines as well as the flexibility of the Agile approach with the research work arranged in a sprint format. For SMEs, such balance may be crucial because it allows forecasting if needed for investors or lenders but retains creativity of iterative work.

According to Sharma et al. (2022), Agile can bring innovation to life in small businesses because it involves the speedy experimentation of concepts. A pilot enables one to uncover weaknesses or validate the effectiveness of the plan on a limited scale before going for an expensive and large-scale implementation. Mohammed et al. (2022) further explains that within the financial domain, agile-balanced scorecards enable quick modifications to the established evaluation criteria and strategic goals. To ensure that such metrics are within the cycle of iterative deliveries, SMEs can use them to integrate daily work with long-term objectives. This does to a great extent limit the possibility of getting off track with set key performance objectives and at the same time provide employees with a notion of how their current tasks are relevant to the larger vision of the organisation.

Digital transformation brings new challenges as stated by Popoola et al. (2024). If there is any form of change in an SME when introducing new technologies, then this is forced through accommodating ICT, which is costly, technical and has its risks. Nevertheless, the large-scale changes to technologies can be tackled through the implementation of pure agile

sprints that offer an opportunity for the firm to only roll out functionalities, capture consumers' feedback, and adjust technology rolls out throughout the process (Machado et al., 2021). The enhancement is gradual and ideal for organisations with restricted capital since it does not require a massive investment in information technology and risks or write off the technology initiative as a complete failure. However, it is also noteworthy that technology-driven transformations require skills that may be difficult or costly to obtain (Matveev et al. 2021). Even if the sprints are well structured, technical challenges might arise and hinder the progress if the SME fails to develop or source the skills.

Interestingly, culture and human factors are two aspects that strongly emerge in the success or otherwise of SME Agile. According to Olafsen et al. (2021), scope and coverage, it is crucial that employees receive support for implementing new responsibilities. Thus, knowing that feedback during such meetings can be employed for laying blame makes the teamwork diminish. In Bagga et al. (2023), the focus is made on the change of the leadership approach needed for psychological safety when innovations are created in that mistakes made can be lessons for constant performance enhancement rather than punishment. In smaller organisations, such relations between managers and employees can even amplify such tendencies – while some employees may look forward to daily stand-ups as warm interactions, they also may be afraid of the consequences of sharing problems in such a close context (Gigliotti et al., 2019). According to Errida and Lotfi (2021), this level of concern may be caused by a lack of proper communication of Agile's purpose and benefits whereby people see adaptation as part of the process to achieve success.

Furlan et al. (2023) highlight the lack of research on studying, again, Agile within the context of the long term, paying specific attention to its sustenance among SMEs. Similarly, Tripp et al. (2018) also describe how energy and motivation aimed at iterative planning may decrease if organisations fail to integrate those principles into their genetic code. The

change of leadership or staff could also bring new processes which if followed might not have the necessary knowledge transfer put in place. While Parsons & MacCallum (2019a) do recommend Agile seems to suggest that Agile is driving growth in small, particularly tracking how long a project takes, there are more subtle changes such as morale, learning capabilities and how small businesses cope with shocks from the market.

It states that different sectors have different requirements for the utilisation of Agile. For instance, there could be stringent regulatory standards for the use of patient data in healthcare facilities thus making the amount of experimentation that can be conducted small, according to Zasa et al., (2020). Financial services may require a consistent auditing trail, once again being a conflict between regulating laws and the recurring cycles. SMEs in the manufacturing industry can apply Agile in product development especially when managing a prototype but the making of the product may be challenging in Agile if suppliers are unable to commit to the Agile pace of changes according to Rao and Kumar (2019). These observations indicate that there is no one-size-fits-all in Agile adoption requirements and that they must be adapted to each SME's regulatory environment, operations, and culture.

In addition, Sharma et al. (2022) also explains how other benefits like 'perceived collaboration or learning are as valuable as bricks-and-mortar achievements. However, agile promotes the flow of communication of individuals and ideas while eradicating barriers that are typical of small firms in the process of growth. During the same, they may acquire new skills that expand the skill sets of the firm internally across the multiple sprints. Though not always restoring the dominance of cost reduction or short-term gains, these types of capabilities frame of the firm could anchor its competitiveness for the long term (Choi et al., 2018; Mansour et al., 2022). With each retrospective, SMEs improve internal processes sometimes identifying new product offerings or markets, thus strengthening the link between Agile and dynamic capabilities.

## **2.4 Best Practices for Agile Adoption in SMEs**

Agile adoption in (SMEs) is essential. It helps them improve efficiency and deliver better results. Many SMEs struggle with adopting Agile due to limited resources. However, using best practices can ease this process. Agile methods, such as Scrum and Kanban, provide flexible ways to manage projects. These practices focus on iterative development and continuous improvement. They are valuable for SMEs, as they reduce waste and increase productivity (Popoola et al., 2024). Studies such as Žužek et al. (2020) show that Agile adoption helps SMEs stay competitive. Companies use Agile to enhance team collaboration. This approach allows teams to respond quickly to customer needs and market changes.

One important aspect of Agile adoption is leadership. The role of leaders is crucial in guiding the team. Leaders should support Agile practices and promote change. They need to show the benefits of Agile. This helps employees understand its value (Heilmann et al., 2020). Without strong leadership, Agile may not succeed in SMEs. Leaders must also encourage training. Training provides employees with the skills they need to implement Agile effectively. According to Modransky et al. (2020), regular training sessions are key to successful Agile adoption.

Another practice for successful Agile adoption is setting clear goals. Clear goals provide direction for teams. Teams can focus on what matters most. When goals are not clear, teams may waste time. They may not achieve the desired results. Setting achievable goals helps teams stay on track and improve performance (Sharma et al., 2022). Goals should also be aligned with the overall business strategy. This ensures that Agile contributes to the company's long-term growth.

Effective communication is also crucial for Agile success. SMEs must ensure that all team members communicate regularly. Daily stand-up meetings are one way to ensure this. These meetings allow teams to discuss progress and issues. They also provide an opportunity to share feedback. According to Alqudah et al. (2022), open communication in

Agile teams leads to better decision-making. It helps teams address challenges quickly.

Collaboration between teams and stakeholders is another best practice. In Agile, teams must work closely with customers. This allows them to deliver products that meet customer needs. Frequent feedback from customers helps improve products (Celestin et al., 2024). This customer-centric approach makes Agile different from traditional project management methods. It helps SMEs stay focused on their customers' needs and preferences. This is important for SMEs that have limited resources but want to compete effectively.

Another practice that supports Agile adoption in SMEs is flexibility. Agile emphasizes the need for flexibility. Teams must be able to adapt quickly to changes. Agile methods allow teams to adjust plans as needed. This is essential in SMEs that operate in fast-changing markets. Flexibility helps SMEs overcome obstacles and take advantage of new opportunities (Rajan & Santhosh, 2021). SMEs can benefit from Agile's ability to address unforeseen challenges.

Training and coaching are essential for Agile success. SMEs often lack formal structures. This can make it hard to train employees effectively. However, small businesses can still make Agile work. They can provide basic training and offer ongoing coaching (Gustavsson, 2016). The training should focus on Agile principles and how to apply them in daily work. By training their staff, SMEs increase the likelihood of Agile success.

Agile methods also promote teamwork. Teamwork is critical in SMEs because the teams are small. In Agile, teams are self-organizing. They manage their work without micromanagement (Gigliotti et al., 2019). This leads to more autonomy and empowerment. Empowered teams are more motivated to work together and achieve success. Therefore, SMEs should encourage a culture of trust and collaboration within their teams.

SMEs can also integrate Agile into their existing business models. This integration ensures that Agile practices align with the company's objectives. Some businesses may need to modify their processes to fit Agile. For example, they may need to adjust their budgeting and planning processes (Leite et al., 2016). However, the integration should not be rushed. It should be done step by step to ensure smooth adoption. Successful integration helps SMEs maintain their core values while benefiting from Agile's flexibility.

## **2.5 Impact of Agile on Team Collaboration and Client Satisfaction**

Agile has a significant impact on team collaboration. Agile methods, such as Scrum and Kanban, encourage regular communication. Teams meet often to discuss their progress and challenges. This leads to better teamwork and coordination. According to Rad and Rad (2021), teams that use Agile methods communicate more effectively. They share ideas and feedback regularly. This improves their ability to work together and solve problems.

Agile's influence on communication helps build stronger relationships within teams. When team members communicate openly, trust grows. Trust is essential for effective collaboration. In Agile, team members work closely together to meet project goals. They share responsibility for success (Gustavsson, 2016). This shared responsibility increases motivation. It also enhances job satisfaction. As teams collaborate more, their efficiency improves. They can complete tasks faster and with higher quality.

Employee engagement is another benefit of Agile. Agile methods give employees more control over their work. Teams are self-organizing, meaning they decide how to complete tasks. This autonomy makes employees feel more involved in the project (Alqudah et al., 2022). They have more say in the process, which increases their motivation. This

leads to higher levels of engagement. Engaged employees are more likely to be productive. They are also more likely to stay with the company. This reduces turnover and the costs associated with hiring and training new employees.

Agile also promotes a sense of ownership. Employees take ownership of their tasks and deliverables. This increases their commitment to the project (Rajan & Santhosh, 2021). When employees feel that they own their work, they put in more effort. They are more likely to go above and beyond to meet project goals. This ownership also extends to problem-solving. Teams work together to address issues and find solutions.

Agile practices lead to improved client satisfaction. In Agile, client feedback is gathered frequently. Clients provide input at every stage of the project. This allows teams to make adjustments based on client needs. As a result, the final product is more likely to meet the client's expectations (Žužek et al., 2020). Regular feedback sessions also help build stronger client relationships. Clients feel that their opinions are valued. This leads to higher levels of trust and satisfaction.

Client involvement is key to Agile's success. In traditional project management, clients are often only involved at the beginning and end of the project. In Agile, clients are involved throughout the entire process. This helps ensure that the project stays on track and that client needs are met (Serrador & Pinto, 2015). By involving clients regularly, teams can adjust their work based on client feedback. This leads to a more customized and successful project outcome.

Agile methods improve project quality. In Agile, projects are broken into smaller tasks. Each task is completed in a short period, allowing for frequent reviews. These reviews help teams identify problems early on. This allows them to make improvements before the project is completed (Sharma et al., 2022). As a result, the project is more likely to meet the client's quality standards.

Agile also helps SMEs achieve faster delivery. In Agile, teams work in short iterations. Each iteration produces a working product increment. This allows teams to deliver value to clients more quickly. Clients receive products faster, which improves their satisfaction (Žužek et al., 2020). This quick delivery is especially beneficial in competitive markets. Clients appreciate fast service and the ability to adapt to their changing needs.

Agile practices increase productivity. Teams that use Agile are often more productive. The iterative nature of Agile ensures that work is completed in manageable chunks. Teams focus on delivering value in each iteration (Stern, 2020). This approach helps reduce waste and improves efficiency. As teams become more skilled at Agile, their productivity increases.

Another impact of Agile is the continuous improvement of processes. In Agile, teams review their performance regularly. They identify what worked well and what needs improvement. This focus on continuous improvement leads to higher-quality work (Popoola et al., 2024). Teams can refine their processes over time, resulting in better outcomes for clients.

Agile also leads to better resource utilization. In SMEs, resources are often limited. Agile methods help teams prioritize tasks and allocate resources effectively. This leads to more efficient use of available resources (Modransky et al., 2020). By focusing on the most important tasks, teams can maximize the impact of their work. This ensures that the project delivers value without wasting time or money.

## **2.6 Synthesis, Implications and Conclusion**

Agile is presented by Popoola et al. (2024) as the developmental outcome of several theoretical strains, which is evident in explaining its increasing appreciation in a resource-scarce environment that is dynamic. Lean principles which focus on waste reduction are synergistic

with Agile's iterative nature provided that wasteful activities are cut down by avoidable rework. This is so true, especially for SMEs given that they face limitations in terms of the resources that they can employ (Stern, 2020; Furlan et al., 2023). Even the models of change management reinforce that cultural readiness is a must, and, therefore, people and leaders must comprehend why it is possible to perform change based on the feedback loop (Weiner, 2020; Olafsen et al., 2021). Alongside increasing strengthens the theory of halal decision-making in complex markets with many decision centres, which is in tune with the Agile methodology (San Cristóbal et al., 2018; Boonstra & Reezigt, 2023). Last but not least, the application of a resource-based view and the dynamic capabilities for enhancing the relationships between the values and theories provide information on how the small cycle and fast feedback categorizations of Agile help organisations work on the strategic reallocation of resources in small-scale enterprises (Choi et al., 2018; Mansour et al., 2022).

In the present research, these theoretical contexts are applied by SMEs in adapting the Agile frameworks. Namely, Rao and Kumar (2019) argue that the number of small business enterprises promotes the implementation of organisational changes due to a flat organisational structure that connects managers and workers and enables quick cross-checking of new strategies. On the same note, these characteristics can become problematic when the informal structure of relations or hierarchy hinders areas that require order to achieve sprints, Kanban boards, or even backlog control (Gigliotti et al., 2019). As noted by Modransky et al. (2020), people who do not have structured training risk falling into pseudo-Agile state where Agile ceremonies happen, but other factors like communication, openness, and feedback from customers are nowhere in sight.

Implementing Agile and Lean methodologies within the SME environment is regarded as the best of practice or the best practice (Kišš & Rossi, 2018; Tripp et al., 2018). In such integrations, teams attempt to

create incremental value in terms of features while, at the same time they progressively eliminate more and more clinical processes that do not have relevance to any customer's needs. Pata et al. (2021) have also identified that these Lean-Agile adaptations are anchored on continuous improvement cycles that are backed up by metrics data. Thus, instead of proscribing all the Agile ceremonies, SMEs should perhaps start with a pilot project, or at most, kick off with a minimal number of practices, for instance, the daily stand-up, before evaluating the outcome (Zasa et al., 2020). This phased approach is highly flexible while at the same time taking into account the issues of culture and resources that will affect the plan.

For instance, Alqudah et al. (2022) and Rad & Rad (2021) stated that leadership can support or hinder the implementation of Agile. Servant leadership, where the managers help and guide the participants, is relevant to Agile since this framework focuses on team self-organisation. On the other hand, direct leadership can hinder the progress of the iterative cycles because one will be afraid to express ideas or different opinions (Errida & Lotfi, 2021). According to Olafsen et al. (2021), which point out that it is essential to encourage employees to accept the new responsibilities under Agile, whether tangible or intangible organisational support strengthens team identity and knowledge exchange. In the context of the least developed HR procedures and practises this support might manifest in such forms as mentoring, easily accessible leadership, and goal definition.

Risk management is integrated seamlessly with Agile ceremonies during a specific Agile sprint from the threats review (Buganová & Šimíčková, 2019). Younus and Abumandil (2021) therefore note that SMEs can engage in observing and controlling financial or operational risks step by step and can make adjustments in stages which means that they will not be merely caught off guard by the escalating risks. Thus, according to Ciric et al. (2019), it is effective to introduce risk discussions into the daily stand-ups, back-log grooming sessions and the like to enhance

proactive actions. Still, managers have to avoid having risk awareness become a dampener for experimentation—an always challenging task because people will avoid risk-taking if they get penalised whenever some values emerge from the retrospective (Olafsen et al., 2021).

Hybrid models are still a subject of discussion and research. Zasa et al. (2020) believe that using both Agile and more conventional approaches is most appropriate for assuming risk to enhance the organisational adaptability of SMEs that conduct their business in sectors associated with compliance or significant contracts where some predetermined predictability is expected. According to Betta and Boronina (2018), these tools include the dashboards which provide a summary of the progress of the particular sprint as well as any other large-scale objectives, integrated into a single plane. Hidalgo (2019) notes that these hybrid techniques were adopted by scientific collaborations to meet the requirements of formal publications based on new experiments while being able to innovate in terms of design more flexibly. For SMEs, such a hybrid enables them to embrace Agile while at the same time keeping away from unnecessary changes that might offend essential business practices and customers who expect normal schedules.

Sharma et al. (2022) discussed that agile innovation management can act as an entry point for the development and enhancement of new products for SMEs. Because one can ensure that innovations take place in distinct stages, they make it easier to try out fresh concepts and also limit the extent of loss in case of failure. Mohammed et al. (2022) expand on how using agile-balanced scorecards can ensure that operation work is ensured to work in line with set organisational goals and realities and offer real-time corrections on the same. According to Popoola et al., (2024), Such benefits can be attributed to digital transformation, and iterative pilots are especially valuable while exploring emerging technologies. Machado et al. (2021) agree with this proposition as the small-scale technological implementations and their validations during each

sprint ensure that the SMEs can manage risks and build new competencies at a reasonable pace.

However, the cultural aspect stands as a focal point of concern in the majority of the research studies (Olafsen et al., 2021; Bagga et al., 2023). That is why, if employees fail to see real organisational changes in terms of moving to more decentralised cooperation and respect, then the attempts to bureaucratize Agile appear superficial. This parallel between intentions and work-related actions is most crucial in small businesses since staff members are usually versatile and interdependent. Gigliotti et al. (2019) agree with these arguments stating that psychological safety should be established as workers need to discuss issues they experienced during sprints or whether one or other product ideas should be pursued without fearing for their jobs. When they are fostered by open dialogue, retrospective sessions are considered as inspiration and coping mechanisms (Errida & Lot-fi, 2021). On the contrary, if the team members do not trust each other, the retrospectives are confined to mere roll call meetings that do not lead to effective change.

Parsons & MacCallum (2019b) emphasised that further ethnographic study in SMEs be made to understand how Agile mindsets are developed over time. Furlan et al. (2023) also demand long-term data to identify repercussions of initial impact (e.g., quicker speed of product releases or improvement of customer satisfaction) on the competitive advantage. According to Tripp et al. (2018), the majority of the studies fail to consider changes in the fundamental strategic organisational culture, attrition of employees, or organisational learning in response to a huge upheaval in market conditions. Addressing these research gaps could help determine which of the Agile components provide tangible value to SMEs and which have to be adapted or complemented with non-Agile approaches.

Variations are perceived when the concept is applied across the sectors and this proves that no one size can fit all the SMEs in the application of

Agile. Some sectors such as the healthcare or the financial sectors have requirements regarding documentation that is difficult to reconcile with the concept of iteration and flexibility (Zasa et al., 2020). While Agile could be adopted within manufacturing SMEs for product development, production planning and supplier management might still be done using the old methods (Rao & Kumar, 2019). A Journey of Creative Ideas would eliminate the need for long innovation workshops and give creative agencies the advantages of total Agile as well as short sprints for the ideation with instant feedback from the client. As such, any generalization must be worked according to each sector's structure and pace, including the regulatory one.

In general, the literature provides evidence that Agile presents SMEs with a highly appealing means of initiating substantially quicker and far more flexible project management, though several urgent limitations related to culture, leadership, resources, and risk have been noted. Therefore, integrating Lean constructing the readiness for change and systematically creating the practises of complexity in a company make a good foundation for incremental improvement. In addition, Agile holds promise for improving and extending dynamic capabilities to other organizations particularly smaller enterprise that relies on dynamic strategies to remain competitive in a volatile market. Thus, incorporating these insights into future research streams will help to expand the understanding of how and when Agile is most effective for SMEs and where this line of work can offer academic and practical value.

The basis for agile in small to medium organisations can be viewed from several theoretical perspectives that embrace iteration, customer-centricity and flexibility. Despite the fact this approach emerged in the software industry, it is effective where basic principles are applicable when resources are scarce and require to be used responsively. Providing positive attitudes, promoting values that fit with Agile enterprise behaviours and leadership, and training or coaching are the recommendations which

can help these enterprises unleash Agile applications. However, flexibility may conflict with structure, risk has to be addressed and not all employees will be happy to let go of change-resistant processes.

Both lean thinking and organisational change management as well as concepts such as complexity theory and the development of dynamic capabilities help to explain how Agile can alter project processes. These perspectives offer an account for why the adoption of iterative work patterns may be favourable for small businesses yet why its effectiveness is not solely predictable by the notion of the process, ceremonies and tools discussed earlier. These chapters then extend the ideas presented here using evidence and case-based discussions to establish how Agile can positively improve project outputs, improve team dynamics, and ultimately reduce inefficiencies in SMEs.

## **3 METHODOLOGIES**

### **3.1 Research Design**

This research follows a qualitative approach. It uses secondary data from past studies and research papers. The data is collected through desktop research. This means no new data was collected from people or surveys.

The goal was to understand Agile use in SMEs. The study looks at how Agile helps project work. It also explores problems SMEs face when using Agile. The work compares different findings from trusted sources. This helps form ideas about best practices in real projects.

Secondary data is used because many good studies already exist. These studies give useful knowledge. They also save time and cost (Saunders et al., 2016). Many SMEs have already used Agile. So, there are reports on what worked and what did not. These reports give rich details for study.

The study uses thematic analysis to understand the data. Themes are common ideas found across the sources. The researcher reads each paper. Then key points are noted. Later, these are grouped into themes. Braun and Clarke (2006) explain how this helps find patterns in texts.

Themes in this research include:

- Agile benefits for SMEs
- Common barriers to Agile use
- Best practices for better results
- Teamwork and customer value

This method gives deep insights from many angles. It is good for topics with human and team focus (Creswell, 2014). Agile methods need people to change how they work. So, it is best to study this using real examples and ideas.

The research method is qualitative because it focuses on meanings. It does not use numbers or surveys. Instead, it focuses on what authors said in past work. Qualitative studies are often used when the topic is new (Bryman & Bell, 2015). Agile in non-IT SMEs is still a growing topic. So, this method fits the research goal.

Also, the topic is complex. Agile involves teamwork, change, and leadership. These cannot be measured by numbers alone. They need words and stories. That is why a qualitative method is right. It helps understand the "how" and "why" of Agile use.

This research is also interpretive. It does not just collect facts. It tries to explain what those facts mean. This helps understand how Agile works in different SME types. It also shows what things block its use.

Lastly, the study does not try to test a theory. Instead, it looks to build understanding. The goal is to give real-world ideas. These can help SME leaders and workers improve project work using Agile.

### **3.2 Data Sources and Selection Criteria**

The data came from online academic sources. These include journals, books, case studies, and research papers. The main platforms used were:

- Google Scholar
- Scopus
- JSTOR

- ResearchGate
- ScienceDirect

These sources offer high-quality, peer-reviewed studies. Peer review means that experts have checked the research for truth and value. This ensures the information is trusted (Saunders et al., 2016).

The papers were selected based on a few key rules. These inclusion criteria are:

- The study must be about Agile or project management
- It must focus on SMEs, or small and medium firms
- It must be written in English
- It must be peer-reviewed and from a trusted journal
- The data must be related to team work, Agile use, or results

Also, the papers had to be published from 2015 to 2024. This keeps the data current. Agile methods keep changing. So old papers may not reflect new Agile trends.

The papers came from different sectors. These include IT, manufacturing, education, and health. This gives a wider view of Agile use. Agile started in software. But now, many SME types use it. So, the data had to cover this wide scope.

A few exclusion criteria were also used. These helped remove papers that were not useful. Papers were not used if:

- They only discussed large companies
- They lacked detail about the methods used
- They did not show results clearly

- They were not peer-reviewed

The papers used in this study were also checked for geographical spread. This means the research came from many regions. These include Europe, Asia, and North America. This helps show how Agile works in different cultures and markets. Creswell (2014) says that wide data sets make research stronger.

The goal was to keep a balance. There had to be many types of SMEs. There also had to be many types of Agile use. This gave a full picture of the topic.

In total, around 50 sources were read. From those, about 35 papers were used. Some were books or book chapters. Some were case studies. Most were peer-reviewed journal articles.

Each paper was read and coded. The codes helped group the ideas into the main themes. These codes were like labels. For example, a code like "Agile Benefit" was used for texts showing Agile success. Another code was "Barriers" for texts showing problems. The themes were made from these codes. The themes helped show how ideas repeated across papers. For example, many studies talked about poor training as a key issue. That became one of the main themes.

The researcher made sure that the codes were clear. Braun and Clarke (2006) suggest that clear codes help avoid mistakes. The codes were kept short and simple. After coding, the themes were used to write the findings. The findings then helped answer the research questions. The whole process followed a clear path from reading to coding to analysis. Reliability was kept by using many sources. Also, each idea was checked across several papers. If one paper said something that others did not support, it was not used.

Validity was ensured by using trusted sources only. Also, bias was avoided by not choosing only positive Agile stories. Both good and bad examples were used. This gives a fair view. Also, every idea used in this

study was cited. This means the source was named and listed. All citations follow the APA referencing style. Some case studies were also used. Case studies give deep examples of Agile in real life. They show how one firm tried Agile and what happened. These case studies were taken from journals and reports.

For example, a case from Žužek et al. (2020) showed a firm that improved its work using Agile. Another case by Modransky et al. (2020) showed how poor training led to Agile failure. These examples helped give context to the main themes. In some papers, interviews or surveys were used. The results from those studies were also helpful. They gave real quotes from SME leaders or staff. These quotes helped explain how Agile worked in practice. No primary data was used in this study. This means the researcher did not talk to any firms or people. All data came from books, articles, and reports. This was due to time and money limits.

Still, the data was rich and deep. Many papers had real examples and detailed results. This made the study strong. Also, using only secondary data does not make the study weak (Bryman & Bell, 2015). It just means the work is based on what others have found. In short, this chapter showed how the data was found and used. The method followed clear rules. Trusted sources gave the data. The data was sorted into themes. These themes helped form the findings in the next chapter. This method gave a full view of Agile in SMEs. It was clear, fair, and based on good research steps. The next chapter shows what this data helped to find.

### **3.3 Data Analysis Process**

This study used thematic analysis to study the data. It helped to find patterns in the research papers. Braun and Clarke (2006) explain that thematic analysis is good for finding common ideas in text. It helps break large data into small, useful parts. This method works well for qualitative studies. The process started with reading all the selected pa-

pers. Each paper was read more than one time. This helped to understand the full meaning of the text. Important lines or parts were marked in each paper. These marked parts were called codes.

Each code was a short label. The label showed the meaning of that part. For example, if a paper talked about "better teamwork," it was marked as "Teamwork." This process of marking was called coding. Coding helped to collect many similar ideas together. Coding in this study was done manually. The researcher used a notebook and computer to write down the codes. This was easy to manage because the data size was not too large. Using manual codes also helped the researcher stay close to the data.

After coding, the codes were grouped into themes. A theme is a bigger idea that comes from many codes. For example, codes like "happy customers," "faster feedback," and "good communication" were grouped under the theme "Client Satisfaction."

This study found four main themes:

- Agile Benefits
- Adoption Challenges
- Best Practices
- Client Satisfaction and Teamwork

Each theme had smaller parts called sub-themes. For example, under "Agile Benefits," the sub-themes were "better planning," "faster delivery," and "more value." These small parts helped to explain the theme in more detail.

The themes were not made before the study. They came from the data itself. This is called inductive analysis (Braun & Clarke, 2006). Inductive means the ideas come from the data, not from the mind of the researcher. Each theme was checked again and again. This was done to

make sure it matched the codes. If a theme did not match the data, it was changed or removed. This checking made the findings stronger.

Some papers used different words for the same idea. The researcher had to compare the meaning, not just the words. For example, one paper used "better output," and another used "high performance." Both were coded as "Improved Efficiency." The researcher made a simple table to sort the themes. Each theme was given a color and tag. This helped to keep the work tidy. The table showed where the theme came from and which paper supported it.

Sometimes, the same theme was seen in many papers. This helped to confirm the theme as strong. When only one paper showed a theme, it was marked as weak. Strong themes were used more in the final report. Using secondary data has some limits. One problem is that the researcher cannot ask new questions. The data is already there. So, if something is missing, it cannot be added.

Also, some papers may not show how the data was collected. This makes it hard to check if the data is true. That is why only peer-reviewed papers were used. Peer-reviewed work is checked by other experts before it is published (Saunders et al., 2016). Another problem is that all data is based on other people's work. It may have errors or bias. The researcher has no control over how the data was made. This is a risk in all secondary research (Creswell, 2014).

To reduce these risks, the study used many sources. This process is called triangulation. It means checking the same idea from more than one source (Bryman & Bell, 2015). If three or more papers show the same thing, it is more likely to be true. Also, the researcher was careful not to pick only positive examples. Both good and bad of Agile usage were included. This gave a fair view of the topic. In short, thematic analysis helped to break the data into parts. These parts were grouped into themes. The themes helped answer the research questions. This process made the study clear and easy to follow.

### **3.4 Reliability and Validity**

This study followed steps to keep the work reliable and valid. Reliability means the findings are stable and repeatable. Validity means the study gives true answers based on the data (Saunders et al., 2016). To keep reliability, only trusted papers were used. These papers were from journals that check all work before they publish. This step helped to avoid false data. It also made sure that all ideas came from good sources.

The study used triangulation to support reliability. Triangulation means using more than one source to check a fact. For example, if three papers said that Agile improves teamwork, this idea was marked as true. This made the results stronger. Also, the same method was used to read and code all papers. This helps keep the process fair. If another person followed the same steps, they would likely get the same themes. This shows that the research process is stable and repeatable (Creswell, 2014).

To keep validity, the study only used papers that matched the topic. If a paper did not discuss Agile in SMEs, it was not used. This helped to stay focused on the topic. Also, papers were checked to see if they gave real results. Papers that only gave ideas or opinions were not used much. Papers that had data, quotes, or real cases were used more. This step helped improve the truth in the study.

Another step was checking bias. Bias means favouring one side too much. To stop this, the study included both good and bad stories. For example, some firms had success with Agile. Others failed. Both were used in the study. Also, the researcher made sure not to use only papers from one country. The papers came from many places. This helped give a broad view. It also avoided country bias. There were some gaps in the data. For example, not many papers showed long-term Agile use in SMEs. Most papers only looked at short-term results. This is a known problem in Agile research (Tripp et al., 2018). The study marked this as a limit.

Another gap was that most papers focused on software or IT firms. Fewer papers were about non-software SMEs. This made it harder to study Agile in sectors like education or health. However, some non-software cases were found and used (Žužek et al., 2020). Some studies used different terms for the same thing. This could confuse the reader. To fix this, the study used clear and simple themes. For example, all work on “better planning” was grouped under “Agile Benefits.”

Another step to improve validity was checking the research questions often. Each theme was checked to see if it helped answer a question. If not, the theme was dropped. This step helped to keep the work focused. The researcher also made notes during the coding process. These notes helped track thoughts and choices. This made it easier to explain the findings later. It also showed how each theme was made. Each paper was cited clearly in the text. This showed where each idea came from. The citations followed Harvard style. This step helps readers check the work. It also builds trust in the results.

In summary, many steps were used to keep the work reliable and valid. Only trusted sources were used. Triangulation helped to check facts. Bias was avoided by using many views. Gaps were noted and explained. The whole process followed a clear and fair path.

These steps helped make sure the findings are true and useful. They also help others trust the research. The next chapter will show what the data found.

## 4 RESULTS

### 4.1 Overview of Key Findings

This part shows the main findings of the study. The themes were built using many papers and reports. Each theme comes from ideas that repeated across different sources. The table below shows the five key themes. Each theme includes several papers that supported the idea.

Table 1: Key Thematic Categories with Supporting Sources

Theme	Supporting Sources
Agile Benefits in SMEs	Gustavsson (2016); Stern (2020); Žužek et al. (2020); Celestin et al. (2024)
Common Implementation Challenges	Modransky et al. (2020); Alqudah et al. (2022); Leite et al. (2016); Olafsen et al. (2021)
Best Practices and Mitigation Strategies	Heilmann et al. (2020); Sharma et al. (2022); Popoola et al. (2024)
Impact on Team Collaboration	Rad & Rad (2021); Gigliotti et al. (2019); Gustavsson (2016); Alqudah et al. (2022)
Client Satisfaction	Žužek et al. (2020); Hidalgo (2019); Serrador and Pinto (2015); Sharma et al. (2022)

This table shows the five most repeated topics in Agile studies. These themes are common across many business types.

The first theme is the benefits of Agile in SMEs. Many papers show that Agile helps small teams improve work speed. It also helps them manage time and respond to change. According to Stern (2020), Agile helps small teams do more with fewer steps.

The second theme is the challenges during Agile use. Many firms face problems when they start Agile. These include lack of training and fear of change. Modransky et al. (2020) say that most small firms cannot afford long training.

The third theme is about best practices. These are the steps that help Agile succeed. Strong leadership and open talk are two important points. Popoola et al. (2024) say that support from managers helps Agile work better.

The fourth theme shows the team effects. Agile helps team members talk more. It also helps them share jobs and ideas. Rad and Rad (2021) explain that teams grow stronger when they meet daily and share tasks.

The last theme is client satisfaction. Agile allows teams to ask for feedback early. This helps the client feel involved. Hidalgo (2019) shows how clients liked small steps in Agile projects.

These five themes guide the next parts of the report. They help explain how Agile changes work in small firms.

## **4.2 Insights into Agile Benefits**

Agile methods bring many benefits to small and medium-sized businesses across different sectors and regions. These benefits help teams work better, faster, and with more flexibility. Agile also improves teamwork, client feedback, and trust between workers and leaders. The four key benefits discussed in this section are faster delivery, better adaptability, stronger communication, and greater team freedom. Each benefit is based on real-life research examples taken from trusted sources in various fields.

The first major benefit is faster project delivery. Agile uses short work cycles called sprints. These sprints help teams complete tasks within a short and clear timeline. Each sprint delivers a part of the total work.

Over time, all these small parts form the final product. This step-by-step process helps teams avoid major delays and big errors. Žužek et al. (2020) found that a manufacturing firm used Agile to cut production time. The team worked in short sprints and tested early. This helped them avoid mistakes later. The company also released early versions of the product. That gave them a lead in the market. Celestin et al. (2024) also found that Agile helped other firms finish tasks faster. Short cycles helped focus the team and reduced delays. Leaders could see early results and plan next steps better.

The second benefit is better adaptability. Agile allows teams to change their plans quickly when conditions change. This is useful in markets where client needs change often. Traditional methods use fixed plans that are hard to change. Agile lets teams pause, reflect, and shift direction if needed. Hidalgo (2019) shared a case where a research team used Agile. They received new data midway through the work. The team used the data to adjust their task list. This helped avoid waste and saved time. Gustavsson (2016) noted that small firms often cannot afford slow change. Agile helps firms avoid wasting time and resources. It also helps them respond quickly to client needs.

The third benefit is improved stakeholder communication. Agile requires daily meetings and open talks among team members. These daily talks keep everyone informed and active in the process. Teams also share progress with clients more often. Clients see small results and give feedback. This helps improve the product and build trust. Serrador and Pinto (2015) found that regular feedback helped fix problems early. Clients felt more involved and satisfied. Team members also knew their tasks clearly. Rad & Rad (2021) said daily talks helped teams stay focused. These talks made teams feel safe to speak and share. This improved teamwork and reduced confusion. Better talks also helped leaders support teams when needed.

The fourth key benefit is stronger team autonomy. Agile gives the team more control over how they work. Teams can plan their own tasks and take ownership. They do not rely on a boss for each step. Gustavsson (2016) said self-managed teams performed better. They felt trusted and took greater care of their tasks. Alqudah et al. (2022) noted that trust improved when teams had decision power. They said job quality improved when people felt their voices mattered. Teams became more skilled and confident. Members felt proud and more engaged in the work. They helped each other and solved problems together. This type of work environment led to better results overall.

Agile is not only used in software firms. It is also used in health, manufacturing, education, and services. Popoola et al. (2024) showed how non-IT firms used Agile in marketing tasks. Teams used Agile steps to test ideas and improve planning. Sharma et al. (2022) said that Agile helped small firms run product trials. These firms used short sprints to test product samples. This helped reduce risks and costs. It also gave them useful feedback before full launch. Firms understood client needs better and improved their product quickly. Clients also liked the fast results and updates. This built better relationships between firms and clients.

These benefits grow stronger over time. Teams get better after each sprint. They learn from past mistakes and manage their time better. Stern (2020) said teams improve after each cycle. They plan better, avoid waste, and work faster. Rad & Rad (2021) noted that many teams use visual boards. These boards show what is done, in progress, and next. This helps the whole team see progress. People know their jobs and can offer help. These boards also help teams stay focused. They avoid confusion and delay. Everyone can track progress at a glance. This builds teamwork and improves performance.

However, these benefits do not appear automatically. Teams must follow Agile steps properly. Without training, Agile can fail. Modransky et al.

(2020) warned that poor training leads to failure. Some firms use Agile terms but skip real steps. This creates confusion and weak results. Staff feel lost and unmotivated. Leaders must provide proper training and support. Heilmann et al. (2020) said leaders should guide, not control. Good leaders help teams grow by building trust and giving freedom. Leaders also provide needed tools and space. These supports are important for Agile success.

In summary, Agile brings four major benefits to small and medium firms. These are fast task delivery, better ability to change, improved talks, and stronger team roles. These benefits help firms save time and improve quality. But success depends on how the method is used. Teams need training, tools, and time to adjust. Popoola et al. (2024) suggested starting with pilot projects. One team can test Agile in a small task. If it works, other teams can follow. This slow growth helps build trust. Small wins build team confidence. Over time, teams can take on bigger projects with success. Agile becomes part of the team's way of work.

Agile is not just a method. It is a smart way of working that supports learning, trust, and teamwork. It helps teams think, plan, and act better. It also helps firms stay ready for change. Agile helps small firms use their limited resources well. It gives them the power to test, improve, and grow. The firm becomes more flexible and stronger in a changing market. It builds better teams and keeps clients happy. With proper use, Agile can help firms reach new levels of success. Agile makes work simple, clear, and focused. That is why it fits so well with small and growing businesses.

Table 2: Agile Benefits in SMEs with Examples from Literature

<b>Agile Benefit</b>	<b>Description</b>	<b>Example and Source</b>

<b>Faster Project Delivery</b>	Agile helps teams complete tasks faster using short, planned sprints.	A manufacturing SME used sprints to reduce production time (Žužek et al., 2020).
<b>Better Adaptability</b>	Agile allows fast response when market needs or client demands change.	Agile helped shift direction during a research project (Hidalgo, 2019).
<b>Improved Stakeholder Communication</b>	Agile promotes regular client feedback and better internal communication.	Sprint reviews improved planning and reduced rework (Serrador & Pinto, 2015).
<b>Stronger Team Autonomy</b>	Agile gives teams more power to plan, decide, and manage tasks independently.	Self-organised teams performed better in service delivery (Gustavsson, 2016).
<b>Wider Sector Application</b>	Agile benefits are not limited to software, but apply in many other sectors.	Marketing teams used Agile for campaign testing (Popoola et al., 2024).
<b>Cost and Risk Reduction</b>	Agile helps test small parts early, lowering failure risk and resource waste.	SMEs used sprints to test new product versions (Sharma et al., 2022).

<b>Improved Client Value</b>	Agile delivers faster updates and clearer value, keeping clients satisfied.	Clients liked faster feedback and regular updates (Rad & Rad, 2021).
<b>Better Team Learning</b>	Teams reflect after each sprint to learn and avoid past mistakes.	Sprint reviews helped teams improve each cycle (Stern, 2020).
<b>Enhanced Visibility</b>	Tools like Kanban boards help track tasks and progress clearly.	Visual boards improved team focus and collaboration (Rad & Rad, 2021).

### 4.3 Implementation Challenges

Many small and medium firms face problems when they try to use Agile. These problems stop Agile from working well. Some issues come from people. Other problems come from money or systems. The first big issue is resistance to change. Many workers do not like new ways of working. They feel safe with the old style. Change brings fear. They worry their jobs may change or go away.

Rad and Rad (2021) said some people do not trust team-led work. They like a boss telling them what to do. This is a big block to Agile. In Agile, teams plan their own tasks. So, people must learn to work in new ways. Also, managers may not want to give up control. They fear teams may not do well alone. Olafsen et al. (2021) said some leaders feel unsafe when teams make decisions. These leaders block Agile to keep their power.

The second problem is lack of training. Agile is new for many small firms. They do not know the steps or rules. Modransky et al. (2020) said many

SMEs start Agile without real training. This leads to poor results. Some teams do fake stand-up meetings. They do not share real problems. Others run sprints with no goals. These actions look like Agile but do not follow the method. This makes the team confused and weak.

The third issue is poor understanding of Agile. Many firms think Agile is only for software. They feel it will not work for them. They fear it needs too many tools or steps. Heilmann et al. (2020) said non-tech SMEs often misunderstand Agile. They try to use it like IT firms do. But their team setup or job style is different. This gap leads to failure. Popoola et al. (2024) said firms must adapt Agile to fit their own tasks. They must change steps as needed. If they try to copy other firms, it may not work.

The fourth issue is limited budgets. Small firms often have little money. They cannot pay for tools or trainers. They also cannot stop work to learn new ways. Leite et al. (2016) said small teams have many roles. People do many tasks. So, they have no extra time. This makes it hard to learn Agile. Many teams try to do it fast but fail. Also, firms cannot always hire Agile experts. So, they ask one person to read and teach others. This can lead to wrong use or lost trust.

There are also sector-specific issues. For example, in health or banking, strict rules exist. These rules ask for clear plans and records. Agile allows fast change, which may clash with such needs. Rodríguez et al. (2019) said Agile can be too loose for strict sectors. These fields need reports, forms, and checks. Agile may not give all of that. So, firms may face legal risks. In factories, things must be done in steps. Machines or workers need a fixed flow. If Agile keeps changing tasks, work can stop. Rao & Kumar (2019) said many factory teams had to mix Agile with old ways.

Even in creative fields, Agile may feel too fast. Some people need more time to think. Short sprints may feel rushed. Gigliotti et al. (2019) said pressure can reduce trust and teamwork. Agile also needs tools and space. Teams must talk daily. They need boards and meeting spots. Small firms may not have these. So, real Agile talk may not happen.

Also, digital gaps can stop Agile. Some SMEs lack good software or network tools. Machado et al. (2021) said tech gaps can make Agile harder. This is common in small firms in poor regions. To sum up, Agile is not easy to start in SMEs. There are people issues, system issues, and money issues. Firms must plan how to face these if they want Agile to work.

#### **4.4 Analysis of Best Practices**

Agile needs the right steps to succeed. Many firms failed because they missed key points. Other firms did well by using smart ways. The first best practice is strong leadership. Leaders must guide teams and support the change. They should not control but help.

Heilmann et al. (2020) said leaders who trust their teams see better results. These leaders share goals and allow choices. Teams feel safe and work better. Bagga et al. (2023) said good leaders build team trust. They create safe spaces for talk. This helps when mistakes happen. Rad and Rad (2021) said leaders should explain why Agile is good. This helps remove fear. People follow change when they see value.

The second-best practice is clear communication. Agile needs open and daily talk. Teams must share updates and ask for help. Gustavsson (2016) said teams fail when they keep silent. Problems grow and delay work. Open talk keeps tasks on track. Daily meetings help people feel part of the plan. They can raise ideas or ask for help. This makes teams feel active and free. Alqudah et al. (2022) said open talk builds shared trust. This helps fix tasks fast. It also improves work joy.

The third best practice is proper training. Teams must learn how Agile works. They should know the steps and tools. Modransky et al. (2020) said training removes fear and confusion. Teams feel more ready to try new tasks. They also do better jobs. Firms can start with short sessions.

One or two staff can learn more and guide others. Sharma et al. (2022) said peer training works well in small teams.

Firms with no time can start with one team. That team can test Agile and help teach others later. The fourth practice is gradual change. Agile should not be forced in one day. It should grow step by step. Zasa et al. (2020) said firms that start small do better. They test first, then expand. This allows time to fix problems.

One good way is to try a pilot project. The team uses Agile in one small task. Then, they review the results. Firms can then add Agile to more teams slowly. This gives space for learning. It also avoids team stress.

Hidalgo (2019) said pilot sprints help firms see what works. They adjust tasks based on results. This helps long-term success. The fifth best practice is using hybrid models. Not all tasks fit Agile. Some need old steps. A mix can work well. Betta & Boronina (2018) said hybrid work fits better in some sectors. Agile can handle fast tasks. Old models handle long plans.

Zasa et al. (2020) said firms can keep old ways for budgets and records. Agile can be used for team work. This helps meet rules and still allow fast tasks. Some firms used boards that show both parts. One part shows sprint tasks. The other shows fixed goals. This makes it easy to track both sides. Now let's compare two firms. One failed. One succeeded. This shows why best steps matter.

In the failed case, the firm used Agile without training. They copied IT teams without change. The team had no guide. Tasks got mixed. Meetings were fake. Results were poor. The firm gave up. In the success case, the firm trained a small team first. That team tested Agile on one product. Leaders supported them. The team shared results with others. The firm slowly added Agile to new teams. They saw more work done in less time.

Heilmann et al. (2020) said this slow build helps teams feel safe. They trust the process and stay engaged. To sum up, Agile works well with good steps. These steps include strong leaders, open talk, team training, slow change, and hybrid models.

Firms must pick what fits them best. No single plan works for all. They must know their staff, work, and goals. With care and planning, small firms can gain from Agile. They can finish tasks faster, keep clients happy, and help their teams grow.

#### **4.5 Client Satisfaction and Market Responsiveness**

Agile helps teams work closely with their clients. This support builds trust and improves project outcomes greatly. When clients give feedback early, they feel more involved and respected throughout the entire work process. According to Serrador & Pinto (2015), clients like to see progress in small parts. These small results help them feel their voice matters and their ideas shape the final product. Many SMEs in the study used sprints to show these results regularly to clients. This helped clients stay informed and gave them a chance to suggest changes on time.

The results showed that client satisfaction improves when teams use feedback loops. Each sprint ends with a review meeting involving both teams and clients. Hidalgo (2019) showed that regular client meetings made expectations clear and removed confusion. Clients gave direct feedback on tasks. The team then used that feedback in the next sprint. This kept the client engaged and made their needs visible to the team. Clients also reported feeling more valued because their feedback was not ignored.

In many SMEs, Agile helped reduce long gaps in communication with clients. Daily or weekly meetings gave clients updates and kept them in the loop. Gustavsson (2016) said that open updates reduce client com-

plaints. Clients do not like waiting for results without knowing the progress. Agile removes this problem by making communication a part of the process. Teams showed visual tools like Kanban boards to clients. These boards helped clients see how tasks were moving forward. This transparency helped build trust.

Better client communication also helped reduce errors. Many firms said early feedback stopped problems from growing. Serrador & Pinto (2015) found that Agile feedback loops reduced total rework time. When a client corrected a mistake early, the team could fix it before the next step. This saved money and time. Teams did not waste effort on tasks that clients would later reject. Clients were also happier because they saw teams listening to their concerns quickly.

Client satisfaction also grew due to faster delivery. Agile teams break big tasks into smaller steps called user stories. Each story creates a result the client can see. Žužek et al. (2020) reported that clients were impressed by these small results. They felt the team worked efficiently. Even if the full project took time, these short wins made clients happy. Clients said it was easier to trust a process that delivered small wins every week.

Firms using Agile also reported that client loyalty improved. When clients feel heard, they often return for future work. Sharma et al. (2022) found that firms using Agile had repeat clients more than non-Agile firms. This loyalty comes from consistent value delivery and open communication. Clients knew they could share ideas anytime and receive responses soon. This made them feel like part of the team. They were not just buyers, but active partners in the process.

In competitive markets, fast response matters a lot. Agile helped teams react quickly to changes in client needs. Hidalgo (2019) noted that firms changed tasks when new data arrived. A team working on a marketing plan got sudden input from the client. Instead of delaying the change, they updated the sprint goal. The team completed the new task within

days. The client was surprised and pleased by the speed. This kind of quick move helped SMEs stay ahead of competitors.

Agile also supported market responsiveness by allowing teams to test ideas fast. Popoola et al. (2024) showed that firms used short sprints to try small features. These features were then tested with real users or sample clients. The feedback from users helped guide the next steps. This fast testing reduced the risk of building the wrong product. Clients liked this because they saw their ideas tested quickly. It gave them more confidence in the product and the team.

In some firms, market conditions changed rapidly. New trends or customer demands appeared suddenly. Agile teams managed these shifts well. Stern (2020) explained that Agile makes it easy to stop a sprint and start another. If a market trend changed, the team could adjust goals without breaking the process. This helped firms avoid wasting resources on outdated tasks. Clients appreciated this flexibility. They saw that the team was ready to adapt for their benefit.

Customer satisfaction also grew when teams used clear goals and tracking systems. Agile tools like task boards, burndown charts, and sprint reviews helped teams stay focused. Alqudah et al. (2022) said these tools also helped clients see real progress. Clients said it helped them trust the team more. They no longer needed to ask for updates. The system showed everything in simple visuals. This reduced stress for both sides.

One major part of satisfaction is trust. Agile helps build this trust by keeping promises. When teams say a task will be done in a sprint, they work to finish it. If something goes wrong, they tell the client early. Gustavsson (2016) showed that this honesty made clients more understanding. Clients do not expect perfection. But they want teams to be clear and honest. Agile helps teams build that trust.

Teams in the study also said client mood improved when they gave fast updates. Even when a task was delayed, the client was calmer. Hidalgo (2019) said that fast replies reduce client anxiety. When clients get no answer, they feel ignored. But even a short update makes them feel important. This study found that Agile teams used many tools like emails, calls, or dashboards to update clients. This kept the trust level high.

Firms that mixed Agile with old methods had mixed results. Some clients liked fixed plans better. But many liked the flexible flow of Agile. Betta & Boronina (2018) showed that hybrid models helped balance both needs. Firms could keep long-term plans but also show short updates. This made clients happy without losing control. Agile helped firms keep clients in the loop, even if the work took longer.

Client feedback also shaped future plans. Agile teams did not just use feedback to fix small things. They also used it to build new ideas. Ser-rador & Pinto (2015) said that active clients often gave ideas for new products. This shows that Agile does more than satisfy—it invites client innovation. Clients feel free to dream and suggest when they trust the team.

Some challenges also came up. Not all clients understood Agile. Some wanted full plans before work started. Heilmann et al. (2020) said that teams must explain Agile clearly at the start. If not, clients may feel confused or worried. Teams in this study said they gave a short intro session to clients. They explained what sprints meant and how reviews worked. This helped remove fear and made clients feel safe.

To handle client needs well, firms also trained their staff. Sharma et al. (2022) said that team training helped improve how they talked to clients. Teams who learned how to listen and answer questions did better. Clients said they felt more respected. This shows that good client results come from strong teams.

To sum up, Agile improves client satisfaction in many ways. It gives early results, listens to feedback, and changes fast. Clients feel more engaged and informed. They trust the team and return for more work. Firms can improve their market position with better client ties. Agile makes that possible with small steps and open talk.

Table 3: Agile Impact on Client Satisfaction and Market Responsiveness

<b>Theme</b>	<b>Description</b>	<b>Example and Source</b>
<b>Early Client Feedback</b>	Clients provide input during each sprint, shaping outcomes more effectively.	Frequent small deliverables-built trust and reduced misunderstandings (Serrador & Pinto, 2015).
<b>Clear Communication</b>	Regular updates reduce confusion and improve transparency with stakeholders.	Daily meetings helped manage client expectations during delays (Hidalgo, 2019).
<b>Faster Response to Market</b>	Agile enables quicker adjustments to client or market demands.	SMEs used sprint reviews to pivot product direction based on customer input (Popoola et al., 2024).
<b>Continuous Improvement</b>	Regular retrospectives ensure ongoing enhancement of processes and client service.	Process adjustments based on client feedback improved satisfaction over time (Sharma et al., 2022).

<b>Trust and Engagement</b>	Close collaboration increases client involvement and loyalty.	Involving clients in sprint planning fostered long-term partnerships (Žužek et al., 2020).
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#### 4.6 Connecting Theory to Practice

This part connects theory with what was found in the study. It shows how SME cases match key ideas. These ideas come from research about Agile, Lean, change, and team abilities. Agile is not just a method. It is based on values, team spirit, and response to change. These ideas have strong roots in theory. This research identified several SME case studies from the literature (e.g., Žužek et al., 2020; Modransky et al., 2020) that align with the theoretical concepts discussed. The table below links the real findings to the main theories.

Table 4: Matching Empirical Findings with Key Theoretical Concepts

<b>Theory or Concept</b>	<b>Key Idea</b>	<b>Match in SME Practice</b>
Agile Manifesto (Cobb, 2023)	People over process, changeover plan	Teams liked open talks, short plans, and shared tasks
Lean Thinking (Stern, 2020)	Cut waste, keep value, do small steps	Teams used sprints to avoid waste and fix fast
Lean Agile (Kišš & Rossi, 2018)	Mix lean speed with Agile flow	Firms mixed steps to fit work and avoid long delays

Change Readiness (Weiner, 2020)	Change works if people are ready and supported	Training and leadership helped teams accept new ways
Dynamic Capabilities (Choi et al., 2018)	Small teams use feedback to shift fast	Teams changed direction using sprints and feedback loops
Learning and Adjustment (Mansour et al., 2022)	Fast learning helps long-term growth	Teams improved after each sprint with small changes

This study found strong links between Agile values and real actions in SMEs. Many teams did not follow full Agile books. Still, they used parts that matched their needs. Cobb (2023) said Agile is not about rules. It is about people working better.

Many of the SMEs referenced in the literature worked in short iterative loops, consistent with Agile principles. For example, Žužek et al. (2020) described teams that engaged in regular stand-ups and sprint-based testing to improve outcomes. These practices align with the Agile Manifesto, which emphasizes collaboration, early delivery, and adaptability (Cobb, 2023). Agile prioritizes people and interactions over tools, as observed across multiple SME case studies. Such early testing phases helped reduce errors, saved time, and enhanced client satisfaction.

Lean ideas were also seen. Stern (2020) said Lean means cutting waste and keeping value. This matched teams who used sprints. They checked work early and removed extra steps. Kišš & Rossi (2018) said Lean-Agile fits small firms well. It mixes short tasks and fast checks. The research showed teams used short meetings and simple tools. This helped keep speed and control.

Weiner (2020) said change needs people to feel ready. This study found that firms with training did better. Workers feared less and joined Agile

more. Olafsen et al. (2021) also said team trust helps change happen. Choi et al. (2018) said dynamic teams shift fast. They do not wait for big plans. Mansour et al. (2022) said small steps build strong systems. This was seen in firms that learned after each sprint.

Gustavsson (2016) said even non-IT firms can do Agile if they adjust. This study found proof for that. Many firms changed Agile to fit their size, team, and goals. So, theory and practice match well. Real SME actions reflect strong support from research models. This shows Agile is not just a tool. It is a smart way to help teams grow.

#### **4.7 Contribution to Knowledge and Practice**

This research adds new value to Agile knowledge. It looks at small firms, not just large or software firms. Many past studies only looked at IT or big firms. This study fills that gap. Agile has mostly been studied in software. But many small businesses now try Agile in new areas. This research shows how they use it. It also shows what helps or stops Agile from working.

The research also gives a real path for small firms. It shows steps they can take to start Agile. These steps come from real examples, not just books.

Table 5: Key Contributions of the Research

<b>Area of Contribution</b>	<b>How This Study Adds Value</b>
SME-Focused Agile Study	Shows how small firms use Agile, not just big or tech firms
Beyond Software	Shows Agile use in health, education, factory, and more

Practical Adoption Steps	Gives easy-to-follow ideas for starting Agile in small firms
Real example of Success and Failure	Helps leaders learn what works and what to avoid
Sector-Specific Insight	Shows how different sectors need different Agile steps
Theory-Practice Link	Maps real actions to strong theories like Lean and change models

Many past papers talked only about large companies. Gustavsson (2016) said more work is needed on small firms. This study helps fill that space. It shows that Agile helps small firms save time and do better work.

Žužek et al. (2020) showed a case in a small factory where Agile helped reduce errors. This research draws from that and other cases, such as Modransky et al. (2020), who documented Agile use in small service firms, & Hidalgo (2019), who examined its role in collaborative research environments. These form a strong foundation for applying Agile outside the technology sector. Firms referenced in this study span manufacturing, services, and education. They demonstrate Agile's flexibility in product development, client engagement, and cross-functional planning.

Agile is not one-size-fits-all. Sharma et al. (2022) said firms must change Agile to fit them. This research agrees. It gives real steps for small teams to try. For example, firms can start with daily talks and short task lists. Modransky et al. (2020) said bad training ruins Agile. This study shows the same. It tells firms to train teams slowly. Leaders must also support, not just order.

Best steps include training, open talk, good leaders, small trials, and flexible planning. These points come from real teams. They help future firms plan better Agile steps. This research also adds to theory. It shows

how Lean ideas work in small Agile setups. It also shows how change theory helps workers feel ready. Stern (2020) & Weiner (2020) said such models help success. This study proves that link. It also shows how fast feedback and small tests build dynamic teams. Choi et al. (2018) said that is key for long-term growth. Small firms must move fast. Agile gives that speed.

The study also gives warnings. It shows that Agile may fail if firms skip training. Or if leaders force it too fast. Or if teams copy tech firms without change. These lessons help future research. This work helps policy makers too. They can see what small firms need to try Agile. They can give support, training, or tools. Popoola et al. (2024) said such help boosts success.

The study gives clear value for teachers as well. They can teach Agile not just for IT but for all fields. Agile is not just about coding. It is about smart work and team trust. In short, this research gives clear help to many groups. It helps SME owners. It helps team leaders. It helps trainers and policy people. And it helps future researchers.

It builds a full view of Agile in small firms. It uses real stories and strong ideas. It gives easy steps and shows both wins and fails. This helps more people trust and try Agile. It also helps teams use it in the right way. That means less waste, faster tasks, and better teams.

## 5 SUMMARY AND DISCUSSION

### 5.1 Evaluation of the Research

This research focused on Agile use in small and medium enterprises across different fields and sectors. The aim was to explore how Agile helps firms, what issues they face, and how to solve them. It also looked at best practices that help Agile succeed and how it affects both teams and clients. The study followed four research objectives, and each one guided the review of past studies.

The first objective was to identify the key benefits of Agile in small and medium-sized firms. The study found that Agile helps teams finish tasks faster and manage their time more effectively. It also helps firms respond quickly to client needs and sudden market changes without wasting resources. Agile teams can break down large jobs into smaller parts and complete each part in short cycles. These short cycles are called sprints and help firms release small results faster. Gustavsson (2016) said Agile lets teams plan their own tasks, which builds more trust. Žužek et al. (2020) showed how a firm cut project time using short sprints and quick testing. Their case study proves that Agile can improve project speed and reduce mistakes that cost time and money.

The second objective was to find the challenges firms face when starting Agile in their teams. The study found that many workers fear change and prefer old ways of working with fixed steps. Some managers worry that Agile will reduce their control over teams and task planning. Rad & Rad (2021) explained that people resist team-led work if they do not trust the process. Another problem is the lack of proper Agile training before starting new methods. Modransky et al. (2020) said many firms use Agile without understanding it fully, leading to confusion and failure. Some teams hold fake daily meetings without solving any real problems

or sharing task updates. Budget limits also stop firms from hiring trainers or buying Agile tools and digital platforms. This makes it harder for small teams to start and maintain a proper Agile routine. Firms must balance their current work while trying to learn new steps and tools.

The third objective explored the best practices that support Agile success across different types of businesses. The study found that good leadership helps guide teams and reduce fear during new changes. Leaders must explain why Agile is important and support the team through early difficulties.

Heilmann et al. (2020) said leaders who trust their teams often see better results and smoother changes. Communication was another key practice. Daily talks help teams stay on the same page and solve issues faster. Gustavsson (2016) said silence between teams often leads to delays and misunderstandings.

Open talks help everyone know their job and stay focused on shared goals. Alqudah et al. (2022) said that open talk builds trust and teamwork among all members. Training was another important step. Modransky et al. (2020) said peer training works well in small teams with fewer resources. One trained person can teach others and build team skills slowly without extra cost.

Sharma et al. (2022) also suggested pilot projects. Firms can test Agile with one team before applying it more widely. Zasa et al. (2020) said this slow approach helps teams learn without feeling too much pressure. Another best practice was using hybrid models that mix Agile with old steps. This works well in sectors that need fixed rules or long-term records. Firms can keep some old methods while adding Agile for flexible teamwork.

The fourth objective was to explore how Agile affects team work and client satisfaction in real cases. The study found that Agile improves teamwork by building more daily talks, faster feedback, and shared

plans. Teams feel safe to speak and solve problems early instead of hiding mistakes. Rad & Rad (2021) said daily talks help teams trust each other more and reduce stress at work. Agile also helps clients feel involved in the process through early feedback and visible progress. Ser-rador & Pinto (2015) said that clients like seeing small results and giving feedback after each sprint.

Hidalgo (2019) found that client input helps teams make better changes before releasing the final work. This makes the client feel heard and increases their trust in the team. When clients feel valued, they are more likely to continue the business relationship and give positive feedback.

This study used secondary data instead of collecting new data from surveys or interviews. It used trusted books, journal papers, and past case studies to find patterns and key ideas. This method helped save time and money while covering a large number of real-world examples. Thematic analysis was used to group findings into clear topics such as benefits, problems, and practices.

Each theme had support from multiple sources, which helped improve the trust level of the study. This approach was suitable for the study goals, as it allowed wide views across sectors and firms. The method worked well for this kind of topic, especially when the focus was on general patterns. The findings match the four research questions and show real lessons that firms can follow easily.

The study adds value by focusing on small firms that often receive less attention in Agile research. Most past studies only looked at big companies or software projects with high budgets and large teams. Gustavsson (2016) said more research was needed in small firms that also try new methods.

This study fills that gap by showing how small teams use Agile for work outside of software tasks. Žužek et al. (2020) gave one such example in a small factory that used Agile to improve production. Hidalgo (2019)

also showed how Agile helped a research team change project direction after getting new data. These prove that Agile can help in many fields like teaching, health, and design as well. Sharma et al. (2022) said Agile works best when firms adjust the method to fit their own needs. This study supports that view and gives simple steps like training, daily talks, and small sprints.

The research also warns firms not to copy Agile from others without checking if it fits their work. Modransky et al. (2020) said that many failures happen when firms skip training or rush the process. This study confirms that view and gives real-world lessons to avoid those mistakes. Popoola et al. (2024) said small steps with support from leaders work best in most firms. This study agrees and shows how pilot teams can build skills before the full team uses Agile.

To sum up, this research gives useful help to small firms that want to try Agile. It gives lessons on what works, what fails, and what steps help most. The study used the right method and answered all four research goals clearly and effectively. The findings are based on secondary analysis of real-world SME case studies documented in peer-reviewed literature. These provide practical insights into how Agile practices were applied, helping firms save time, reduce waste, build trust, and better serve their clients.

## **5.2 Ethical Considerations**

This study followed all rules for ethical research. No people were asked for data. No interviews or surveys were done. Only books and papers were used. All data was taken from public sources. These were journal papers, books, or websites. Each source was cited. This showed where the idea came from. This keeps the study honest.

No private or secret data was used. No company names were shared unless found in public papers. This kept firm data safe. Also, no fake

data was made. Every point in the study came from a real source. This helps readers trust the work. Saunders et al. (2016) say good research must respect people, data, and truth. This study did that fully.

### **5.3 Reflection on Research Questions**

The study answered all four research questions. Each answer came from trusted sources and case-based findings. These questions guided the research and helped explore Agile's real effects in small businesses.

#### **RQ1: What are the benefits of Agile?**

Agile gives faster delivery and flexible planning. Teams complete their work early and adjust tasks when needed. Agile teams also get feedback from clients after every short cycle or sprint. This improves the quality of work and adds value to the overall project outcome.

We noticed that team communication became stronger during Agile use, based on many reviewed cases. People talked more during meetings, shared work better, and trusted each other more. Team members felt included and respected when their ideas were accepted by others. According to Stern (2020), Agile allows quick thinking and value delivery for small companies. Gustavsson (2016) also showed that self-managed teams completed work faster with fewer errors.

We reflected on these and understood how these benefits fit real-world needs. We feel small teams enjoy the most when they see early progress in projects. We believe this reduces stress and keeps motivation high. These small benefits can bring large success when teams keep learning and adapting together.

#### **RQ2: What challenges do SMEs face during Agile?**

Agile is helpful but not easy to apply, especially in small and new firms. The study showed that employees feared change and avoided sharing control with others.

Some workers felt unsure about Agile tasks or team roles. Managers feared they would lose control or power if teams worked without their instructions. Rad & Rad (2021) noted that fear of losing authority blocks Agile implementation in many places. I think people must first understand the value of teamwork in Agile before they can accept change.

Another problem is the lack of training and planning in many firms. Some small businesses started Agile without learning it properly. This caused confusion and poor results. Modransky et al. (2020) found that teams often copied Agile without real understanding. I feel that slow learning and guided practice are better than quick copying of methods.

Also, I realised that strict sectors like finance or healthcare need fixed rules and records. Agile may not work well in such environments without extra planning.

### **RQ3: What are best practices for Agile use?**

The research showed that training is one of the best ways to begin Agile successfully. Leaders must also help teams accept change and give tools and space for daily work.

Strong leadership is very important in creating a safe and open team environment. One of the best ideas is starting with one small team or pilot project. Popoola et al. (2024) said pilot testing helps teams learn and fix errors early. I agree with this idea because small wins help people believe in Agile.

Once they trust the system, other teams can follow with more confidence. Another practice is mixing Agile with old processes for tasks that require structure. Zasa et al. (2020) said hybrid models work best in fields needing both planning and change. I learned that not all parts of

Agile fit every job, so flexibility matters. Firms should choose which Agile steps help their goals and then adjust carefully.

#### **RQ4: How does Agile affect teams and clients?**

Agile makes team communication easier and stronger. Daily meetings help people share ideas and solve problems early. Team members learn to trust each other more and feel free to speak without fear. This helps build stronger team spirit and reduces workplace stress. Serrador & Pinto (2015) found that good communication improves team morale and job satisfaction.

We now understand how much better people work when they feel trusted and valued. Clients also enjoy Agile because they see results in small parts and give feedback quickly. This feedback helps improve project quality and ensures that client needs are met faster. Clients feel respected when their opinions shape the work. They build trust with the team and stay happy with the results.

We believe Agile builds stronger relationships between teams and clients. This is important for long-term business growth and customer loyalty. In conclusion, Agile creates a culture of teamwork, trust, and shared success for everyone involved.

#### **5.4 Emerging Questions and Future Research**

The research answered key questions, but it also raised new ideas for future research studies. These ideas can support deeper understanding and help more firms benefit from using Agile practices. The first key question is about national culture and how it shapes Agile use in firms. Different cultures view team roles, openness, and authority in ways that may influence Agile performance. For example, some teams may avoid open talk, while others prefer freedom and shared team control. This difference affects Agile outcomes, so culture-focused studies are needed

to explore this connection further. More local studies are important because global findings may not fit every place or organization well. A small company in Bangladesh may not follow the same Agile approach as a firm in Sweden.

The next question is about how to track long-term Agile success inside small and medium enterprises. Most studies only report short-term wins, like early feedback or quick testing of project features. However, future studies should check whether benefits continue after one or two years of practice. Do teams still stay active, motivated, and committed to Agile after long periods of working together? Do customers still provide feedback and remain engaged throughout long project journeys using Agile? Firms need tools to measure these outcomes, so researchers must design tools for long-term success tracking.

Another question is about the link between Agile and digital change in poorer or developing countries. Small businesses in such places often want to use technology but lack skills, funds, and training. Agile may help them take small steps by testing tools without major costs or big risks. Short sprints can reduce losses and let firms learn from trials without damaging core operations. If tools work, teams grow. If not, the failure is small and part of the learning. This idea must be tested in future research that focuses on resource-limited business environments.

This study only used past literature, which gave strong insights but revealed key research gaps too. New studies should collect fresh data from real firms through interviews, surveys, or field observations. Each business has unique experiences, and these stories can offer helpful lessons for other firms. Learning from success and failure stories helps future users avoid problems and improve their Agile adoption.

Future studies must explore Agile in different sectors like education, farming, retail, or healthcare systems. Agile may not work the same way across industries due to varying goals, structures, and workflows. Sharma et al. (2022) said that tool selection matters less than ensuring

the method fits properly. So, cross-sector research is key to finding the best fit between Agile and business context.

Long-term research is also needed since many papers only cover results after six months or less. Tripp et al. (2018) noted most Agile studies lack long-term data about sustainability and performance. Researchers should explore what happens after two years. Does Agile still work well over time? Are team energy, motivation, and communication levels still strong in the long run?

Cultural differences also need deeper study, as trust and safety differ by country or region. Olafsen et al. (2021) said change needs safety, but safety depends on values and social norms. Agile must match local culture for better outcomes, so this link deserves more attention.

Future studies must also connect Agile and digital transformation to support cautious but meaningful innovation. Machado et al. (2021) said small tech steps help firms grow. Agile supports those learning steps. Researchers should also test hybrid models that mix Agile and traditional methods to suit different tasks.

Finally, South Asia must get more research attention since few Agile studies come from this region. Bangladesh, Nepal, and India have many SMEs that can benefit from clear, simple Agile guidance. Studies should be written in plain language so more leaders can apply the findings in practice.

## **5.5 Personal Reflections and Perspectives**

We believe Agile fits very well in today's world of fast and sudden changes across industries. Traditional methods often move too slowly and fail to respond to client needs on time. Agile gives teams short steps

and feedback cycles, which improve speed and decision-making together. These small steps reduce risk and allow firms to test new ideas without wasting time or money.

This study helped us learn how Agile builds stronger teams in small and medium-sized companies. It showed us that trust and teamwork are very important for any project to succeed. When teams work in small groups and feel trusted, they stay motivated and focused. Members feel more confident to share ideas and give honest feedback during the work. This healthy team spirit helps people grow together and improve their skills faster.

We also learned that good communication is a core part of Agile methods in every situation. Teams talk daily and make sure everyone knows what is happening in the project. This keeps tasks clear and avoids confusion among members and clients as well. When mistakes happen, teams fix them quickly using open and honest talk. These habits build trust within the group and with the clients too.

Agile also helps businesses respond to market needs faster and more effectively than old methods. This is especially helpful in Bangladesh, where many companies are small and face daily challenges. These firms have low budgets and less time for long planning and detailed structures. Agile offers a better way to do tasks in short time and with fewer resources.

However, small firms need proper training and support before using Agile for their projects. They must understand the steps, tools, and values clearly to avoid confusion or failure. Local case studies and stories of success can inspire firms to try Agile slowly and confidently. We hope such stories are shared more in the future to help other teams learn.

This study changed how we think about project work and teamwork in real business settings. We learned that planning alone is not enough to

finish a good project with success. Feedback, flexibility, and shared decision-making are just as important, especially in dynamic workplaces. When people feel safe to speak, the team works better and stays united through every step.

We also realised that change is not easy for everyone, especially in firms with fixed habits or rules. Leaders must help their team members feel ready and safe during new steps or changes. They should show support, explain the reason for changes, and listen with care during every stage.

Agile is not just a method for work. It is a way of thinking and acting with care. We now respect team roles more and believe in shared learning from both success and failure. This study gave us a clear goal for the future. We want to support new teams trying Agile for the first time. Our aim is to help firms build safe and strong work environments based on trust and teamwork.

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