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IT Sector Transition to Agile: Managerial Challenges and Cultural Dynamics in Pakistan's Technology Firms

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Abstract

This research examined the use of agile methodologies within the IT sector in Pakistan in the views of project managers in terms of challenges and cultural fit. The study was to examine the role of organisational culture, managerial approach, and external forces in the implementation of agile in an environment characterised by hierarchical culture and resource limitations. A qualitative research design was adopted with reference to semi-structured interviews with twelve project managers who work with various IT companies. Thematic analysis involved manual coding to extract common themes leading to the identification of five major themes, namely cultural resistance to the principles of agile, gaps in managerial knowledge, structural barriers, external client and market pressures, and adaptive strategies to hybrid adoption. The results showed that although agile brought a considerable advantage to flexibility and competitiveness, hierarchical decision-making, ineffective training, and conflicting organisational priorities proved unhelpful in enhancing the success of the practice. Large companies had a problem of bureaucratic inertia, and SMEs lacked resources. However, to adjust the agile practices to the local cultural and organisational contexts, the project managers used adaptive strategies like gradual integration and combining models. The study demonstrates the necessity of setting strategies context-specific and aligning global agile frameworks with the organisational culture in Pakistan. The research offers important insights to theory and practice in agile management in the emerging economies.

Keywords: Agile adoption, IT Sector, Pakistan, Project Management, Cultural Fit, Organisational Challenges, Thematic Analysis.

Introduction

Background of the Research

The information technology (IT) sector of Pakistan has seen a period of scalding growth in the past few years. The industry is estimated to generate the export worth of more than USD 3.2 billion and over 200,000 professionals in the shape of software houses, IT service providers and start-ups

(Arshad et al., 2024). As Pakistan continues to develop into a regional center with regards to outsourcing IT and software development, businesses are increasingly adopting agile styles to initiate greater flexibility, project delivery, and innovation, not to mention alignment with international standards (Ahmad et al., 2021). Considered a Western software practice, Agile has gained popularity in Pakistan and is already being applied by firms that seek to compete globally by improving efficiency, addressing project uncertainty, and creating outputs that are consumer oriented (Wafa et al., 2022). This change indicates the local need for more responsive project management approaches as well as the external force of foreign customers who require agile-based approaches to the contractual requirements. Although this has been the state of things, the introduction of agile in the IT industry of Pakistan is not uniform, and there is a difference in scale, maturity, and cultural adoption among companies. Although multinational companies and large IT service providers show a more organised adoption, the small and medium-sized enterprises (SMEs) tend to be challenged by the cultural and structural changes to adopt the agile practices successfully (Arshad et al., 2024, Abrar, 2024). Moreover, hierarchical organisational structures, a lack of training of management, and inflexible workplace cultures often complicate the transition to agile methodologies and are usually inconsistent with the agile principles of teamwork, flexibility, and frequent feedback (Wadood et al., 2022). The dynamics have significant questions on whether agile methodologies are the right approach to the socio-cultural and organisational reality of the Pakistan IT sector.

Problem Statement

Despite the high promises of agile methodologies in improving outcomes within a project, it has been indicated that Pakistani IT companies have a challenge in maintaining a consistent performance. Specifically, project managers face difficulties with adapting the agile principles to the local workplace culture that is conventionally defined by hierarchy-based authority, risk aversion, and a lack of empowering employees at lower levels (Khan et al., 2021). The challenge is not necessarily the technical implementation of agile tools, but the compatibility of the culture that prevents partnership, openness, and flexibility. Although the amount of material related to the viability of agile adoption is available, comparatively little literature deals directly with the real-life experiences of project managers who are tasked with the responsibility of applying and maintaining the methodologies in actual practice. It is not yet clear how organisational culture, managerial practices, and structural conditions affect the results of agile adoption in the IT industry in Pakistan without looking into their perspectives.

Research Questions

The research questions to be followed in this study are:

- What is the perception of the project managers in the IT industry of Pakistan towards the challenges of adopting agile methodologies?
- How does organisational culture in Pakistan help or barrier agile practices from actual implementation?
- How do project managers fit cultural fit into the agile principles to achieve project success?

Research Objectives

The objectives of this research are:

- To examine the issues that project managers encounter in adopting agile methodologies in the IT market in Pakistan.
- To explore how cultural norms and organisational structures can determine the success or constraints of agile adoption.

- To determine the combination of the principles of agile and the practices of managers that can be adopted to fit local organisational settings.

Significance of the Research

This study has both academic and practical implications. As an academic contribution, it adds to the expanding literature on the topic of agile adoption by placing the phenomenon in the context of the Pakistani IT sector, the contexts of which are different from those of the West. The study focuses on the perspectives of project managers and highlights the lived experiences and decision-making of project managers closest to the use of agile. In practice, the results will provide the IT companies in Pakistan with the concept of cultural fit issues and will guide the project managers to adapt the agile methods to the local conditions (Khan et al., 2021). Further, the research will be helpful for policymakers and industry players to design training programs, policy interventions and organizational changes that may generate more sustainable agile transformations. A qualitative research design was adopted for the study, which was carried out through semi-structured interviews with twelve project managers working in different IT companies in Pakistan. A qualitative method has been selected in order to answer the deep perspective and nuanced experiences of the research participants. The sampling was purposive, as both large-scale IT companies and SMEs were taken into account to represent the agile adoption practices. Semi-structured interviews were used as the method of data collection, which enabled the interviewees to present detailed descriptions of their experiences in addition to the flexibility to raise emergent issues. To acquire a systematic insight into what agile adoption relies upon and what cultural forces are at work, thematic analysis was conducted to extract recurrent patterns, themes and sub-themes. Strict ethical considerations, such as informed consent, confidentiality and voluntary participation, were strictly observed. The results are presented in terms of five major themes, which indicate the obstacles as well as the adaptive measures that project managers go through, with quotes by the participants that describe their experiences.

Literature Review

Theoretical Framework

The theory underpinning agile adoption in organisations rests on socio-technical systems theory, which focuses on societal elements and organisation culture and processes, as well as technology. Adaptation of agile methodologies in the Pakistani IT sector occurs within the context of the country's traditional hierarchical organisation and power relations dominated frameworks (Muhammad et al., 2021). Hence, socio-technical systems theory sheds light on the cultural and managerial conditions agility frameworks operate on. Also, how the success of agile adoption depends on the organisation's size, project complexity, and market conditions indicates the relevance of contingency theory in this instance (Magistretti & Trabucchi, 2025). Agile methodologies are more effective in organisations which adopt supportive structures, appropriate leadership styles and active frameworks within the industry (Abrar et al., 2019). Pakistani conditions of uncertainty, resource scarcity, and cultural rigidities, which prevail in most cultures globally, complicate the translation of agile principles, which pose significant challenges to most project managers (Ashraf et al., 2025). These theoretical perspectives inform the study on the adoption of agile frameworks within the context of cultural relevance, managerial perspectives, and local organisational issues within the IT sector.

Agile Adoption and Project Performance

Agile methodologies were adapted for the first time due to the promised capability of increasing responsiveness and value in challenging circumstances. Evidence in the case of Pakistan's IT sector

also supports the claim that agile adoption leads to positive improvement in project performance; such improvements are manifested in better client satisfaction, faster turnaround and improved quality (Muhammad et al., 2021). Even so, such outcomes are not guaranteed and depend on the extent to which organisations succeed in combining agile principles with internal practices. Wafa et al. (2022) show that the impact of agile on project success is moderated by the degree of person–job fit. This means that the impact of individual attributes and the agile role that one occupies is crucial (Mamakou & Meridou, 2025). Hence, this illustrates the dual challenge that project managers face. They must plan for organisational change, and at the same time, they must prepare the employees to embrace agile practices. While the literature agrees that agile methodologies can improve the outcomes of a project, there is recognition of the underlying barriers to sustained performance. Wadood et al. (2022) explain how attempting to implement large-scale agile transformations runs into problems with software quality assurance because the underlying structures do not align with agile requirements. Such findings emphasise the need for organisational readiness and cultural compatibility; estimation improvements would not materialise without it.

Organisational Culture and Agile Fit

Cultural fit is key to the discourse on the adoption of Agile in the Pakistan IT industry. Agile frameworks promote empowerment, cooperation, and change, along with other necessary values, but these values are often in direct opposition to the organisational culture of hierarchy and control. Khan et al. (2021) argue that the management of uncertainty in Agile is primarily bounded by managerial structures that are rigid, highly controlled, and predisposed against risk-taking and innovation. Also, Arshad et al. (2024) argue that SMEs are unable to embed organisational agility because of the low level of organisational elasticity and rigid authority structures. These findings are a blunt reminder that the practice of Agile methodologies is not a 'Western' practice that can be transplanted without modification. Rather, the requisite cultural conditions are necessary for how agile frameworks are understood and sustained. For example, Gul et al. (2025) point out that in large construction projects, culture in the form of how well communication was structured and the level of the ordinal rank of control in the formal social structure can strongly influence the outcome of agile practices on the performance of teams. Although this work is under construction, the instructive lessons can equally apply to IT firms, especially when the communication and social control structures are similarly configured.

Challenges of Large-Scale Agile Adoption

Unique challenges arise from implementing agile methodologies at the organisational level. Abrar et al. (2019) performed a systematic review and identified motivators for large-scale agile adoption as enhanced project deliveries, improvement in client relationships, and better inter-staff collaborations. However, these motivators are likely nullified by the more prominent structural hurdles, such as cultural managerial systems, change-averse mindsets, and siloed working units (Alexandro, 2025). Such challenges are evident in Pakistan's large IT sector, where large corporations still operate under bureaucratic systems. As noted by Wadood et al. (2022), agile approaches in Pakistan are hindered by difficulties, with software quality assurance being the worst victim of inter-departmental approaches. What these students reflect, and indeed a larger problem, is that since agile has been designed for flexibility, large corporations tend to intentionally or unintentionally construct inflexible frameworks that are labelled as agile. The problem described by Jan et al. (2021) is similar in nature. Jan et al. (2021) apply AHP and construct the motivators for agile adoption as a hierarchy, noting that management-driven motivations are important, but

organisational changes are a must. What all these findings reveal is that the problems associated with large-scale adoption are structural and cultural, as opposed to being largely technical.

Individual-Level Factors: Person–Job Fit and Managerial Competence

Person-level factors that aid in the use of agility within organisations include competencies and motivation, and how well the roles are aligned with the agility requirements. Wafa et al. (2022) state that there is a person–job fit that enhances the relationship between agile methodology and project success, suggesting that employees who perceive a mismatch with agile roles could work against the achievement of the intended project success. This accentuates the position of project managers in training, defining the role of the employee, and ensuring that there is stakeholder engagement. In the absence of this, the agile collaborative and iterative practices are more likely to be defaulted. Also, the adoption of agility in an organisation is dependent on the managerial competence as well. Muhammad et al. (2021) emphasise that while the role of project managers is pivotal in the enhancement of agile performance, they are often not well prepared as complete agile leaders. Agile leadership is not top-down, and requires, primarily, the gatherings of people, coaching, and situational management (Fissalma et al., 2025). This state of managerial preparedness is fundamental to the proper use of Agile in the Information Technology in Pakistan.

Agile and Digital Transformation

The transformations and innovations that a company goes through correlate closely with the use of agile techniques. Specifically, Hafeez and Sharif (2025) detail the role of agile practices as a sequential mediator between digital transformation and innovation in some of the largest Pakistan-based telecom and manufacturing firms. Although the work is not primarily based on Information Technology (IT) services, it does draw attention to the importance of agile practices and how they determine the chances of continuous improvement and adaptability within almost all industries. Transformation within the IT sector has shown that the adoption of agile methodologies positively correlates with digital transformation efforts through the use of technological pivots and client demands. Alam et al. (2025) further investigate the organisational aspect of agility and its digitalised supply chains by ascertaining its beneficial role within the operations of various Pakistani agile manufacturing firms. These works emphasise the widespread importance of agility, and in the case of the IT sector, the absence of agility practices is detrimental to digital transformation efforts (Soomro & Khan, 2025). This implies that agile adoption in IT project management is not optional, but a minimum realistic requirement to remain competitive in the market.

Agile in SMEs versus Large Organisations

The difference in implementation of agile methodologies in small and medium enterprises (SMEs) and large-scale organisations is well noted in the literature. Arshad et al. (2024) report that SMEs do not have sufficient structural flexibility and resources to agile a practice adequately. While their scope of scale is disadvantageous, the small size is an advantage because the limited size of teams is coupled with a direct line of communication that enhances smoother collaboration. However, the lack of financial support, coupled with inadequate managerial training, poses significant challenges (Hyder et al., 2024). On the other hand, large organisations possess resources that can be used to train and restructure processes; however, they are bogged down by bureaucratic inertia and rigid hierarchy (Wadood et al., 2022). Jan et al. (2021) add to the discussion by positioning motivators for scaling agile adoption, citing client demands and competitive pressures as primary motivators. However, the motivators are not the same in their effects in relation to the size of the organisation. SMEs are implementers of agile processes reactively to client demands, whereas

large organisations are proactive in adoption (Sharma et al., 2022). However, they struggle in efforts to change and coordinate with numerous teams. This difference illustrates the need to consider the size of an organisation as an important factor in agile adoption outcomes.

Agile and Project Uncertainty

Khan et al. (2021) show that agile methods, while giving tools to handle uncertainty through spiral planning and adaptive feedback loops, are constrained by culture and structure within Pakistani Information Technology (IT) firms. Managers tend to stick to hawkish command-and-control management structures, which is equally dismal to agile management, which focuses on dealing with dynamic project environments. This is crucial as the nature of the IT industry is uncertain in several dimensions of customer needs, technology, and competition (Wang et al., 2021). The easy approach of agile is to keep the culture of the firm, along with team member risk acceptance, at the core of business practices and remove the controls put in place by management. This absence of curves reduces the risk of agile practices, and at international levels, there is a growing body of research that describes this paradox as the agile culture that is paradoxical in nature. The paradoxical culture derives from a paradox of agile culture, where adopting agile culture reduces uncertainty, yet paradoxical cultural and management elements sustain the uncertainty (Su et al., 2025).

Gaps in Existing Research

The literature on agile adoption in Pakistan is indeed very informative, yet there are some gaps in the literature. First, there is an emphasis on the structural and organisational facets at the expense of understanding the agile project managers, whose circumstances and everyday challenges must be understood, as highlighted by Chita (2022). Secondly, there is some acknowledgement of the cultural role in agile adoption, but there is a lack of studies on how project managers deal with cultural discord, especially in the case of Pakistan, with its organisational and socio-cultural hierarchy and norms, with agile. Finally, there is a dearth of qualitative studies that adequately and deeply examine the fundamental issues in the practices of the practitioners. Many studies, such as Jan et al. (2021), are either survey-based or use some quantitative model to determine a few shallow and broad patterns of management that do not reflect the complete managerial ecosystem. The literature links agile adoption to wider topics, such as digital transformation (Alam et al, 2025), but more comprehensive analysis has to be carried out regarding the agile practices "change intersection's" with the change with the different facets of the organisational structure, leadership approach, and culture of the country, especially in Pakistan's IT industry.

Methodology

Research Design

This study engaged a qualitative research design in order to scrutinise varying perspectives of project managers regarding the adoption of agile methodologies in the IT industry within Pakistan. A qualitative approach fits best in this scenario because it allows for a thorough analysis of lived experiences, managerial perspectives, and cultural contexts that are difficult to capture in more quantitative surveys (Braun & Clarke, 2017). The research design intends to find out how project managers perceive the challenges of adopting agile methodologies, how the organisational culture affects their implementation practices, and how agile methodologies are locally contextualised and adopted. The research is the interpretivist paradigm, which focuses on the meanings that people attach to their experiences. The adoption of agile methodologies is a technical and cultural negotiation, and because of that, capturing these meanings is best achieved in a design that is more participant-centred than generalised (Mucha, 2022). In this case, semi-structured interviews were

chosen as the primary data collection method because they allow for the exploration of the set themes while providing the participants the opportunity to discuss the topics that are most important to them. Thematic analysis is the method of data analysis applied in this case, which allows for the systematic finding of patterns and themes within the data (Braun & Clarke, 2022). The dissertation offered depth and nuanced understanding, and critical insight into how agile practices were understood and implemented in the IT industry of Pakistan by capturing the lived experiences of twelve project managers.

Sampling Strategy

The agile methodologies IT project participants with direct experience were recruited using a purposive sampling technique. Only project managers working in IT companies in Pakistan were included in the study because they were responsible for supervising the agile adoption process and were involved in the culture fit integration challenges. This sampling technique satisfied the criteria for appropriateness, expertise needed to offer relevant insights based on experience. A final sample of twelve participants from a range of large IT service providers and small to medium-sized enterprises was used. This mix made it possible to examine differences based on organisational contexts and how the size and structure of the firm affected the adoption of agile. Recruitment was done through professional connections and industry referrals. Participants were given study information and signed informed consent forms before their interview. The sample of twelve was adequate for the achievement of thematic saturation, as patterns began emerging across participants. Despite the sample size being modest, the emphasis on depth rather than breadth ensured the data was rich and meaningful.

Data Collection

The primary method of data collection was a semi-structured interview. The interviews were conducted over a 45-50-minute period and on a face-to-face or secure online platform based on the availability of the participants. A guide to the interview was prepared so that there is consistency in the interviews, and also, there is flexibility. Questions were set to cover major areas such as issues encountered in adopting agile, attitudes towards cultural fit, organisational preparedness, and coping mechanisms adopted to align agile practices to local environments. Open-ended questions allowed the respondents to give a detailed description of their experiences, and probing questions helped the researcher delve further into certain issues. To illustrate, the participants were requested to consider the impact of organisational structures on teamwork, or how customer needs impacted their agile implementation process. The audio-recorded interviews were transcribed word-for-word and analysed. The interview process produced an abundance of data that mirrored similar as well as different experiences among project managers. This gave them a broad foundation to base thematic analysis and formulation of major themes.

Data Analysis

Data analysis worked with Braun and Clarke's (2022) framework of thematic analysis, which requires systematic coding and subsequent development of themes. The process started with reading the transcripts multiple times so as to become familiar with the information. The initial codes were created by hand, in which critical statements or phrases which involved the hurdles, the cultural traits, and the adaptive practices in conjunction with the adoption of the agile framework were denoted by highlighting. The codes were grouped into higher-level categories as defined by the same response pattern and in relation to the other participants. Five crucial themes were defined from those categories, which encapsulated the key concerns brought up by the project managers. Each of the themes was further developed to ensure maximised validity and was not a

duplicate theme. In terms of the theme of cultural fit, some of the sub-themes were limited empowerment of teams and hierarchical resistance. The analysis was complemented by the participants' quotations to describe in as much detail as possible how the managers relayed their narratives. This made the findings more credible and aligned them more closely with the realities of life. Therefore, thematic analysis was the most appropriate technique to cover the complexities involved in the adoption of agile methodology stemming from the Pakistani IT sector.

Ethical Considerations

The study was upheld with ethical principles of protecting participants' rights, privacy and wellbeing at all times. Ethics approval was given before the gathering of the relevant data, and all participants gave informed consent and were debriefed thoroughly on the aims, processes and risks associated with the study. Participation was voluntary, and participants had the right to drop out of the study at any point, for any reason (Mumford et al., 2021). Pseudonyms were used, and identifying data were deleted from transcripts to ensure anonymity. Only the researcher was given access to audio recordings and transcripts, which were kept in safe storage. Participants were allowed to review the findings in order to minimise the risk of inaccuracy and disrespect for the findings. The ethical practices described helped to maintain the integrity and trust of the participants before, during and after the case study.

Participants' Profile

The sample for the study consisted of 12 project managers in various IT organisations in Pakistan. Participants had varying backgrounds in organisational size, years of work, and level of responsibility. This provided a breadth of understanding of the contexts through which SMEs and large multinational firms used adoption of agile. Participant characteristics are summarised in Table 1 below.

Table 1:

Participant Profiles

Participant	Gender	Years of Experience	Organisation Type	Agile Adoption Experience
P1	Male	10+	Large IT firm	5 years
P2	Female	8	SME	3 years
P3	Male	12	Large IT firm	6 years
P4	Male	7	SME	2 years
P5	Female	9	Large IT firm	4 years
P6	Male	15	Large IT firm	7 years
P7	Male	6	SME	2 years
P8	Female	11	Large IT firm	5 years
P9	Male	13	Large IT firm	6 years
P10	Male	5	SME	2 years
P11	Female	14	Large IT firm	6 years
P12	Male	9	SME	3 years

The table highlights the participants of different levels of experience between 5 to 15 years. The sample contains both large established IT firms that have agile practices and SMEs which are just beginning agile adoption. This wide range of participants added depth to the dataset by including different viewpoints on cultural fit, organisational issues, and adaptive techniques.

Findings and Discussion

In this section, the results of the interviews with twelve managers of IT-related projects in the context of Pakistan are presented and discussed in the light of the literature. The analysis identified five main themes: (1) Cultural Incompatibility with Agile Principles, (2) Managerial Challenges in Implementation, (3) Organisational Structures and Resource Capabilities, (4) Adaptive Practices and Hybrid Approaches, and (5) Evolving Client Expectations and Market Pressures. Sub-themes, quotations, and critical analysis are presented to back each theme. In addition, the section includes a thematic analysis table and is concluded with a discussion of findings, contextual recommendations, and future research directions.

Theme 1: Cultural Incompatibility with Agile Principles

A common theme that emerged from the interviews is the disconnect between the agile principles and the cultural practices of Pakistani IT organizations. Agile practices are about team autonomy, openness and iterative feedback - yet participants described environments where these values were stifled by authoritarian decision-making and hierarchies. Every project manager mentioned that resistance to adopting agile was due to rigid hierarchies. P7 said, "In my company, senior management is still in the command and control stage." They claim to want to be agile, but in reality the decisions are one-way from top to bottom. It also confirms the results of Khan et al. (2021) that found that the hierarchies of authority hindered agility due to its ability to deal with uncertainty. Similarly, Arshad et al. (2024) argued that SMEs, despite having fewer people on their teams, still suffered from centralised authoritarian structures that were incompatible with agile principles.

Some participants noted their disappointment at the absence of the necessary agility for practices like daily stand-up meetings or sprint retrospectives. As P2 put it, “Developers do not feel comfortable in challenging managers. Even in retrospectives, they tend to squirm when it comes to surfacing challenges.” This supports the findings of Wadood et al. (2022), which indicated that, when it comes to large-scale agile transformations, cultural reluctance to question authority is a problem. This lack of empowerment mirrors global socio-cultural misconceptions about Pakistan, which imply that respect for authority is more important than collaborative decision-making (Daraz et al., 2025).

Theme 2: Managerial Challenges in Implementation

The second theme emphasises the challenges that managers faced when it came to the implementation of agile practices. Numerous participants acknowledged a lack of adequate training in agile leadership, while others spoke of the challenges associated with the need to compromise on agile ideals while meeting the expectations of the organisation. P4 explained, “I was put in charge of agile adoption without any training, which was formal. What I know, for the most part, is self-taught, which means I do a lot of trial and error.” Muhammad et al. (2021) reported that the effectiveness of agile adoption was limited because of a lack of sufficient agile-oriented managerial skills, which was the case with most project managers who worked in a traditional environment. Too many managers, particularly those tasked with the adoption of agile practices in a culturally aligned manner, did not have the necessary frameworks available to them. Participants also pointed out conflicts between agile’s incremental approach to processes and organisational performance measurement systems. P11 mentioned, “Our company still measures success by strict deadlines and budgets. Agile is supposed to be flexible, but I am evaluated on traditional KPIs.” This point of friction aligns with Wafa et al. (2022), who argued that the success of agile methodologies is contingent on the practices employed and the congruence of the organisation with the role and expectations of the worker. Wherever the performance criteria were

frozen, the managers dealing with accountability were the ones who had issues with reconciling the principles of agile.

Theme 3: Organisational Structures and Resource Constraints

Structural and resource-related issues were yet another dominant theme. Participants from SMEs stressed the financial constraints, while in the case of larger companies, the pain point was the organisational bureaucratic inertia. The managers in the large IT companies, for instance, said that they had problems with the coordination of the agile practices across the different teams. P9 said, "Scaling agile is very difficult here. Different departments have their own rules, and alignment is slow." This was a case of Wadood et al. (2022) who noted that the coordinated attempts in large-scale transformations resulted in the loss of the quality assurance components. Similarly, Jan et al. (2021) documented that while the profits for scaling agile adoption were potentially high, the constraints were of a bureaucratic nature.

In comparison, manager participants reported challenges in the resource allocation for the adoption of agile practices. P10 elaborated, "We are unable to hire agile coaches or assign people to the scrum master roles. It is all hands on deck, so agile becomes superficial." Arshad et al. (2024) reported that for most SMEs, the adoption of agile, in theory, was a tethered limb to the organisational parameters of resource allocation and structural agility. Financial resource constriction meant that the adoption of agile practices remained rudimentary and superficial in smaller firms operating in purely domestic markets (Omowole et al., 2024).

Theme 4: Adaptive Practices and Hybrid Approaches

Participants, in all their mentioned difficulties, described the adoption of agile practices to be flexible and creative within the local context, often incorporating agile and traditional workflows. "We use Scrum terminology, but in reality, it is a mix. Some things are agile, but the deadlines are managed the old way," described P3. This supports Abrar et al. (2019), who argue that the adoption of agile methodology at scale is more often the case when hybrid practices are the order of the day due to structural and cultural constraints. Such hybrids helped managers to exercise control and supervision at the same time, integrating in what Hafeez and Sharif (2025) referred to as slipstreamed agility, or the integration of agility in processes at the organisational level.

Participants concluded that adopting agile techniques in their entirety was often unfeasible. Rather, managers chose to embrace the agile framework in a piecemeal fashion. P12 claimed, "We started with daily standups, and then added sprints later. We could not change everything all at once." Such findings are in line with Alam et al. (2025), who suggested that agility often developed incrementally as organisations coped with digital transformation. Gradual adoption helped organisations to mitigate the risks of cultural backlash and to organically sustain more agile ways of working.

Theme 5: Evolving Client Expectations and Market Pressures

This last theme demonstrated that wider forces, particularly client expectations and the international competitive landscape, drove the adoption of agile methodologies. Participants claimed that numerous clients from developed countries demanded proof of agile methodologies and practices as part of contractual obligations. P5 noted, "Our overseas clients inquire about scrum boards and sprint reports. If we do not exhibit agility, we stand to lose several contracts." R. Jan et al. (2021) placed client demand at the top of the list and an important factor in adopting agile frameworks. For the IT companies in Pakistan, especially those with outsourcing contracts, agile frameworks were a necessity, not an option.

Apart from client requirements, organisations were also driven toward agility by market competition. P8 explained, “Start-ups around us are very agile. If we stick to old methods, we fall behind in delivery speed and innovation.” Hafeez and Sharif (2025) showed that agility available innovation by facilitating the mediation of digital transformation processes, whereas Alam et al. (2025) highlighted its importance in sustaining operational competitiveness. For project managers, the market pressures increased the need to use agile more than ever, even in cases when the organisational frameworks were not fully aligned.

Table 2:
Thematic Analysis of Findings

Theme	Sub-theme	Codes	Description
Cultural Misalignment with Agile Principles	Hierarchical Resistance; Limited Empowerment	Command-and-control, reluctance to challenge, authority-driven decision-making	Highlights how organisational hierarchies conflict with agile values of autonomy and collaboration
Managerial Challenges in Implementation	Insufficient Training; Conflicting Metrics	Lack of training, reliance on traditional KPIs	Captures the difficulty managers face due to limited agile knowledge and conflicting evaluation systems
Organisational Structures and Resource Constraints	Bureaucratic Inertia; Resource Shortages	Multi-team coordination issues, financial constraints, role multitasking	Reflects how both large firms and SMEs face structural and resource limitations
Adaptive Practices and Hybrid Approaches	Hybrid Models; Incremental Adaptation	Mixing agile with traditional, gradual implementation	Describes strategies managers use to adapt agile to local realities
Evolving Client Expectations and Market Pressures	Client Demands; Competition	Outsourcing requirements, innovation pressures	Demonstrates how external pressures drive agile adoption despite internal resistance

Summary of Findings

The results of the research suggest that the agile adoption for the IT sector in Pakistan was influenced by internal culture and the prevailing external market conditions. Resistance to culture change and limited team empowerment were the most determining obstacles to adoption. Even managers faced the problem of being under-trained for the role and having to deal with paradoxical organisation-wide performance indicators. The level of structural adoption was also problematic;

large firms suffered from bureaucratic stagnation while SMEs experienced acute resource deficiency. Despite the challenges, proactive project managers were able to develop rational and pragmatic hybrid incremental strategies that complied with agile principles and the local context. In the end, it was external factors, especially in the form of client and competition, that most strongly precipitated agile adoption in outlier organisations, irrespective of the prevailing unsatisfactory conditions of culture fit.

Practical Recommendations

The results implied a number of implications to managers and organizations. To begin with, they had to invest in training and capacity-building of project managers and project teams. The adoption of agile leadership was superficial without sufficient knowledge on agile leadership (Spiegler et al., 2021). Second, companies had to adjust performance metrics to match agile principles instead of strict deadlines to eliminate tensions between principles and responsibility. Third, subsidised training programmes or common agile coaching facilities were needed to help the SMEs break through the financial obstacles. Fourth, organizations might find it beneficial to formulate hybrid models consciously by valuing cultural norms but expanding agile practices gradually (Temitope, 2022). Lastly, hierarchical resistance may be approached gradually through facilitating a culture of empowerment via small-scale intervention through the encouragement of open feedback in retrospectives.

Future Research Directions

This study raised many issues that need to be examined in greater depth. First, future examination should look into the impact of cultural hierarchy on the sustainable longevity of hybrid agile frameworks. Second, research across industries within Pakistan could establish if cultural problems identified in IT are present in other industries such as construction or manufacturing as well (Nan & Huang, 2025). Third, a longitudinal study might be carried out to trace the incremental adoption rate over time and see that cultural resistance in the scenario of long-term exposure develops more positively. Lastly, there is room for more systematic examination of the influence international clients have on shaping agile practices, especially how the terms of the contract impact the freedom of the manager (Chukwunweike & Aro, 2024).

Conclusion

This research on agile adoption in the Pakistani information technology scenario highlighted the perspectives of project managers. As evidenced by the analysis, although the agile frameworks are supposed to anticipate improved responsiveness, creative latitude, and competitive advantage, long-term adoption was limited by complex cultural, structural, and managerial constraints. The main obstacle arose because one cannot reconcile the agile principles of team autonomy and frequent collaboration with the pervasive, stratified hierarchy still present in many IT enterprises. Developers cited limited power, whereas supervisors faced limited training that targeted performance, enhanced by performance measures that still gave precedence to traditional project management theories.

The obstacles were enhanced by complementary structural impediment. In big companies, bureaucratic inertia prevented rapid and deterministic coordination of activities among teams; in SMEs, on the other hand, there was the lack of human and financial resources to allow for the systematic institutionalisation of agile practices. Such contradictions constitute an unevenly textured landscape of agile incorporation, the course of which is mediated by structural contours and dominant financial capacities. Nevertheless, managers developed complementary counter-

strategies including hybrid models (combining both agile and residual traditional methods), and an incremental modality (allowing for gradual exposure to new practices, measured culturally).
External determinants proved equally pivotal within the adoption tableau. Expectations articulated by global clients, alongside the imperatives of intensifying market rivalry, generated powerful pressures that catalysed the diffusion of agile methodologies. In instances where organisations displayed limited endogenous propensities for agility, external constituencies nevertheless temporarily overrode internal inertia, compelling the incorporation of agile practices to avert declines in competitive standing. The interaction of covert internal resistance and overt external compulsion thus forged the distinct contours of agile trajectory within Pakistan's information technology landscape.
In sum, the inquiry advances scholarly comprehension of the interplay among cultural, managerial, and structural constructs that condition agile uptake in contexts characterised by emergent economic trajectories. It affirms the necessity of interpretive, context-imbued frameworks that recognise reinforced hierarchies, bounded resources, and external stakeholder orientations. By inventorying both endemic impediments and circumstantial coping modes, the analysis yields actionable recommendations germane to practitioners, policymakers, and investigators intent upon intensifying agile efficacy within environments marked by pronounced cultural heterogeneity.

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