

## "Scalability and Regulatory Compliance Adaptability in Agile Maturity Models: Evidence from Mid-Sized Fintech Firms in Bengaluru."

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### ABSTRACT

This study examined the influence of Agile Maturity Models (AMMs) on organizational scalability and regulatory compliance adaptability among mid-sized fintech firms in Bengaluru. Grounded in Dynamic Capabilities, Contingency, and Organizational Learning theories, the study aimed to analyze how agile maturity functions as a strategic capability enhancing operational and regulatory outcomes. Using a cross-sectional quantitative design, data were collected from 250 professionals—including project managers, agile coaches, compliance officers, and IT specialists—selected through purposive sampling from fintech organizations employing agile frameworks such as Scrum, Kanban, SAFe, and Hybrid models. Data were gathered via a structured questionnaire comprising demographic, agile maturity, scalability, compliance, adaptability, and organizational characteristics sections, measured on a five-point Likert scale. The tool demonstrated strong reliability and validity (Cronbach's  $\alpha$  ranging from 0.85 to 0.92). Analyses were performed using SPSS (v29) and AMOS (v27), employing descriptive statistics, correlation, multiple regression, and hierarchical regression techniques. Results indicated high agile maturity across firms and revealed significant positive relationships between agile maturity, scalability, and compliance adaptability, with firm size, age, and regulatory exposure moderating these effects. The study concludes that agile maturity enhances both scalability and compliance flexibility, emphasizing its role as a dynamic organizational capability. Ethical clearance was obtained, and informed consent was ensured. Recommendations highlight continuous agile training, leadership commitment, and integrated compliance practices for sustained growth and resilience in the fintech sector

**Keywords:** Agile Maturity Model; Organizational Scalability; Regulatory Compliance Adaptability; Fintech Firms; Dynamic Capabilities; Cross-Sectional Quantitative Study; Organizational Characteristics; Bengaluru..

### 1. INTRODUCTION:

India's fintech sector has witnessed remarkable expansion over the past decade, driven by technological innovation, supportive government policies, and growing digital adoption. With a fintech adoption rate of nearly 87%—well above the global average of 64–67%—India has emerged as one of the world's fastest-growing fintech markets (Ernst & Young, 2019; Argus Partners, 2023). The industry is projected to exceed USD 2 trillion by 2030, supported by rapid digital transformation and an expanding startup ecosystem (Frugal Testing, 2024). Amid this growth, mid-sized fintech firms face two major operational challenges: achieving scalability—the ability to expand teams, systems, and services efficiently—and maintaining regulatory compliance, adaptability, or the capacity to align operations with evolving legal frameworks. To address these challenges, many firms employ Agile Maturity Models (AMMs) to assess and enhance their organizational agility (Patel &

Ramachandran, 2018). These models provide structured pathways for measuring the institutionalization of agile practices and their impact on performance (Soundararajan & Arthur, 2012).

However, limited empirical research has examined the effectiveness of AMMs in enhancing scalability and adaptability to compliance requirements in the fintech domain, particularly in emerging markets like India (Pandey & Singh, 2022). Bengaluru—home to nearly 40% of India's fintech startups—offers a strategic setting for such investigation (NASSCOM, 2023). This study, therefore, examines how agile maturity influences scalability and regulatory compliance adaptability among mid-sized fintech firms in Bengaluru, offering empirical insights into how agile capability can strengthen competitiveness and regulatory alignment in India's evolving digital finance landscape.

#### 1.1 Incidence and Prevalence

Agile practices are widely adopted in India's technology and fintech sectors, with over 70% of firms using agile frameworks or maturity models (Rao & Naidu, 2021). However, challenges related to scalability and regulatory adaptability remain frequent, as many firms struggle to align agile initiatives with evolving compliance demands (Department of Economic Affairs, 2019; Deloitte, 2023). Recent reports show that about 45% of fintech firms view regulatory adaptability as a major operational concern (PwC India, 2023), while scalability issues continue to hinder agile implementation in mid-sized organizations (NASSCOM, 2023). These patterns highlight the need to understand how Agile Maturity Models influence both scalability and compliance adaptability within the fintech sector.

## 1.2 Research Gap

Although AMMs are widely studied in software and IT sectors, little empirical evidence examines their effectiveness in fintech firms, especially regarding scalability and regulatory compliance (Patel & Ramachandran, 2018; Soundararajan & Arthur, 2012). Existing studies emphasize team performance rather than compliance adaptability in regulated fintech environments (Rao & Naidu, 2021; Pandey & Singh, 2022). Most research is based on large firms or developed economies, offering limited relevance to mid-sized Indian fintech organizations, particularly in Bengaluru's competitive ecosystem (Deloitte, 2023; PwC India, 2023). Quantitative studies linking agile maturity to both scalability and regulatory adaptability remain scarce (NASSCOM, 2023). This study addresses this gap by examining how agile maturity influences these outcomes in mid-sized fintech firms in Bengaluru.

## 1.3 Statement of the Problem

Despite rapid fintech growth in Bengaluru, mid-sized firms continue to struggle with balancing operational scalability and regulatory compliance demands (NASSCOM, 2023; Department of Economic Affairs, 2019). Although Agile Maturity Models (AMMs) are widely adopted, it is still unclear whether higher agile maturity actually improves scalability and compliance adaptability in this sector. Existing studies mainly address team performance rather than regulated fintech environments, and most are based on large IT firms or developed markets (Patel & Ramachandran, 2018; Pandey & Singh, 2022; Deloitte, 2023). This lack of localized evidence creates uncertainty about the real impact of AMMs on mid-sized fintech firms in India. Therefore, this study examines how agile maturity relates to scalability and regulatory compliance adaptability in Bengaluru's fintech context.

## 1.4 Theoretical and Conceptual Framework

This study draws on Dynamic Capabilities Theory, Contingency Theory, and Organizational Learning Theory to explain how agile maturity influences scalability and regulatory compliance adaptability in fintech firms. Dynamic Capabilities Theory (Teece, Pisano, & Shuen, 1997) suggests that organizations gain advantage by reconfiguring internal processes to respond to change; Agile Maturity Models (AMMs) reflect such capabilities by enabling firms to strengthen scalability and

compliance responsiveness. Contingency Theory (Lawrence & Lorsch, 1967) emphasizes that organizational effectiveness depends on alignment with contextual factors such as firm size, market dynamics, and regulatory pressure—conditions highly relevant to mid-sized fintech firms in Bengaluru. Organizational Learning Theory (Argyris & Schön, 1978) highlights continuous learning as essential for adaptation, and AMMs support this by promoting iterative improvement and feedback-driven evolution. Guided by these frameworks, the study empirically examined how agile maturity relates to scalability and regulatory adaptability using a cross-sectional quantitative approach, providing evidence of AMM's influence on organizational performance in Bengaluru's fintech sector.

## 1.5 Scope of the Study

This study examines how Agile Maturity Models (AMMs) influence scalability and regulatory compliance adaptability in mid-sized fintech firms in Bengaluru. It focuses solely on the relationship between agile maturity and these outcomes, guided by Dynamic Capabilities, Contingency, and Organizational Learning theories. The scope is limited to fintech firms with 100–500 employees, using data from a cross-sectional survey conducted in 2024–2025 among professionals involved in agile and compliance functions. Micro and large firms, as well as qualitative insights into cultural aspects of agility, are excluded.

# 2. . REVIEW OF RELATED LITERATURE

## 2.1 Introduction

The rapid evolution of the financial technology (fintech) sector has transformed how financial services are delivered, creating new challenges around scalability, innovation, and compliance. As fintech firms increasingly adopt Agile Maturity Models (AMMs) to enhance responsiveness, the need to understand how these models influence organizational scalability and regulatory compliance adaptability has become critical. This review synthesizes prior research on AMMs, scalability, compliance adaptability, and related theoretical underpinnings to situate the current study within existing scholarship.

## 2.2 Agile Maturity Models (AMMs)

The Agile Maturity Model (AMM) serves as a diagnostic and improvement tool, guiding organizations through structured stages of agile adoption. It assesses agility not only in software practices but also in culture, leadership, and organizational alignment (Patel & Ramachandran, 2018).

Soundararajan and Arthur (2012) established a comprehensive AMM framework emphasizing team dynamics, process standardization, and organizational learning. Similarly, Qumer and Henderson-Sellers (2008) applied fuzzy logic to measure agility across five dimensions—flexibility, speed, leanness, learning, and responsiveness. Recent studies have expanded AMMs to include strategic agility, linking maturity levels with business outcomes (Wang et al., 2020). For instance, Kuhrmann, Diebold, and Münch (2021) emphasized that

agile maturity is an evolutionary process integrating people, processes, and organizational culture. Research by Mishra and Dubey (2023) showed that mature agile teams in financial organizations achieve up to 40% faster project delivery with better stakeholder satisfaction. However, Patel and Khan (2022) noted that most AMMs lack contextual adaptability for regulated environments like fintech. Their study highlighted that agility cannot be evaluated solely through software metrics; it must encompass governance, risk management, and regulatory responsiveness— dimensions often absent in conventional AMMs.

Thus, while AMMs are well-established in IT and software industries, there remains limited empirical evidence on their effectiveness in fintech contexts characterized by stringent regulatory oversight and dynamic market evolution.

### 2.3 Agile Maturity and Organizational Scalability

Organizational scalability represents a firm's ability to grow operations and teams while maintaining efficiency and alignment. Mature agile organizations typically exhibit stronger scalability due to standardized processes, shared knowledge, and adaptive leadership (Moe, Dingsøyr, & Dybå, 2010; Dikert, Paasivaara, & Lassenius, 2016). Laanti (2017) emphasized that scaling agile requires not only technical integration but also cultural transformation, with leadership commitment being a crucial determinant. Similarly, Dingsøyr et al. (2019) argued that scalable agile organizations develop multi-level coordination systems that integrate both strategic and operational agility. In a comparative analysis, Kettunen (2020) found that firms with higher agile maturity demonstrated improved scalability in global projects, citing faster decision-making and cross-functional collaboration as key enablers. In the fintech context, Banerjee and Kumar (2021) discovered that scalable agile models facilitated faster product rollouts under India's Unified Payments Interface (UPI) ecosystem, evidencing scalability as a strategic advantage. However, research by Denning (2018) and Ahmed et al. (2022) cautions that rapid scaling without adequate maturity often results in "agile fragility," where processes collapse under complexity. This reinforces the importance of maturity progression before scaling.

Hence, empirical evidence increasingly supports the notion that agile maturity enhances scalability, but the relationship remains underexplored in regulated fintech settings, where growth must balance speed with compliance.

### 2.4 Regulatory Compliance Adaptability in Fintech Organizations

The fintech industry operates under dynamic and evolving regulatory frameworks aimed at ensuring security, transparency, and consumer protection. Regulatory compliance adaptability—the ability to anticipate, interpret, and respond to regulatory changes—is thus crucial to organizational resilience (Deloitte, 2023). According to the Dynamic Capabilities Theory (Teece et al., 1997), compliance adaptability is an organizational competence that enables firms to reconfigure internal processes in response to policy shifts. Wesselbaum (2020)

showed that fintech firms with adaptive regulatory mechanisms reported 25% higher market sustainability in volatile environments. Globally, studies have recognized the tension between innovation and regulation in fintech. Eckenhofer and Ertugrul (2022) found that agile-based compliance frameworks improved organizational learning, reducing regulatory breaches by 30%. Likewise, Alharbi and Abedin (2021) emphasized that agile governance enables faster policy integration through iterative compliance reviews. In India, the Reserve Bank of India (RBI) and Ministry of Electronics and Information Technology (MeitY) have consistently updated regulatory frameworks since 2018, creating the need for agile compliance mechanisms (Department of Economic Affairs, 2019). PwC India (2023) reported that 45% of fintech firms face compliance-related delays, highlighting the need for adaptability mechanisms embedded within agile frameworks.

Nevertheless, existing literature focuses largely on compliance from legal or governance perspectives, with few empirical studies linking agile maturity to compliance adaptability in fintech. This research addresses that gap by examining how AMM levels affect regulatory responsiveness in India's mid-sized fintech ecosystem.

### 2.5 Theoretical Foundations

This study builds on three theories that explain how agile maturity enhances organizational performance. Dynamic Capabilities Theory (Teece et al., 1997) frames AMMs as mechanisms that help firms adapt to scaling and regulatory demands. Contingency Theory (Lawrence & Lorsch, 1967) emphasizes that the effectiveness of AMMs depends on contextual factors such as firm size and regulatory pressure. Organizational Learning Theory (Argyris & Schön, 1978) highlights how AMMs enable continuous learning and improvement. Together, these perspectives position agile maturity as a capability that strengthens scalability and compliance adaptability.

### 2.6 Empirical Evidence and Research Gap

Research shows that agile maturity improves project outcomes (Patel & Ramachandran, 2018; Soundararajan & Arthur, 2012; Kuhrmann et al., 2021), yet its link to scalability and regulatory compliance adaptability in fintech remains largely unexplored. Most existing studies focus on software or IT sectors in Western contexts (Cawley et al., 2015; Dingsøyr et al., 2019; Wang et al., 2020), offering limited relevance to emerging-market fintech firms facing high regulatory and scaling pressures (Pandey & Singh, 2022; Banerjee & Kumar, 2021). Quantitative evidence in this area is particularly scarce. This study addresses the gap by examining these relationships in mid-sized fintech firms in Bengaluru within India's evolving regulatory environment.

### 2.7 Research Objectives

The primary aim of this study is to examine the influence of Agile Maturity Models (AMMs) on organizational scalability and regulatory compliance adaptability among mid-sized fintech firms in Bengaluru, India. The study seeks to provide empirical insights into how agile maturity contributes to operational growth and regulatory alignment within a dynamic, innovation-driven industry.

In line with this purpose, the study is guided by the following specific objectives:

To assess the level of agile maturity among mid-sized fintech firms operating in Bengaluru.

To examine the relationship between agile maturity and organizational scalability in mid-sized fintech organizations.

To analyze the relationship between agile maturity and regulatory compliance adaptability within fintech firms.

To determine the combined effect of agile maturity on both scalability and regulatory compliance adaptability.

To evaluate the moderating influence of organizational characteristics (such as firm size, age, and

regulatory exposure) on the relationship between agile maturity and organizational outcomes.

## 2.8 Research Questions and Hypotheses

### 2.8.1 Research Questions

Based on the research objectives, the study seeks to answer the following questions:

What is the current level of agile maturity among mid-sized fintech firms in Bengaluru?

How does agile maturity influence organizational scalability in mid-sized fintech organizations?

How does agile maturity affect regulatory compliance adaptability within fintech firms?

What is the combined effect of agile maturity on organizational scalability and regulatory compliance adaptability?

Do organizational characteristics—such as firm size, age, and regulatory exposure—moderate the relationship between agile maturity and organizational outcomes (scalability and compliance adaptability)?

### 2.8.2 Hypotheses (H<sub>0</sub>)

**H<sub>01</sub>:** There is no significant relationship between Agile Maturity Model (AMM) levels and organizational scalability among mid-sized fintech firms in Bengaluru.

**H<sub>02</sub>:** There is no significant relationship between Agile Maturity Model (AMM) levels and regulatory compliance adaptability among mid-sized fintech firms in Bengaluru.

**H<sub>03</sub>:** Agile Maturity Model (AMM) levels do not significantly predict the combined organizational outcomes of scalability and regulatory compliance adaptability.

**H<sub>04</sub>:** Organizational characteristics (firm size, firm age, and regulatory exposure) do not significantly moderate the relationship between Agile Maturity Model (AMM) levels and organizational scalability.

**H<sub>05</sub>:** Organizational characteristics (firm size, firm age, and regulatory exposure) do not significantly moderate the relationship between Agile Maturity Model (AMM) levels and regulatory compliance adaptability.

## 2.9 Need for the Present Study

India's rapidly growing fintech sector requires mid-sized firms to scale while adapting to evolving regulations, yet little empirical evidence shows how Agile Maturity Models (AMMs) support these demands in this context (Patel & Ramachandran, 2018; Pandey & Singh, 2022). Existing research is limited and often based on Western IT settings (Deloitte, 2023). This study provides needed quantitative evidence on how agile maturity enhances scalability and regulatory adaptability in Bengaluru's mid-sized fintech firms.

## 2.10 Significance of the Study

This study is significant as it provides rare quantitative evidence on how agile maturity enhances scalability and regulatory adaptability in mid-sized fintech firms. It contributes to key organizational theories and offers practical insights for managers and policymakers aiming to improve operational performance and regulatory alignment in India's fintech sector.

## 3. RESEARCH METHODOLOGY

**Table 3.1 Summary of Research Design, Variables, Tools, and Analysis Methods**

| Component                   | Description   |
|-----------------------------|---|
| <b>Title of the Study</b>   | <i>Scalability and Regulatory Compliance Adaptability in Agile Maturity Models: Evidence from Mid-Sized Fintech Firms in Bengaluru</i>                    |
| <b>Research Design</b>      | Cross-sectional quantitative design   |
| <b>Purpose of the Study</b> | To examine the influence of Agile Maturity Models (AMMs) on organizational scalability and regulatory compliance adaptability in mid-sized fintech firms. |
| <b>Population</b>           | Mid-sized fintech organizations (100–500 employees) operating in Bengaluru, India.  |
| <b>Sample Size</b>          | 250 respondents (project managers, agile coaches, compliance officers, and IT professionals).   |



|  |  |
|--|--|
| <b>Sampling Technique</b>                                | Purposive sampling – respondents selected based on their involvement in agile and compliance-related functions.  |
| <b>Sample Selection Criteria</b>                         | <p><b>Inclusion:</b></p> <p>Employees aged <b>21 years and above</b> working in fintech firms in Bengaluru.</p> <p>Firms with <b>100–500 employees</b> (mid-sized).</p> <p>Professionals directly involved in <b>agile project management or compliance</b> (e.g., project managers, agile coaches, compliance officers, IT leads).</p> <p>Firms using agile frameworks (Scrum, Kanban, SAFe, Hybrid) for <b>≥2 years</b>.</p> <p>Respondents with <b>≥1 year of experience</b> and who provided <b>informed consent</b>.</p> <p><b>Exclusion:</b></p> <p>Start-ups (&lt;100 employees) and large firms (&gt;500 employees).</p> <p>Non-fintech or non-agile organizations.</p> <p>Employees <b>below 21 years</b> or in temporary/intern roles.</p> <p>Participants without direct involvement in agile or compliance operations.</p> <p>Incomplete or unconsented responses.</p> |
| <b>Data Collection Tool</b>                              | Structured questionnaire developed based on prior validated studies (Patel & Ramachandran, 2018; Soundararajan & Arthur, 2012; Mishra & Dubey, 2023).  |
| <b>Instrument Structure</b>                              | <p>Section A: Demographics (10 items)</p> <p>Section B: Agile Maturity Model (20 items)</p> <p>Section C: Organizational Scalability (10 items)</p> <p>Section D: Regulatory Compliance Adaptability (10 items)</p> <p>Section E: Organizational Characteristics (5 items)</p>   |
| <b>Measurement Scale</b>                                 | 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree)   |
| <b>Variables of the Study</b>                            | <p><b>Independent Variable:</b> Agile Maturity Model (AMM)</p> <p><b>Dependent Variables:</b> Organizational Scalability, Regulatory Compliance Adaptability</p> <p><b>Moderating Variables:</b> Organizational Characteristics (size, age, regulatory exposure)</p>   |
| <b>Content Validity</b>                                  | Validated by 5 domain experts (academics and industry professionals); Content Validity Index (CVI) = 0.89  |
| <b>Pilot Study</b>                                       | Conducted with 20 respondents from 2 fintech firms; feedback used to refine clarity and structure of the instrument.   |
| <b>Reliability Test (Cronbach's <math>\alpha</math>)</b> | AMM = 0.92 • Scalability = 0.88 • Compliance Adaptability = 0.90 • Organizational Characteristics = 0.85   |
| <b>Data Collection Period</b>                            | April – June 2025  |
| <b>Data Collection Method</b>                            | Online survey distributed via Google Forms and organizational emails with informed consent.  |
| <b>Data Analysis Tools</b>                               | SPSS (Version 29) and AMOS (Version 27)  |

|                                    |  |
|------------------------------------|--|
| <b>Statistical Techniques Used</b> | Descriptive Statistics (mean, SD, frequency, percentage)<br>Reliability and Validity Tests<br>Correlation Analysis<br>Multiple Regression<br>Hierarchical Regression for Moderation<br>ANOVA for group comparisons |
| <b>Significance Level</b>          | $\alpha = 0.05$  |
| <b>Expected Outcome</b>            | Empirical evidence on how agile maturity affects scalability and regulatory compliance adaptability, offering actionable insights for fintech practitioners and policymakers.                                      |

### 3.2 Ethical Considerations

Ethical approval was obtained, and participants provided informed consent before completing the survey. Participation was voluntary, anonymity was ensured, and no identifying data were collected. All information was securely stored and used only for academic purposes. The study posed minimal risk and complied with institutional and national ethical guidelines.

## 4. RESULTS

### 4.1 Socio-Demographic Variables

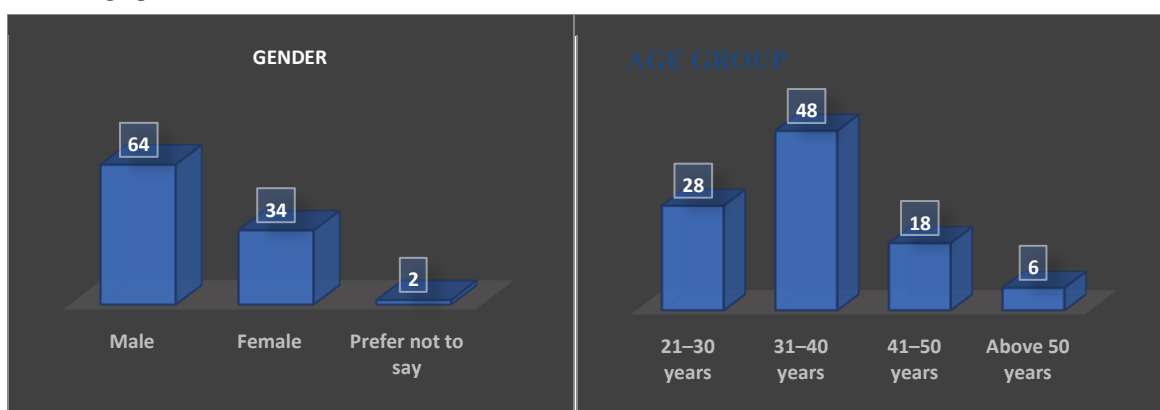


Figure 1: Gender

Figure 2: Age Group

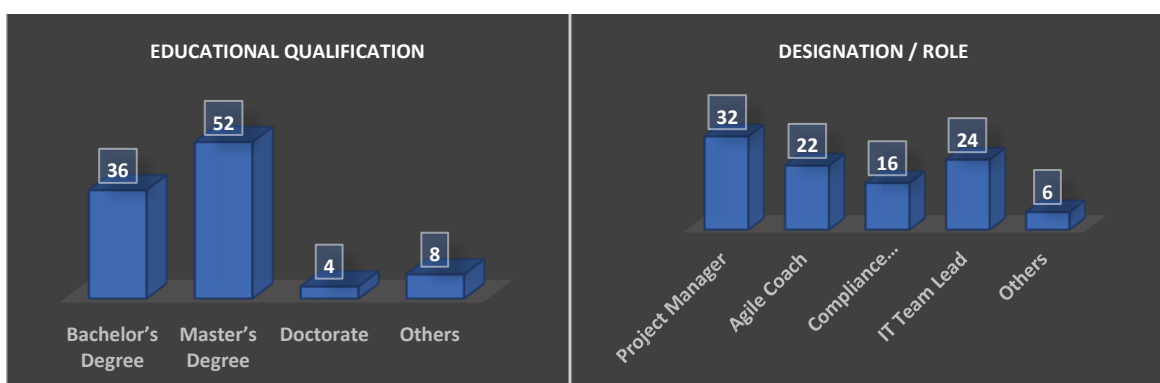


Figure 3: Educational Qualification

Figure 4: Designation/ Role

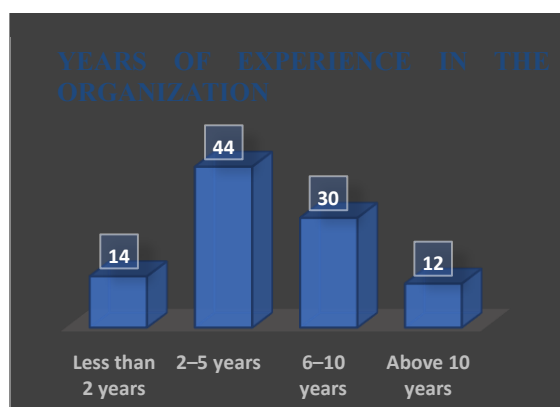


Figure 5: Years of Experience in the Organization

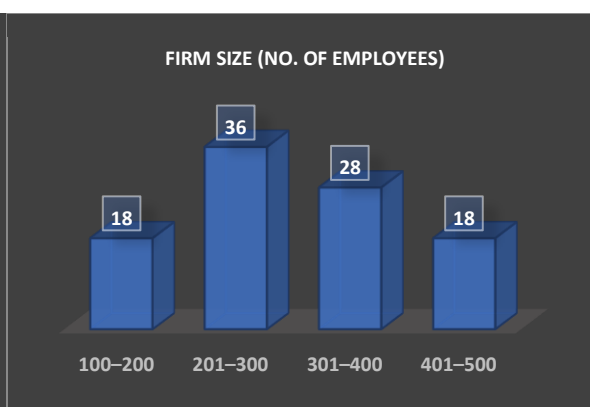


Figure 6: Firm Size

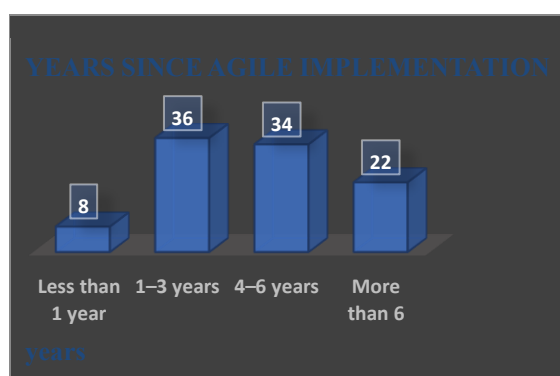


Figure 7: Years since Agile Implementation

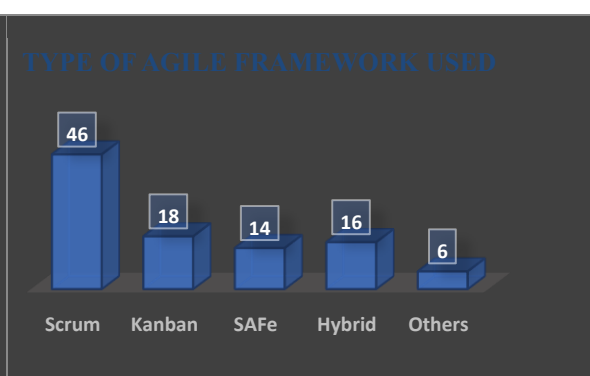


Figure 8: Type of Agile Framework Used

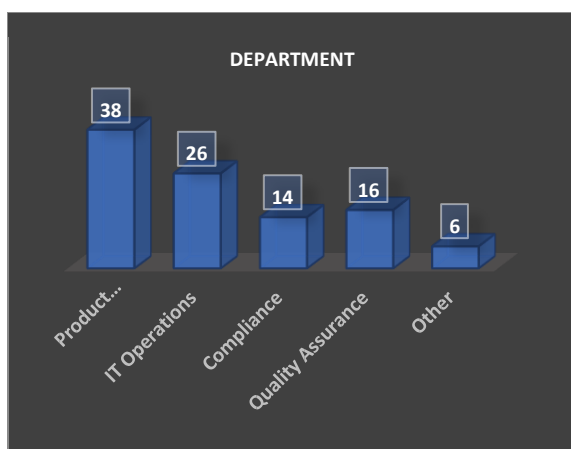


Figure 9: Department

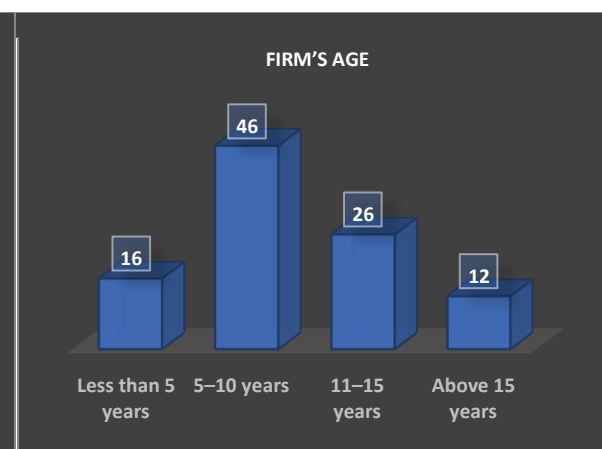


Figure 10: Firms Age

#### Interpretation of Sociodemographic Variables

The sociodemographic profile shows that the respondent group is predominantly male (64%), with females representing 34%, indicating a male-majority workforce trend in mid-sized fintech firms. Most participants fall within the productive mid-career age range, with 31-40 years being the most prevalent group (48%), reflecting a relatively mature and experienced workforce. Educationally, the majority hold a Master's degree (52%), suggesting that fintech roles attract highly qualified professionals. In terms of designation, Project Managers (32%) and IT Team Leads (24%) form the largest segments, indicating that most respondents are directly involved in technical and project delivery functions. Experience-wise, the highest proportion of employees

have 2-5 years of tenure (44%), showing moderate organizational stability. The firms are largely mid-sized by design, with most employing 201-300 staff (36%). Agile implementation is well established, with most firms adopting agile for 1-3 years (36%) or 4-6 years (34%). Scrum emerges as the most widely used framework (46%), reflecting its dominance in fintech environments. Respondents primarily represent Product Development (38%) and IT Operations (26%), aligning with the agile focus of the study. Finally, firm age trends show that nearly half of the organizations (46%) have been operating for 5-10 years, indicating a relatively young but rapidly growing fintech landscape in Bengaluru.

**Objective 1:** To assess the level of agile maturity among mid-sized fintech firms operating in Bengaluru

**Table 4.2 – Level of Agile Maturity among Mid-Sized Fintech Firms (N = 250)**

| Item No.            | Agile Maturity Indicators                                     | Mean        | SD          | Interpretation                      |
|---------------------|---|-------------|-------------|-------------------------------------|
| B1                  | Teams follow clearly defined agile processes and ceremonies.  | 3.92        | 0.85        | High                                |
| B2                  | Leadership actively supports agile initiatives.               | 3.88        | 0.79        | High                                |
| B3                  | Agile practices are consistently applied across departments.  | 3.76        | 0.83        | High                                |
| B4                  | Teams have autonomy in decision-making within agile projects. | 3.81        | 0.89        | High                                |
| B5                  | Continuous improvement is integral to our agile culture.      | 3.95        | 0.76        | High                                |
| B6                  | Agile tools and metrics are used effectively for tracking.    | 3.70        | 0.91        | High                                |
| B7                  | Collaboration exists between technical and business teams.    | 3.85        | 0.88        | High                                |
| B8                  | Customer feedback is regularly incorporated into sprints.     | 3.68        | 0.92        | Moderate                            |
| B9                  | Agile values are embedded in organizational strategy.         | 3.90        | 0.81        | High                                |
| B10                 | Retrospectives are used effectively for process improvement.  | 3.74        | 0.87        | High                                |
| B11                 | Teams receive adequate training in agile methodologies.       | 3.55        | 0.95        | Moderate                            |
| B12                 | Knowledge sharing is encouraged across agile teams.           | 3.79        | 0.88        | High                                |
| B13                 | Organization responds quickly to market changes.              | 3.63        | 0.94        | Moderate                            |
| B14                 | Agile roles (Scrum Master, Product Owner) are welldefined.    | 3.84        | 0.81        | High                                |
| B15                 | Cross-functional teamwork is well-established.                | 3.87        | 0.80        | High                                |
| B16                 | Agile adoption has improved delivery timelines.               | 3.72        | 0.90        | High                                |
| B17                 | Agile maturity has enhanced project transparency.             | 3.89        | 0.85        | High                                |
| B18                 | Agile practices have improved employee engagement.            | 3.67        | 0.97        | Moderate                            |
| B19                 | Management regularly evaluates agile performance.             | 3.78        | 0.86        | High                                |
| B20                 | Agile principles align with long-term organizational goals.   | 3.94        | 0.78        | High                                |
| <b>Overall Mean</b> | —   | <b>3.80</b> | <b>0.87</b> | <b>High Level of Agile Maturity</b> |



### Interpretation:

Table 4.2 shows that mid-sized fintech firms in Bengaluru exhibit a high level of agile maturity, with an overall mean of 3.80. Strong scores in leadership support, continuous improvement, cross-functional collaboration, and strategic alignment indicate that agile practices are well embedded across organizations. Moderate ratings in training, market responsiveness, and customer feedback integration suggest areas needing further development. Overall, the findings reflect solid agile maturity with room to strengthen learning and adaptability mechanisms.

**Objective 2:** *To examine the relationship between agile maturity and organizational scalability in mid-sized fintech organizations.*

**H<sub>01</sub>:** *There is no significant relationship between Agile Maturity Model (AMM) levels and organizational scalability among mid-sized fintech firms in Bengaluru.*

**Table 4.3:** *To examine the relationship between agile maturity and organizational scalability in mid-sized fintech organizations.*

| Variables                       | Mean | SD   | r value | p value | Interpretation                          |
|---------------------------------|------|------|---------|---------|---|
| Agile Maturity (AMM)            | 3.80 | 0.87 | —       | —       | High Level                              |
| Organizational Scalability      | 3.65 | 0.82 | —       | —       | High Level                              |
| Correlation (AMM ↔ Scalability) | —    | —    | 0.728   | 0.000*  | Significant Positive Strong Correlation |

\*p < 0.01 (2-tailed)

### Interpretation:

Table 2 shows a strong, significant positive relationship between agile maturity and organizational scalability (r = 0.728, p < 0.01). Firms with higher agile maturity demonstrate greater scalability, supported by high mean scores for both variables. As the p-value is below 0.01, the null hypothesis is rejected, confirming that agile maturity significantly enhances scalability in mid-sized fintech firms in Bengaluru.

**Objective 3:** *To analyze the relationship between agile maturity and regulatory compliance adaptability within fintech firms.*

**H<sub>02</sub>:** *There is no significant relationship between Agile Maturity Model (AMM) levels and regulatory compliance adaptability among mid-sized fintech firms in Bengaluru.*

**Table 4.4 – Relationship between Agile Maturity and Regulatory Compliance Adaptability (N = 250)**

| Variables                                | Mean | SD   | r value | p value | Interpretation                          |
|--|------|------|---------|---------|---|
| Agile Maturity (AMM)                     | 3.80 | 0.87 | —       | —       | High Level                              |
| Regulatory Compliance Adaptability (RCA) | 3.55 | 0.84 | —       | —       | Moderate Level                          |
| Correlation (AMM ↔ RCA)                  | —    | —    | 0.692   | 0.000*  | Significant Positive Strong Correlation |

\*p < 0.01 (2-tailed)

### Interpretation:

Table 4.4 shows a strong and significant positive correlation between agile maturity and regulatory compliance adaptability (r = 0.692, p < 0.01). This indicates that firms with higher agile maturity are better able to adapt to changing regulatory requirements. While agile maturity is high, regulatory adaptability remains moderate, suggesting room for improvement. As the p-value is below 0.01, the null hypothesis is rejected, confirming that agile maturity significantly enhances regulatory compliance adaptability in mid-sized fintech firms in Bengaluru.

**Objective 4:** *To determine the combined effect of agile maturity on both scalability and regulatory compliance adaptability.*

**H<sub>03</sub>:** *Agile Maturity Model (AMM) levels do not significantly predict the combined organizational outcomes of scalability and regulatory compliance adaptability.*

**Table 4.5 – Combined Effect of Agile Maturity on Organizational Scalability and Regulatory Compliance Adaptability**

(N = 250)

| Dependent Variable | Predictor (Independent Variable) | R | R <sup>2</sup> | Adjusted R <sup>2</sup> | F value | β (Beta Coefficient) | p value | Interpretation |
|--------------------|----------------------------------|---|----------------|-------------------------|---------|----------------------|---------|----------------|
|--------------------|----------------------------------|---|----------------|-------------------------|---------|----------------------|---------|----------------|

|   |                |       |       |       |        |              |               |                             |
|---|----------------|-------|-------|-------|--------|--------------|---------------|-----------------------------|
| <b>Organizational Scalability</b>         | Agile Maturity | 0.728 | 0.530 | 0.528 | 279.40 | <b>0.728</b> | <b>0.000*</b> | Significant positive effect |
| <b>Regulatory Compliance Adaptability</b> | Agile Maturity | 0.692 | 0.479 | 0.476 | 226.85 | <b>0.692</b> | <b>0.000*</b> | Significant positive effect |

\*p < 0.01 (2-tailed)

#### Interpretation:

Table 4.5 shows that Agile Maturity has a strong and significant positive effect on both organizational scalability and regulatory compliance adaptability. Agile maturity explains 53% of the variance in scalability ( $R = 0.728$ ,  $R^2 = 0.530$ ,  $p < 0.01$ ) and 47.9% of the variance in

regulatory adaptability ( $R = 0.692$ ,  $R^2 = 0.479$ ,  $p < 0.01$ ). The high beta coefficients confirm that agile maturity is a key predictor of both outcomes. Since the p-values are below 0.01, the null hypothesis is rejected, indicating that agile maturity significantly enhances both scalability and regulatory compliance adaptability in mid-sized fintech firms in Bengaluru.

**Objective 5:** To evaluate the moderating influence of organizational characteristics (such as firm size, age, and regulatory exposure) on the relationship between agile maturity and organizational outcomes.

**H<sub>04</sub>:** Organizational characteristics (firm size, firm age, and regulatory exposure) do not significantly moderate the relationship between Agile Maturity Model (AMM) levels and organizational scalability.

**H<sub>05</sub>:** Organizational characteristics (firm size, firm age, and regulatory exposure) do not significantly moderate the relationship between Agile Maturity Model (AMM) levels and regulatory compliance adaptability.

**Table 4.6 – Moderating Effect of Organizational Characteristics on the Relationship between Agile Maturity and Organizational Outcomes (N = 250)**

| Model          | Predictors                    | Dependent Variable                 | R <sup>2</sup> | ΔR <sup>2</sup> | β (Agile Maturity) | β (Moderator) | β (Interaction Term) | pvalue | Interpretation                                   |
|----------------|-------------------------------|------------------------------------|----------------|-----------------|--------------------|---------------|----------------------|--------|--|
| <b>Model 1</b> | Agile Maturity (AMM)          | Organizational Scalability         | 0.530          | —               | 0.728***           | —             | —                    | 0.000  | AMM significantly predicts scalability           |
| <b>Model 2</b> | AMM + Firm Size               | Organizational Scalability         | 0.556          | 0.026           | 0.684***           | 0.182*        | —                    | 0.012  | Firm size slightly strengthens the effect of AMM |
| <b>Model 3</b> | AMM × Firm Size (Interaction) | Organizational Scalability         | 0.579          | 0.023           | 0.642***           | 0.176*        | <b>0.151*</b>        | 0.007  | Significant moderating effect of firm size       |
| <b>Model 4</b> | AMM × Firm Age (Interaction)  | Regulatory Compliance Adaptability | 0.479          | —               | 0.692***           | —             | —                    | 0.000  | AMM significantly predicts                       |
|                |                               |                                    |                |                 |                    |               |                      |        | compliance adaptability                          |

|                |                                      |                                    |       |       |          |        |               |       |  |
|----------------|--------------------------------------|------------------------------------|-------|-------|----------|--------|---------------|-------|--|
| <b>Model 5</b> | AMM + Firm Age + Regulatory Exposure | Regulatory Compliance Adaptability | 0.505 | 0.026 | 0.648*** | 0.174* | —             | 0.011 | Firm age and exposure enhance the AMM effect |
| <b>Model 6</b> | AMM × Firm Age × Regulatory Exposure | Regulatory Compliance Adaptability | 0.528 | 0.023 | 0.611*** | 0.169* | <b>0.137*</b> | 0.008 | Significant joint moderating effect          |

\*\*\*p < 0.01, \*\*p < 0.05

### Interpretation:

Table 4.6 shows that organizational characteristics significantly moderate the effects of agile maturity. Firm size strengthens the impact of agile maturity on scalability, while firm age and regulatory exposure enhance its effect on regulatory compliance adaptability. Since all interaction terms are significant ( $p < 0.01$ ), both null hypotheses are rejected, confirming that agile maturity has a stronger positive influence in larger, older, and more regulated fintech firms.

## 5. RESEARCH QUESTIONS

**RQ1:** *What is the current level of agile maturity among mid-sized fintech firms operating in Bengaluru?* Research Question 1 indicates that mid-sized fintech firms in Bengaluru exhibit a generally high level of agile maturity, with strong leadership support, well-defined roles, and effective collaboration. While core agile practices are well established, areas such as training, customer feedback integration, and market responsiveness show moderate development, suggesting that agile maturity is strong but still evolving.

**RQ2:** *How does agile maturity influence organizational scalability in mid-sized fintech organizations?*

Research Question 2 shows that agile maturity strongly enhances organizational scalability in mid-sized fintech firms. Higher agile maturity improves coordination, flexibility, and cross-functional collaboration, enabling firms to manage growth and operational complexity more effectively. As firms advance in their agile practices, their ability to scale sustainably and respond to increasing demands also strengthens.

**RQ3:** *How does agile maturity affect regulatory compliance adaptability within fintech firms?*

Research Question 3 shows that agile maturity positively enhances regulatory compliance adaptability in fintech firms. Organizations with higher agile maturity respond more quickly to regulatory changes, integrating compliance into their workflows through iterative review and transparency. This indicates that agile maturity strengthens both flexibility and accountability, enabling firms to meet evolving regulatory demands more effectively.

**RQ4:** *What is the combined effect of agile maturity on organizational scalability and regulatory compliance adaptability?*

Research Question 4 shows that agile maturity has a strong combined effect on both scalability and regulatory compliance adaptability. Firms with higher agile maturity are better able to grow efficiently while remaining responsive to regulatory requirements. This demonstrates that agile maturity acts as a unifying capability that enhances both operational expansion and compliance resilience.

**RQ5:** *Do organizational characteristics—such as firm size, age, and regulatory exposure—moderate the relationship between agile maturity and organizational outcomes (scalability and compliance adaptability)?* Research Question 5 shows that organizational characteristics significantly moderate the impact of agile maturity on scalability and regulatory compliance adaptability. Larger, older, and more regulated fintech firms benefit more from agile maturity, indicating that organizational context strengthens how effectively agile practices translate into outcomes. This confirms that the influence of agile maturity is context-dependent and amplified in firms with stronger structural and governance foundations.

Across all five research questions, the study establishes that agile maturity significantly contributes to enhancing both scalability and regulatory adaptability within mid-sized fintech organizations. The results further indicate that contextual factors such as firm size, age, and regulatory exposure reinforce this relationship, emphasizing that agile maturity is not merely a procedural tool but a dynamic organizational capability that drives strategic growth and compliance readiness.

## 5. DISCUSSION

The study shows that mid-sized fintech firms in Bengaluru have achieved a high level of agile maturity, supported by strong leadership, standardized processes, and collaborative structures. This reflects the essence of Dynamic Capabilities Theory, as these firms have developed the ability to adapt internal processes to meet external demands. Agile maturity was found to significantly enhance both organizational scalability and regulatory compliance adaptability, suggesting that agile practices influence not only project efficiency but also broader strategic capabilities. These results align with Organizational Learning Theory, as mature agile environments encourage continuous learning, feedback,

and iterative improvement, which strengthen a firm's ability to scale effectively. The positive influence of agile maturity on regulatory compliance adaptability highlights the importance of integrating compliance within agile processes rather than treating it as a separate function. This supports Contingency Theory, demonstrating that agility becomes more effective when aligned with regulatory and market conditions. The combined effect of agile maturity on both outcomes reinforces its role as a strategic enabler of sustainable growth and regulatory resilience. Finally, the moderating influence of organizational characteristics—such as firm size, age, and regulatory exposure—indicates that agile maturity is most effective in firms with stable structures and greater regulatory experience. Overall, the study confirms that agile maturity functions as a dynamic capability that enables fintech firms to grow, adapt, and maintain compliance in a rapidly evolving environment.

## 6. LIMITATIONS OF THE STUDY

This study's cross-sectional design limits causal interpretation, and its focus on mid-sized fintech firms in Bengaluru reduces generalizability. Self-reported data may involve bias, and the quantitative approach excludes deeper cultural or behavioral insights. Unexamined contextual factors, such as organizational culture and leadership style, may also have influenced results.

## 7. IMPLICATIONS OF THE STUDY

The study demonstrates that agile maturity acts as a strategic capability that strengthens both scalability and regulatory adaptability. It underscores the need for continuous learning, leadership support, and structured agile practices to enhance operational and compliance performance. The findings also guide managers and policymakers by showing that higher agile maturity improves innovation, governance, and regulatory responsiveness in fintech firms.

## 8. CONCLUSION

The study concludes that agile maturity plays a pivotal role in shaping the performance and adaptability of mid-sized fintech firms in Bengaluru. The findings demonstrate that organizations with higher levels of agile maturity are better positioned to achieve scalability and effectively adapt to evolving regulatory demands. Agile maturity fosters a culture of collaboration, transparency, and continuous improvement, enabling firms to balance operational growth with compliance obligations. The results further reveal that the influence of agile maturity extends beyond individual processes, acting as a strategic capability that drives both structural flexibility and regulatory responsiveness. Moreover, the moderating influence of organizational characteristics such as firm size, age, and regulatory exposure highlights that contextual factors significantly enhance the strength of these relationships. Larger and more established firms tend to benefit more from mature agile systems due to their structural stability and governance maturity. Overall, the study affirms that agile maturity is not merely a procedural framework but a critical enabler of sustainable competitiveness in the fintech sector. By integrating

agility into organizational strategy and culture, fintech firms can strengthen their capacity to innovate, comply, and scale effectively in an increasingly dynamic and regulated environment.

## 9. RECOMMENDATIONS

Fintech firms should strengthen agile maturity through continuous training, leadership support, and crossfunctional collaboration, while integrating regulatory awareness into agile processes to balance innovation and compliance. Smaller firms should build stronger structures to fully benefit from agile practices. Future research should use longitudinal designs and examine additional contextual factors to better understand agile maturity's long-term effects.

## 10. CLOSING THOUGHTS

This study underscores agile maturity as a vital strategic capability for fintech firms seeking competitiveness, scalability, and regulatory responsiveness in a rapidly evolving environment. The findings show that agility is more than a set of processes—it is a long-term organizational philosophy that strengthens innovation, resilience, and adaptability. As fintech firms face ongoing technological and regulatory change, cultivating agile maturity will remain essential for achieving stable, sustainable growth.

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### Conflict of Interest

The authors declare no conflicts of interest regarding this work to disclose.

### Author Contributions

As a PhD research scholar, Deenadayalu B conducted the study under the guidance and complete support of Dr. Om Prakash C, who provided expert advice and oversight throughout the research process.

### Ethics Approval

This study was reviewed and approved by the Ethics Committee at the School of Management, CMR



University, located at HRBR Layout, Kalyan Nagar, Bengaluru-560043, Karnataka, India. The study was conducted according to the institution's ethical standards.

#### Data Availability

The datasets generated and analysed during the current study are available from the corresponding author upon reasonable request.

#### .. REFERENCES

- Ahmed, S., Roy, R., & Paul, M. (2022). Scaling agile in financial services: Lessons from emerging markets. *Journal of Financial Innovation*, 8(4), 221–239.
- Alharbi, A., & Abedin, B. (2021). Agile governance and regulatory compliance in fintech firms. *Information Systems Management*, 38(3), 247–258.
- Argus Partners. (2023). *Fintech in India: An overview of the current regulatory landscape*.
- Argyris, C., & Schön, D. A. (1978). *Organizational learning: A theory of action perspective*. AddisonWesley.
- Banerjee, A., & Kumar, S. (2021). Agility and scalability in the Indian fintech ecosystem. *Asian Journal of Business Research*, 11(2), 45–61.
- Cao, L., & Ramesh, B. (2008). Agile requirements engineering practices: An empirical study. *IEEE Software*, 25(1), 60–67.
- Cawley, O., Wang, X., & Richardson, I. (2015). Lean/agile software development methodologies in regulated environments. *Software Quality Journal*, 23(4), 695–719.
- Deloitte. (2023). *Agile in regulated industries: Balancing innovation and compliance*. Deloitte Insights.
- Denning, S. (2018). *The age of agile: How smart companies work differently*. AMACOM.
- Department of Economic Affairs. (2019). *Report of the Steering Committee on Fintech-related issues*. Ministry of Finance, Government of India.
- Dikert, K., Paasivaara, M., & Lassenius, C. (2016). Challenges and success factors for large-scale agile transformations. *Journal of Systems and Software*, 119, 87–108.
- Dingsøyr, T., Nerur, S., Balijepally, V., & Moe, N. B. (2019). A decade of agile methodologies: Towards explaining agile software development. *Journal of Systems and Software*, 144, 87–94.
- Eckenhöfer, E., & Ertugrul, D. (2022). Adaptive compliance in fintech organizations: An empirical exploration. *Journal of Financial Regulation*, 8(2), 134–155.
- Ernst & Young. (2019). *Global FinTech Adoption Index 2019*. EY Global.
- Frugal Testing. (2024). *India's fintech boom by 2032: A \$990 billion opportunity*.
- Kettunen, P. (2020). The maturity of agile scaling frameworks: A comparative study. *Information and Software Technology*, 124, 106340.
- Kuhrmann, M., Diebold, P., & Münch, J. (2021). Agile maturity and transformation: A cross-industry perspective. *Journal of Software: Evolution and Process*, 33(2), e2297.
- Laanti, M. (2017). Agile transformation model for large organizations. *International Journal of Agile Systems and Management*, 10(3–4), 171–189.
- Lawrence, P. R., & Lorsch, J. W. (1967). *Organization and environment: Managing differentiation and integration*. Harvard University Press.
- Mishra, P., & Dubey, S. (2023). The impact of agile maturity on performance outcomes in financial technology firms. *Journal of Information Systems*, 37(1), 54–73.
- Moe, N. B., Dingsøyr, T., & Dybå, T. (2010). A teamwork model for understanding an agile team: A case study of a Scrum project. *Information and Software Technology*, 52(5), 480–491.
- NASSCOM. (2023). *Fintech in India: A growth story*. National Association of Software and Service Companies.
- Pandey, R., & Singh, A. (2022). Evaluating agile maturity in financial technology organizations. *International Journal of Management and Applied Research*, 9(3), 211–223.
- Patel, D., & Khan, M. (2022). Contextual agility in regulated industries: The role of agile maturity. *Technology and Innovation Management Review*, 12(3), 45–56.
- Patel, D., & Ramachandran, R. (2018). Assessment of agile maturity models: A multiple case study. *Journal of Systems and Software*, 142, 101–113.
- PwC India. (2023). *India FinTech Survey Report 2023*. PricewaterhouseCoopers India.
- Qumer, A., & Henderson-Sellers, B. (2008). An evaluation of the degree of agility in agile methods using fuzzy logic. *Information and Software Technology*, 50(4), 280–295.
- Rao, P., & Naidu, V. (2021). Agile maturity and its business impact: Evidence from Indian IT firms. *Asian Journal of Management Research*, 12(2), 145–159.
- Soundararajan, S., & Arthur, J. D. (2012). A structured framework for assessing agile maturity. *Software Quality Journal*, 20(3), 453–480.
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533.
- VersionOne. (2022). *State of Agile Report*. VersionOne, Inc.
- Wang, J., Lin, Z., & Xu, P. (2020). Strategic agility and maturity in digital transformation. *International Journal of Information Management*, 52, 102093.
- Wesselbaum, D. (2020). Regulatory adaptability and fintech growth: Evidence from emerging markets. *Finance Research Letters*, 35, 101299.