

Critical Success Factors in Agile Project Management: An Empirical Investigation of Delivery Outcomes in UK Organisations

Identifying and ranking the factors that distinguish successful agile projects from failed ones

AIM

To identify and rank the critical success factors (CSFs) that most strongly predict successful agile project delivery in UK organisations, and to explain how they operate through practitioner testimony.

METHOD

Sequential explanatory mixed methods — a structured survey of ≥ 110 UK agile practitioners (factor ranking, regression) followed by 12–15 semi-structured interviews (mechanism explanation).

CONTRIBUTION

A UK-specific, empirically ranked CSF model for agile delivery, distinguishing team-level, organisational, and customer-facing factors — and evidence on which matter most at scale.

AT A GLANCE

Candidate: [Name] · ID: [ID]
Supervisor: [Name]
Programme: MSc Project Management
Year: 2024–25 · Word count: approx. 1,500
Duration: 9 months

01 Background and Problem

Agile has become the dominant paradigm for managing projects in software-intensive and, increasingly, non-software domains. What began as a lightweight alternative to plan-driven delivery, codified in the Agile Manifesto (Beck et al., 2001), is now the default operating model for a majority of organisations: the 17th State of Agile Report (Digital.ai, 2023) records agile adoption within software teams approaching near-universality, with adoption expanding rapidly into marketing, operations, and HR functions. The Project Management Institute (2023) confirms the trend at portfolio level, reporting that organisations increasingly favour hybrid and agile delivery over purely predictive approaches, and that the "power skills" enabling agile ways of working have become the strongest differentiators of project success.

Yet adoption has substantially outpaced mastery. Digital.ai (2023) documents a persistent gap between organisations that describe themselves as agile and those that realise its benefits, with a significant share of respondents citing inconsistent practices, cultural resistance, and inadequate leadership support as reasons agile transformations underdeliver. McKinsey and Company (2023) frames this within a broader organisational reality: agile ways of working succeed or fail not on the mechanics of ceremonies and boards but on organisational conditions — psychological safety, decision-making autonomy, and leadership behaviour — that many organisations adopting agile have not established. The problem, in short, is that agile's tools are widely deployed while the conditions for their success are unevenly present.

This creates a practically urgent question with an unsettled answer: *which factors actually determine whether an agile project succeeds?* Practitioners face competing prescriptions — some emphasising team-level

discipline, others organisational culture, others customer collaboration — with limited UK-specific empirical evidence on their relative importance. This study addresses that gap directly.

02 Aim, Questions and Objectives

Which critical success factors most strongly predict successful agile project delivery in UK organisations, and how do they operate in practice?

1. Which categories of success factor — team-level, organisational/cultural, or customer/stakeholder — most strongly associate with agile project success in the UK?
2. How do success factors differ between team-level agile adoption and scaled, organisation-wide agile delivery?
3. What role do leadership behaviour and psychological safety play relative to technical agile practices in determining outcomes?
4. How do experienced UK practitioners explain the mechanisms by which the highest-ranked factors influence delivery?

REF	OBJECTIVE	WINDOW
O1	Review 2023 agile literature and critical-success-factor theory to derive a candidate CSF taxonomy for empirical testing.	Months 1–2
O2	Measure, via structured survey of UK agile practitioners, the association between candidate CSFs and self-reported project success.	Months 3–5
O3	Rank CSFs by predictive strength and test whether rankings differ between team-level and scaled agile contexts.	Months 5–6
O4	Explain the mechanisms behind the highest-ranked factors through semi-structured practitioner interviews.	Months 6–7
O5	Synthesise an empirically grounded UK CSF model and practitioner recommendations.	Months 8–9

Table 1. SMART objectives (specific, measurable, achievable, relevant, time-bound across a 9-month schedule).

03 Literature Review

3.1 Agile success and the CSF lens

Critical success factor theory (Rockart, 1979, as cited in PMI, 2023) holds that a limited number of areas, if satisfactory, ensure successful performance — a lens well suited to agile, where success depends on a constellation of team, organisational, and stakeholder conditions rather than any single practice. The literature converges on three broad CSF categories. *Team-level factors* include cross-functional team composition, self-organisation, technical discipline, and consistent application of agile practices as set out in the Scrum Guide (Schwaber and Sutherland). *Organisational factors* include leadership support, agile-aligned culture, decision-making autonomy, and psychological safety. *Customer and stakeholder factors* include active product-owner involvement, stakeholder availability, and clarity of prioritisation. Digital.ai (2023) evidence suggests that failures cluster in the organisational category — leadership and culture — even where team-level practices are mature, implying that the binding constraint on agile success is frequently organisational rather than technical.

3.2 The scaling problem

A recurrent theme is that success factors shift as agile scales beyond the single team. McKinsey and Company (2023) observes that organisation-wide agility depends on structural and cultural conditions — networked teams, devolved decision rights, and stable funding of persistent teams — that are irrelevant at single-team level but decisive at scale. Deloitte (2023) similarly identifies the tension between agile team autonomy and organisational coordination as a defining challenge of large-scale transformation. This suggests that a single, context-free CSF ranking may be misleading, and that the relative importance of factors is moderated by delivery scale — a proposition RQ2 tests directly.

3.3 Gaps

Three gaps emerge. First, UK-specific empirical CSF rankings for agile delivery are scarce; most cited evidence is global practitioner-survey data (Digital.ai, 2023) not disaggregated for the UK. Second, the relative weight of leadership and psychological safety against technical practice is asserted more often than measured. Third, the moderating effect of scale on CSF importance is under-tested. The WEF (2023) identifies agile and adaptive delivery capability among the workforce competencies most in demand, sharpening the practical value of resolving these gaps for UK organisations and practitioners.

04 Conceptual Framework

The framework positions three CSF categories as predictors of agile project success, moderated by delivery scale:

- **Team-level CSFs** — cross-functional composition, self-organisation, technical discipline, consistent agile practice.
- **Organisational CSFs** — leadership support, agile culture, decision autonomy, psychological safety.
- **Customer/stakeholder CSFs** — product-owner engagement, stakeholder availability, prioritisation clarity.

These predict a multi-dimensional **success outcome** — delivery of value, schedule and budget adherence, stakeholder satisfaction, and team sustainability — with **delivery scale** (single-team vs scaled) as the moderating variable and **agile maturity** as a control. The model draws on CSF theory (Rockart, 1979, as cited in PMI, 2023), the organisational-conditions argument (McKinsey, 2023), and the practice framework of the Scrum Guide, and is operationalised as testable survey constructs in Section 5.

05 Methodology

The study adopts a **pragmatist** philosophy and an **abductive** approach, appropriate to testing a CSF taxonomy quantitatively while explaining its mechanisms qualitatively (Saunders, Lewis and Thornhill, 2023). The strategy is **sequential explanatory mixed methods** with a **cross-sectional** design: a quantitative survey establishes which factors predict success, and follow-up interviews explain how the leading factors operate. Table 2 specifies the design.

ELEMENT	PHASE 1 — QUANTITATIVE	PHASE 2 — QUALITATIVE
Method	Structured online survey	Semi-structured interviews (online)
Instrument	CSF item batteries across three categories; project-success scale; scale and maturity classifiers (5-point Likert)	10 open questions on how the top-ranked CSFs influence delivery, scaling, and failure recovery
Sample	≥110 UK agile practitioners — Scrum Masters, product owners, delivery leads, agile coaches	12–15 purposively selected Phase 1 respondents, stratified by team-level vs scaled context
Analysis	Descriptive stats; reliability (Cronbach's α >0.70); multiple regression (CSF → success); moderation by scale; factor analysis of the CSF structure	Reflexive thematic analysis (Braun and Clarke) in NVivo 14; deductive coding to framework categories plus inductive mechanism themes
Tool	IBM SPSS Statistics 29	NVivo 14

Table 2. Mixed-methods design. Recruitment via Scrum Alliance and PMI UK chapters, Association for Project Management (2023) networks, and LinkedIn agile communities; screening confirms active UK agile delivery involvement.

Reliability and validity: multi-item scales are piloted and assessed via Cronbach's alpha; factor analysis tests the three-category CSF structure against the data; interview credibility is reinforced through member checking. **Ethics:** University Research Ethics Committee approval; voluntary, anonymised, GDPR-compliant participation; no proprietary project data requested. **Limitations:** self-reported success is a perceptual proxy; cross-sectional design cannot track projects longitudinally; practitioner samples skew toward engaged community members; and Phase 2 size bounds statistical generalisation.

06 Timeline and Expected Contribution

Schedule (9 months): literature and CSF taxonomy (M1–2); ethics and survey design (M2–3); survey deployment (M3–5); quantitative analysis and CSF ranking (M5–6); interviews (M6–7); thematic analysis (M7); synthesis and recommendations (M8); write-up and submission (M8–9).

Contribution. Empirically, the study will deliver a UK-specific ranked CSF model for agile delivery — evidence Digital.ai (2023) provides globally but not for the UK in disaggregated form — and will test whether CSF importance is moderated by delivery scale (RQ2), a proposition frequently asserted but rarely measured. Theoretically, it will establish whether organisational factors (leadership, psychological safety) outrank technical agile practice in predicting success, adjudicating a live debate in the practitioner literature (RQ3). Practically, the ranked model and mechanism evidence will give UK agile leaders a prioritised, evidence-based guide to where transformation effort yields the greatest delivery return — aligned with the capability priorities the WEF (2023) and PMI (2023) identify as decisive for the coming years.

Source verification note. Five references are confirmed 2023 publications verifiable at their organisational URLs (PMI, Digital.ai, McKinsey, WEF, Deloitte). Four require confirmation of exact 2023 titles before submission and are marked **[verify]**: Association for Project Management, Scrum Alliance, Standish Group CHAOS, and Gartner; the Saunders et al. (2023) 9th edition should be confirmed via the Pearson catalogue. The Agile Manifesto (2001) and Scrum Guide are cited as standing frameworks, not dated literature. Seminal CSF theory (Rockart, 1979) is cited via the 2023 PMI source to keep the reference list current. Supplementary peer-reviewed sources should be drawn from the *International Journal of Project Management* and IEEE Xplore, each verified individually.

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