LCLM6004 — Research Methods for Business

Component 1: Business Research Proposal

Investigating the Organisational Barriers to Artificial Intelligence Adoption in a Meal-Kit Subscription Business

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1. Introduction and Background to the Business Problem

Meal-kit subscription companies such as HelloFresh and Gousto operate in a highly competitive, low-margin sector characterised by volatile demand, perishable inventory and a constant need to personalise the customer experience at scale (Shorbaji, Alalwan and Algharabat, 2025). To remain competitive, many of these businesses are turning to Artificial Intelligence (AI) to improve demand forecasting, personalise weekly recipe recommendations, automate customer service, and optimise last-mile logistics (McKinsey & Company, 2024). A 2024 McKinsey survey found that 71 per cent of consumer packaged-goods leaders had adopted AI in at least one business function, up from 42 per cent the previous year, and the market for AI in the food sector is projected to grow at over 39 per cent annually to 2030 (Grand View Research, 2024). For a meal-kit business, the potential benefits are considerable: more accurate ingredient forecasting reduces food waste and cost, while AI-driven personalisation can increase basket size and subscriber retention.

However, the transition from pilot projects to full organisational adoption is proving difficult. Industry evidence suggests that AI initiatives in food and retail businesses are frequently constrained not by the technology itself but by organisational factors: high implementation costs, fragmented data infrastructure, employee scepticism, and a lack of internal capability to interpret and act on AI outputs (Sánchez, Calderón and Herrera, 2025). For a mid-sized meal-kit subscription company (referred to here as “MealCo”, a company broadly representative of the sector), this creates a strategic problem: substantial investment in AI tools for demand forecasting and personalisation has not translated into the expected gains in efficiency or customer satisfaction, and operational staff have shown resistance to AI-generated recommendations in forecasting and supply-planning roles. Reported symptoms at MealCo include planners routinely overriding AI-generated ingredient forecasts without documenting a rationale, a personalisation engine whose recommendations are rarely referenced in customer-facing scripts, and rising, rather than falling, levels of food waste in several distribution hubs despite the forecasting tool’s introduction eighteen months ago.

This is significant because unresolved adoption barriers directly affect food waste levels, cost efficiency, employee morale, and the company’s ability to compete with larger, more digitally mature rivals such as HelloFresh and Gousto, both of which have publicly emphasised AI-driven personalisation as a growth lever. If AI tools continue to be under-used or overridden, MealCo risks not only failing to realise a return on its technology investment but also falling behind competitors on cost efficiency and customer experience, two of the sector’s key differentiators. Understanding why AI adoption stalls beyond the pilot stage, and what organisational conditions enable successful adoption, is therefore a pressing and current business problem worthy of structured investigation, and one that has clear implications for the company’s next three-year technology investment cycle.

2. Research Aim, Objectives and Questions

Research Aim: To investigate the organisational barriers to, and enablers of, successful Artificial Intelligence adoption in the demand-forecasting and personalisation functions of a meal-kit subscription business.

Research Objectives

1. To identify the key organisational, technological and human barriers that hinder AI adoption beyond the pilot stage in a meal-kit subscription company.
2. To evaluate employee attitudes towards, and trust in, AI-generated recommendations in forecasting and customer-personalisation roles.
3. To assess the extent to which existing change-management practices support or hinder AI integration.
4. To develop practical recommendations for improving AI adoption outcomes in this sector.

Research Questions

- RQ1: What organisational and technological factors most significantly hinder the transition of AI initiatives from pilot to full deployment in a meal-kit subscription company?
- RQ2: How do employee perceptions of trust, job security and usefulness influence engagement with AI-generated outputs?
- RQ3: What organisational and leadership practices are associated with more successful AI adoption outcomes?

3. Critical Literature Review

Existing research on AI adoption in organisations draws heavily on the Technology-Organisation-Environment (TOE) framework, which explains adoption as a function of technological readiness, organisational capability and external environmental pressure (Sánchez, Calderón and Herrera, 2025). Applied to small and medium-sized enterprises, this framework highlights that limited financial resources, fragmented data, and a shortage of technical expertise are recurring barriers to sustained AI adoption, echoing conditions typical of mid-sized meal-kit businesses that must compete with better-resourced global platforms. While the TOE framework is useful for identifying structural barriers, it has been criticised for under-theorising the human and behavioural dimensions of adoption, which is where the present study intends to contribute.

A growing body of literature addresses the customer-facing side of AI in food-related businesses. Shorbaji, Alalwan and Algharabat's (2025) systematic review of 55 studies on AI-enabled food-ordering apps identifies personalisation value, data trust and procedural fairness as key drivers of customer experience, but notes that most existing research is intention-based and reliant on self-reported data, leaving a gap in evidence about how AI recommendations perform once embedded in day-to-day operational decision-making. Similarly, research on AI-

driven personalisation in digital engagement more broadly confirms that trust and perceived usefulness are the strongest predictors of positive customer engagement with AI, while unresolved privacy concerns can undermine adoption (Golgeci et al., 2025). These findings are relevant to MealCo's personalisation function, but the literature has focused predominantly on the consumer rather than the employee experience of AI.

On the employee side, Golgeci et al.'s (2025) integrative review conceptualises AI resistance as a three-dimensional construct comprising fear, perceived inefficacy and antipathy, arguing that resistance is best addressed through transparent communication and inclusion of staff in AI design decisions rather than technical fixes alone. This is corroborated by Li et al. (2023), whose study in the hospitality sector found that task-oriented leadership significantly reduces resistance to change and improves AI readiness by helping employees understand the rationale for adoption. Within supply chain and forecasting contexts specifically, Teixeira, Ferreira and Ramos's (2025) systematic review of AI in supply chain management identifies persistent barriers around data governance, explainability and trust in algorithmic outputs, and calls for more research into hybrid human–AI collaboration rather than full automation.

A further stream of literature situates AI adoption within broader technology-acceptance theory, notably the Technology Acceptance Model (TAM) and Diffusion of Innovation (DOI) theory, both of which emphasise perceived usefulness, ease of use and compatibility with existing workflows as predictors of adoption. Recent work combining DOI's innovation characteristics with the TOE framework's contextual determinants has been shown to improve the explanatory power of adoption studies in resource-constrained firms, suggesting that a single-theory approach may be insufficient to explain the layered, socio-technical nature of AI adoption in a business such as MealCo (Sánchez, Calderón and Herrera, 2025). At the same time, much of this literature remains conceptual or survey-based, with comparatively few studies triangulating employee interview data against documented operational outcomes such as forecast-override rates or food-waste metrics, which is precisely the kind of evidence this proposal seeks to generate.

Taken together, the literature demonstrates strong theoretical grounding for the technological and structural barriers to AI adoption, and an emerging but still underdeveloped understanding of employee trust and leadership behaviour as adoption enablers. A notable gap remains in research that examines these organisational and human factors together, within the specific operational context of meal-kit subscription businesses, where forecasting accuracy and personalisation are both commercially critical and highly visible to frontline staff. This proposed study addresses that gap by combining the TOE framework's structural lens with insights from AI-resistance and leadership literature, applied to a single organisational case, and by linking employees' stated attitudes to observable operational behaviours such as override rates and waste outcomes.

5. Research Methodology and Design

This study will adopt a mixed-methods, single-case-study design, appropriate for exploring a complex, context-dependent business problem in depth while also capturing broader patterns of employee attitudes (Saunders, Lewis and Thornhill, 2019). A case study approach is well suited to investigating “how” and “why” questions around AI adoption within a bounded organisational setting, and mixing qualitative and quantitative data increases the depth and breadth of the resulting analysis (Adams et al., 2007).

The qualitative phase will consist of eight to ten semi-structured interviews with a purposive sample of employees involved in demand forecasting, supply planning and customer personalisation, selected to capture a range of seniority levels and functional perspectives. Interviews will explore perceptions of trust, usefulness and organisational support for AI tools, and will be analysed using thematic analysis to identify recurring barriers and enablers, consistent with approaches used in comparable mixed-method AI-adoption studies. The quantitative phase will use a short online survey, informed by constructs from the TOE framework and technology-acceptance literature, distributed to a wider sample of operational staff (target n = 60–80) to test the prevalence of themes identified in the interviews and to assess relationships between leadership style, trust and adoption intention using descriptive and correlational statistics.

Purposive and, where appropriate, snowball sampling will be used to identify interview participants with direct experience of AI-enabled forecasting or personalisation tools, while the survey will be distributed more broadly to relevant departments to improve generalisability within the case organisation. Where possible, interview and survey data will be supplemented with anonymised secondary data already held by the company, such as forecast-override logs and food-waste figures over the preceding twelve months, to allow stated attitudes to be checked against observed behaviour rather than relying on self-report alone. Interview transcripts will be coded using a combination of deductive codes drawn from the TOE and AI-resistance literature and inductive codes emerging from the data, following an established thematic-analysis process of familiarisation, coding, theme development and review; survey data will be analysed using descriptive statistics and correlation or simple regression analysis to test relationships between leadership style, trust and adoption intention.

Research ethics will be addressed through informed consent, anonymisation of individual responses, secure data storage in line with GDPR, and the right of participants to withdraw at any stage; given that the topic touches on job security concerns, particular care will be taken to reassure participants that responses will not be shared with line managers in an identifiable form, and access to any operational data will be limited to aggregated, non-identifiable figures. Reliability and validity will be strengthened through triangulation of interview, survey and operational data, use of established measurement scales where possible, and a clear audit trail of coding decisions during thematic analysis, supported where feasible by a second coder to check inter-rater consistency. Limitations include the single-case design, which may limit generalisability beyond similar meal-kit businesses, the relatively modest interview sample size,

and the reliance on self-reported attitudes, which the mixed-methods design partly mitigates by triangulating stated attitudes with documented adoption outcomes.

5. Business Relevance and Practical Implications

This research is directly relevant to MealCo's strategic decision-making. By identifying the specific organisational and human barriers preventing AI from delivering expected efficiency and personalisation gains, the study can inform a more targeted change-management approach, rather than further investment in technology alone. Practical outputs may include recommendations on leadership communication practices, staff involvement in AI tool design, clearer escalation routes for overriding AI forecasts, and phased-adoption strategies that build trust incrementally rather than mandating full reliance on AI outputs from day one. These recommendations would feed directly into the company's forthcoming technology investment review, providing evidence-based justification for where further spending should be directed, whether towards better explainability features, staff training, or revised planning workflows.

For the wider sector, the findings will contribute to an evidence base on how meal-kit and similar subscription-based food businesses can translate AI investment into measurable reductions in food waste, improved forecasting accuracy and stronger customer personalisation, while safeguarding employee engagement and trust. Given that many competitors face similar tensions between algorithmic efficiency and staff buy-in, the resulting framework of barriers and enablers could be adapted by other firms in the sector, extending the study's relevance beyond the single case. Beyond its organisational value, the project develops the researcher's applied skills in qualitative and quantitative research design, critical literature synthesis and stakeholder-sensitive research ethics, all of which are directly transferable to future research-based, analytical or consultancy roles.

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