

## National College of Ireland Project Submission Sheet

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Programme: MSCIB1

Year: 2025

Module: Dissertation

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Submission Due Date: 15-08-2025

**Project Title: THE EFFECTS OF CHANGE MANAGEMENT APPROACHES ON EMPLOYEE PRODUCTIVITY**

Word Count: 18916

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### **Acknowledgment**

I would like to thank my educator and supervisor who provided me with the opportunity of completing this dissertation by conducting elaborate research. I am also grateful to my family and friends who supported me in this research work. My ability to complete this research work on time was a contribution from my parents, close friends and teachers.

## Abstract

**Introduction:** Change management approaches followed in the UK manufacturing sector is the key aim of this research. An overview of research background about the need for incorporating change management strategies in the industry has been presented.

**Purpose:** The purpose of research is to analyse several change management practices adopted in the UK manufacturing sector. The impact of change management strategies on employee productivity in the industry has been analysed.

**Method:** The mixed method, such as the primary and secondary data collection method, was used here to gather real-time insights. A survey was conducted considering 81 participants, and 18 questions were developed. Thematic analysis was conducted with the help of the secondary data.

**Findings:** From the survey findings, it has been observed that most of the respondents agreed with the fact that change is crucial in the manufacturing sector and with the help of strong leadership as well as communication, change can be well managed as well. A thematic analysis has been conducted to highlight key patterns of encouraging skill development, facilitating feedback-oriented communication and development of psychologically safe working space in the industry to improve change outcomes. Limitations of research have also been highlighted.

**Conclusion:** In conclusion, it has been shown how key findings have been linked with research objectives. Based on the discussion, relevant recommendations have been provided to further improve employee productivity in the UK manufacturing sector during change management.

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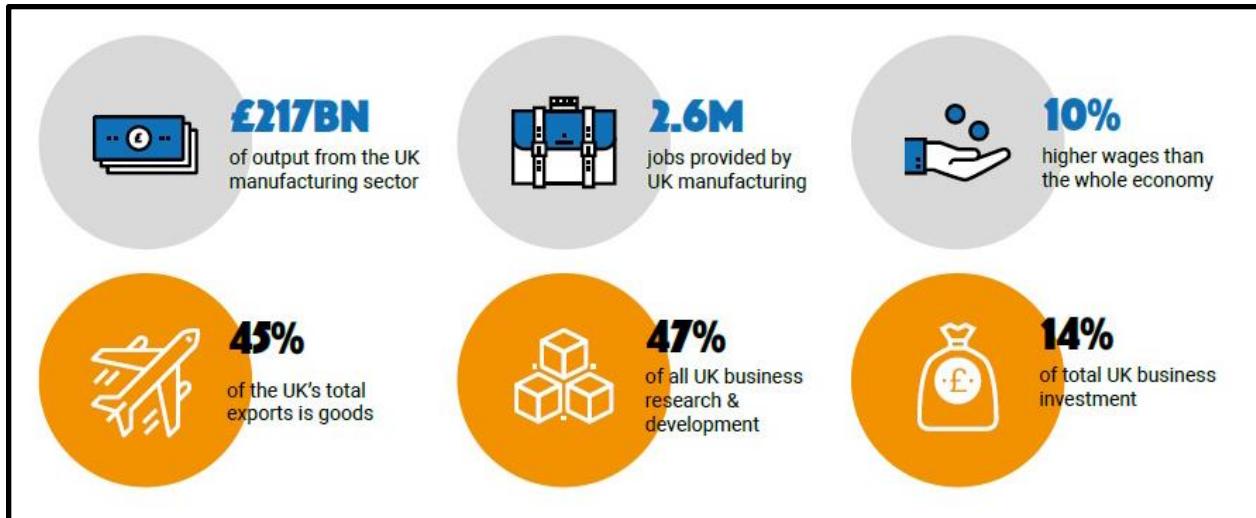
## **Chapter 1: Introduction**

### **1.1 Introduction**

This research aims to examine the effects of change management approaches on employee productivity, and to do so, it is essential to keep focus on how modifications in operations, business models, or decision-making processes within an organization can affect employee efficiency. It will also explore how organizational changes influence employee productivity, and in turn, how that productivity contributes to achieving the organization's goals. When employees are actively engaged in the change process and understand its purpose, they tend to show greater job satisfaction and improved performance (Riyanto *et al.*, 2021). Effective communication, proper training, and ongoing support during periods of transition can boost morale, enhance employee engagement, lower resistance to change, and cultivate a stronger sense of inclusion within the organization (Bah *et al.*, 2024). Change management refers to the structured approach that organisations use for transitioning individuals, teams, and entire businesses from the current state to the desired future state (Nadler, 2024). Effective change management is quite crucial to maintain and even improve employee productivity during the period of transformation (Mwamba, 2023). For instance, in the healthcare industry, changes are observed in terms of technological integration along with high resistance due to the “patient safety concerns” and professional autonomy (Mensah *et al.*, 2024). In financial services, change can be observed as data-driven and iterative quite often (Malhotra and Malhotra, 2023). In the retail sector, changes are observed through the adoption of new systems like CRM and others (Shankar *et al.*, 2021). To manage those changes, certain approaches like “Kotter’s 8-Step Change Model”, “Lewin’s Change Management Model”, and ADKAR can be mostly helpful. In sectors like manufacturing, where operational efficiency as well as team coordination are crucial, the impact of change management on productivity is effectively pronounced.

The UK manufacturing landscape is facing a pivotal intersection of sustainability-driven change and product optimisation at present (Sagar, 2023). Such government and industry initiatives like the "Made Smarter Adoption Pilot Program" were launched by the UK government in 2018 to deliver expert advice, training, and financial support (Business Insider, 2024). Moreover, £4.5 billion of government funding has been provided by the government to integrate sustainable business practices along with technical advancements to reduce operational costs & waste and attract environmentally conscious clientele (Manufacturing Management.co.uk, 2024). These

efforts are timely, whereas "energy-intensive sectors" face production declines; Output is at a 35-year low due to the soaring electricity cost (Financial Times, 2025). The overall manufacturing productivity observed strong and steady growth, where the value added by manufacturing employees in the nation increased by almost £11,200 per worker between 2018 and 2023 (Mta.org.uk, 2025).



**Figure 1.1: Annual analysis of the manufacturing industry of the UK**

(Source: The manufacturer, 2025)

As per above, in 2024, the total financial output from this sector was identified as £217 billion, and it employs nearly 2.6 million people till now, accounts for 45% of total exports, and 47% of all UK businesses' R&D (The manufacturer, 2025). Despite the progress, the productivity puzzle still exists, along with systematic underinvestment within technologies, green approaches, infrastructure, and skills continue to hamper the deeper gain. Poorly managed change in the manufacturing sector is responsible for causing confusion, stress, resistance, and a strong decline in morale, all of which negatively affect productivity (Shaik *et al.*, 2025). In this case, employees feel quite insecure regarding their roles, overloaded by high demands, or disconnected from the leadership.

In response, manufacturing companies are embracing the "change management frameworks" that can integrate operational efficiency with suitable sustainability goals. Lean Six Sigma, especially the "Green Lean Six Sigma" (GLS) methodologies, seemed to be relevant enough for reducing defects, emissions, and waste using the "DMAIC-based model" (Nagadi, 2022; Huang *et al.*, 2023). For instance, focus can be provided on Carlsberg Britvic, a soft drink manufacturing

company in the UK that used "Lean Six Sigma" for waste management and integrating sustainable approaches in business. As a result, it has been possible to reduce "50.2 tonnes of CO<sub>2</sub> emissions", "359 fewer trucks on the road", and improve customer satisfaction (Cqm Ltd.co.uk, 2025). It has been found out that manufacturing regions of the UK, like Scotland and others, showcase high productivity, that is "£47 output per hour", which is 19% above the national average, but it is unclear how change management approaches contributed to this success (PWC, 2023). These areas need to be clearly elaborated for further clarification.

The purpose of the dissertation is to evaluate the effect of change management approaches such as agile, PDCA, and "Lean Six Sigma" on employee productivity in UK manufacturing firms undergoing "sustainability-driven transformations." Grounded in the organisational change theory, this study is going to assess how the approaches can influence employee engagement, improve operational efficiency, and achieve suitable environmental outcomes. By combining quantitative measures, this research aims to reveal how each of the frameworks is unique and relevant for supporting the green transition without affecting the productivity area.

## **1.2 Research objectives and questions**

The research objectives for this study have been discussed below:

- To address the impact that several change management strategies have on employees' productivity, motivation, and well-being in the manufacturing Industry of the UK.
- To address the key characteristics along with principles of effective leadership on impacting employee morale and output during change, particularly in the UK-based manufacturing industry.

The research question for this study has been discussed below:

- What is the impact that several change management strategies have on employees' productivity, motivation, and well-being in the manufacturing Industry of the UK?
- How can key characteristics, along with principles of effective leadership, impact employee morale and output during change, particularly in the UK-based manufacturing industry?

## **1.3 Rationale for the study**

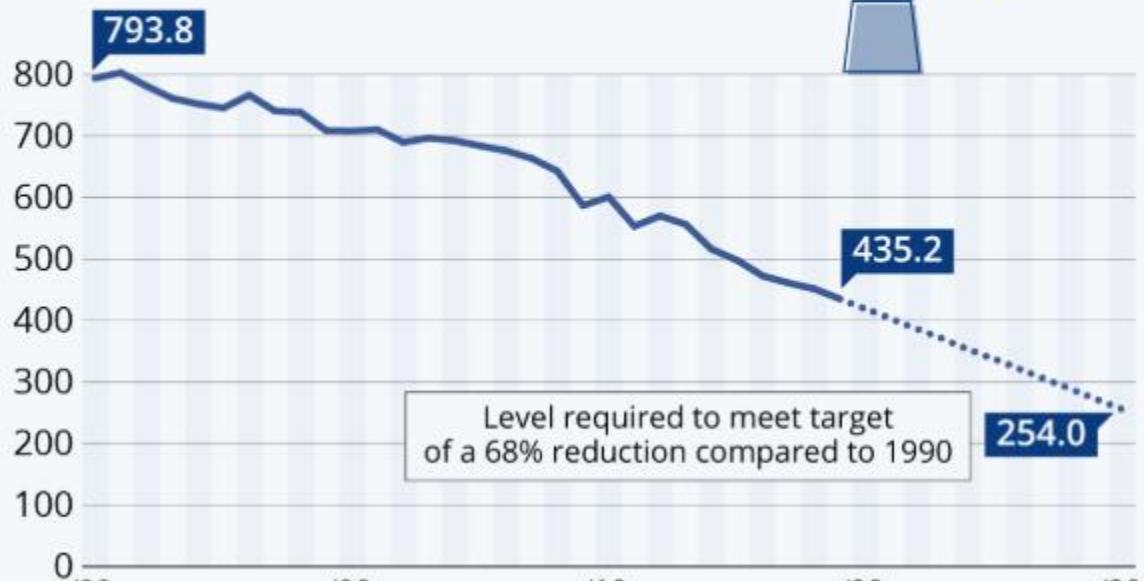
In today's fast-paced environment, organisations are undergoing such changes to stay relevant, competitive, as well as sustainable. Whether driven by technical advancement, regulatory shifts, or globalisation, change has seen a constant across all industries. The UK has been chosen as the

focus for this research due to its diverse and dynamic business environment, where organisations undergo structural as well as strategic changes quite often (Forterro, 2024). Emphasis of the UK on innovation, organisational development, and employee rights delivers the rich context for exploring the impact of “change management approaches” on employee productivity, offering greater insights that are relevant and applicable to “global business practices.”

However, despite strong investments in transformation initiatives, more than 70% of organisational change efforts reportedly fail to achieve their intended outcomes (Berggren, 2023). The major reason behind the failure is the lack of adequate change management, especially in addressing employee engagement, concerns, and performance. In a similar vein, the growing urgency for addressing climate change has highlighted sustainability as the main agenda in the “UK manufacturing industry” to bring certain changes. As the nation is legally committed to achieving “net zero emissions” by 2050, manufacturers face strong pressure to implement sustainable business practices in the business without compromising operational performance, although the transition is quite complex. The research shows that the “manufacturing sector” of the UK is responsible for 14% of the total “greenhouse gas emissions,” which is quite high (Lamb *et al.*, 2022). In order to deal with this, the government has made a “Ten Point Plan for a green industrial revolution,” and based on 2019’s figure, the country was able to make a 45% reduction compared to 1990 (Figure 1.2).

# How ambitious is the UK's emissions target?

Total annual territorial UK greenhouse gas emissions (in Mt CO<sub>2</sub>e\*)



\* million metric tonnes of carbon dioxide equivalents

**Figure 1.2: Ambitious emission target of the UK**

(Source: Statista, 2020)

However, it is quite clear that not all manufacturers can integrate sustainable approaches properly within business operations, and high financial investment is a major cause for this. The significance of the research is associated with evaluating the main reasons behind inadequate business operations of the manufacturing sector, even after the need for sustainable norms, and how the aforementioned approaches can handle the change.

## 1.4 Methodology

The research has adopted a quantitative methodology for examining the impact of change management and its approach on the productivity of employees. Based on the insights from studies, it was cited as important to standardize the framework, especially in the change initiatives. A quantitative approach can ensure replicability and objectivity, especially in evaluating the approaches while influencing workforce outcomes, for example, higher productivity and motivation (Ferede *et al.*, 2024). In this regard, the quantitative approach can provide a database

evaluation in terms of identifying implied responses towards the change, while supporting a structured questionnaire being one of the primary data collection processes.

In this regard, a descriptive cross-sectional design has been considered for investigating the perception of employees at a single given time, which has offered a snapshot of the perception and attitude over several job roles along with the organisational structure. This design is also suitable to identify several variables, for example, communication frequency, employee output, and leadership style. Descriptive design can respect the current or natural organizational aspect without manipulating any situation. The key relevance of the cross-sectional study within the industrial context is that it helps to identify correlated patterns and linkages between employee performance and operational intervention.

For the primary analysis, employees aged 25 to 45 have been considered, and an email and questionnaire have been sent. This age range includes both genders, demographics, and technical criteria, and a broad representation of the diverse nature of the manufacturing workforce. The closed-ended questionnaire has been chosen for improving or increasing statistical reliability and information on data and evaluating organizational nature.

For the analysis of the data, the SPSS tool will be used for conducting statistical tests for example, correlation, regression and others for identifying causal patterns and trends (Archibong and Ibrahim, 2021). Here the uses of SPSS will be validated by allowing a rigorous analysis of reliability, ANOVA test and regression to addresses situation at the management communication on impacting productivity morally.

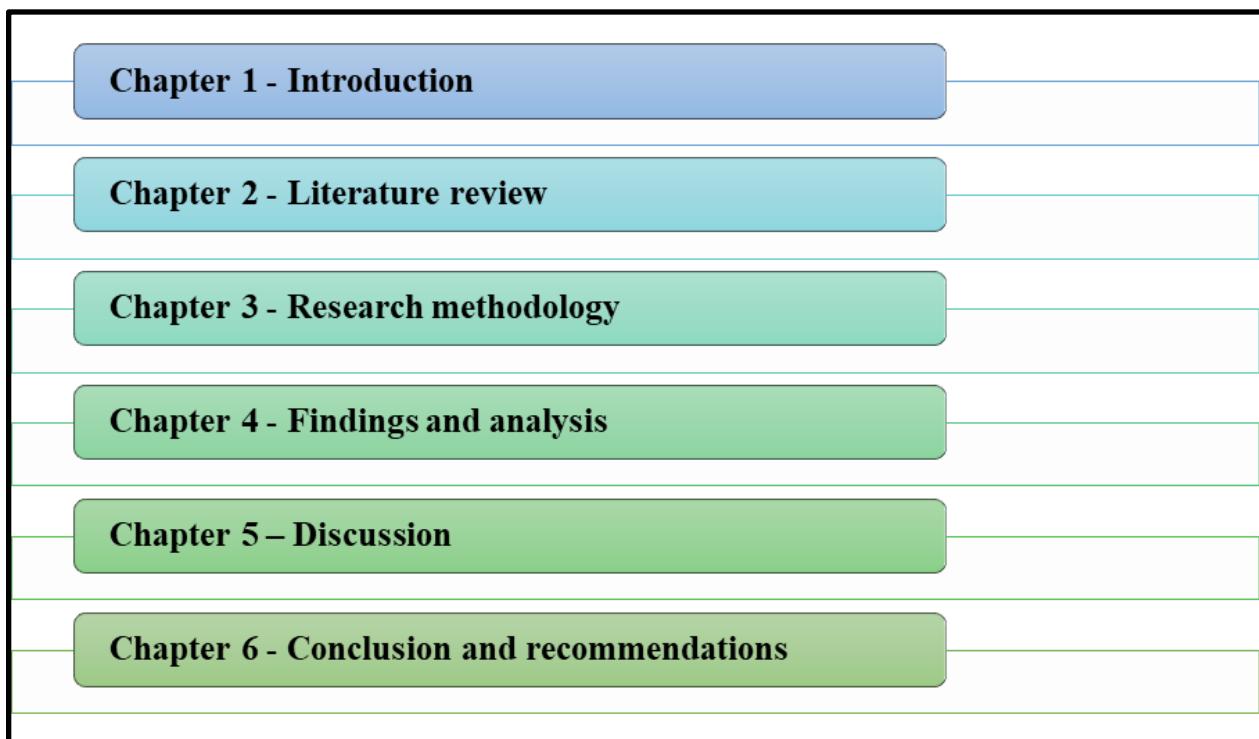
### **1.5 Contribution of the research**

A research study by Li *et al.*, (2023) in the UK manufacturing industry could fill a knowledge gap by examining how structured change management policies, such as Lean Six Sigma, PDCA, and Agile, influence employee engagement, morale, and ultimately operational productivity during sustainability-driven transformations. Despite numerous global studies on Lean Six Sigma's influence on social, environmental, and economic performance, research specifically addressing its direct impact on employee outcomes, especially within manufacturing transitions, remains limited (Li *et al.*, 2023). Especially transitions in manufacturing organizations (Li *et al.*, 2023). A study Barcia *et al.*, (2024) has found that about 70% of social indicators, 83% of economic along with 78% of environmental aspects have been improved based on the LSS or Lean Six Sigma implementation. Addressing its multifaceted value, however, lacks evidence of workforce-based

empirical findings. This study also showcases the significance of humble leadership and employee involvement in preparing an organization for change. Examining a manufacturing firm can help fill a gap in understanding how human-oriented change capabilities influence employee productivity during transformations.

Therefore, it can provide empirical analysis followed by statistical application, particularly focusing on implied changes in management and interpreting the human performance of human capital and operational interventions. This research also offers actionable insight, especially for practitioners, as to quantifying the frameworks, for example, Lean Six Sigma, PDCA, and Agile, on influencing moral productivity (Bah *et al.*, 2024). Firms can make data-driven decisions and evidence-based selection of change models that are customized. Studies find that human factors, for example, engagement and ergonomics with technology, can improve performance (Li *et al.*, 2023; Barcia *et al.*, 2024; Bah *et al.*, 2024). For industry experts and policymakers, this research highlights the crucial role of employee engagement, especially in successful change management and sustainability initiatives (Mehta *et al.*, 2024). It is also supported based on the data-driven aspect for force planning, focusing, and communication style, systematic change management processes, and leadership practices, while sustaining productivity as well.

## 1.6 Dissertation structure



### **Figure 1.3: Dissertation structure**

(Source: Developed by the researcher)

The structure of the dissertation has provided a coherent and logical examination in terms of addressing the changeable impact on the productivity of employees within the manufacturing industry in UK it begins with addressing the introduction in chapter one, the literature review in chapter two methodology in chapter three findings analysis, in chapter four discussion chapter five and conclusion recommendation in chapter six as well (Figure 1.3).

The first chapter has outlined the overall background of the manufacturing sector and the changing financial scenario in the UK under the sustainability changes. This chapter has also defined research problems and objectives for explaining the importance of change management in terms of improving workforce-based outcomes.

The second chapter literature review has addressed the past studies related to theories of change management, for example, Lean Six Sigma, Agile, and PDCA, while exploring the role in improving productivity and identifying gaps in the literature that this research is about.

The third chapter's research methodology has justified the overall selection of the quantitative approach, followed by descriptive design spaces tool, and primary quantitative data collection, that is a closed-ended questionnaire, while aligning with the objective of the study.

The fourth structure provides the analysis and findings based on the primary data of manufacturing employees in the UK. A statistical analysis has been conducted to provide the relationship between productivity and change management that led to strategies.

The fifth chapter has interpreted the findings based on the primary data, and while linking with the literature as well as theoretical perspectives based on the empirical outcomes, this has assessed the change management on contributing to employee-based success and operational aspects.

The last chapter's conclusion, along with recommendations, has summarized the key findings and insights while suggesting strategic aspects for the policyholders and industrial leaders.

### **1.7 Conclusion**

This chapter has set a foundation to examine these change management-based frameworks while influencing employee productivity within the manufacturing sector in the UK. The background of the research has addressed the agency-based economic pressure, productivity challenges, and environmental regulations, making Lean Six Sigma, PDC, and Agile particularly relevant based on the evidence. This chapter has showcased that empirical evaluation and setting research

objectives and questions are crucial for generating key insights to fulfil empirical evidence and the existing literature review, and to conduct the findings analysis.

## **Chapter 2: Literature review**

### **2.1 Introduction**

Change management is considered a crucial aspect in the organisation of Navigate, evolving market demands, economic concentration, and technological advancement. Within the UK manufacturing sector, operational efficiency along with workforce stability have been crucial for managing a strategy to change efficiently and also influencing the organisational performance. This literature review chapter has showcased the overall practices of change management, especially in the manufacturing industry, outlining strategies and models that have been facilitated during operational transition.

This chapter has also examined how such approaches can impact employees' productivity, along with a critical discussion of psychological and motivational well-being of employees, highlighting behaviours and leadership styles and shaping employee morale. Overall, a foundation of change management aspects and strategies during change management to impact affected by employees has been discussed, followed by a theoretical analysis.

### **2.2 Overview of Change Management in the UK Manufacturing Sector**

In a study by Rossini *et al.*, (2022), it was found that clean production, as well as industry 4.0, has been able to understand the operational performance among more than 200 manufacturing organisations. Here, the researcher has used comprehensive survey analysis for measuring delivery, inventory, quality performance and productivity while addressing the findings efficiently among productivity and clean automation as well. The study has combined lean practices along with technologies that have been able to improve 15% lead times as well as inventory reduction. Such outcomes have been able to understand of the relevance of change management to boost employee efficiency as well as more wellbeing in the time of industrial shift.

In another study, He *et al.*, (2022) has addressed that implementing change is crucial, which has been done by an AI-based decision-making strategy and a high-risk environment while considering the use of constraints and adversarial reinforcement-based learning for improving activity with the help of quality. The study has been able to software-based learning for improving activity with the help of quality analysis.

Li, (2023) has addressed that policies over traffic density during the post-COVID-19 has been able to minimize 20% collision rates and improve 30% policy generalization. This has shown how digital transition and in a well-managed environment can be able to increase performance under pressure

as well. In a study by Abdallah *et al.*, (2021), it was addressed through applying a systematic literature review of about 55 studies that employee skill gap, resistance, and poor leadership have been found to be considered as a barrier in terms of identifying digital transformation in the manufacturing sector and addressed that. The study has shown that implementing digital leadership along with efficient leadership can help to increase productivity by 23% and enhance work satisfaction improvements as well (Abdallah *et al.*, 2021). This illustrates how leadership principles, especially with strong communication, can impact the morale of the employees and also output in times of change, management, and transition.

Imtiaz and Muzaffar (2025) also analysed how the fallout of Brexit has affected the UK manufacturing sector, especially due to disruption in the supply chain as well as trade barriers. The researcher has used qualitative analysis and found that about a 25% loss in EU imports because of Brexit, along with 6% drop in productivity after the COVID-19 pandemic. Such an economic shift has required efficient organisational change, which includes supply chain reconfiguration along with workforce restructuring. The researcher has suggested that SMS has progressed by not having many downsizings and retaining employees, focusing on the requirement of inclusive change strategies and agile leadership in terms of maintaining productivity under the policy-based changes.

### **2.3 The Relationship Between Change Management Approaches and Employee Productivity**

Chaudhary *et al.* (2022) have addressed the relation among the transfer and the process, as well as employee productivity. The study by Chaudhary *et al.*, (2022) has investigated how manufacturing firms have been able to navigate organisational changes and especially the servitization pressure. The research has used quality analysis involving participants of 32 participants in several phases to examine the paradox and changes associated with service-led models. The researcher has also uncovered three aspects of paradoxes, for example, performance, learning and organisation and can identify several coping mechanisms, for example, change management, communication, digitalisation and training. The firms can recognise that geographic markets, rather than the platforms, for example, aircraft manufacturing, can lead to role of resistance and reassignment. Such cultural changes and structural aspects have been able to increase service delivery and minimise existing workflows while affecting productivity.

The study by Grozev *et al.*, (2025) has found that training as well as leadership within DMP or “digital material passport” implementation in manufacturing changes has been able to foster employee engagement especially in the transition. The researcher, with the help of empirical and theoretical literature synthesis, has shown that transformational leadership, especially inspirational motivation, along with intellectual stimulation, can help foster engagement. In this regard, leaders using styles of inspirational and motivational leadership can improve the adaptability, performance, and motivation of employees. Moreover, being involved in the place within training and also providing requirements and learning abilities helps to minimise resistance and skill acquisition increase skill acquisition. The researcher has addressed that such an aspect with leadership practices can help to improve productivity outcomes and employee morale (Grozev *et al.*, 2025).

The study by Gibbs *et al.*, (2023) has proprietary analytics-based data from it take organization for measuring productivity of employees to improve productivity of employees to improve productivity of employees before and after work from home. The researcher has shown that productivity has dropped significantly (Gibbs *et al.*, 2023). The research has shown that productivity has dropped significantly by 14% while considering the use of sapiens data, as well as 9% by considering working hours, which is also affected by one-on-one coaching and working collaboration. The studies provided the critical insight about structural work transition and changes, for example, top-down policy has hampered productivity, especially during changes like the COVID-19 pandemic. The researchers have adapted LASSO regression analysis has identified that inter-team networking and focus hours can be considered as strong productivity-based predictors and suggested that, for example, maintaining mentorship along with collaboration can minimise losses of productivity, especially the organisational changes (Gibbs *et al.*, 2023).

Focacci and Perez (2022) has competitively addressed a systematic analysis, showcasing technological revolution along with educational policies, and argued that failures to technical education has affected your productivity, especially in the time of several industrial surges, especially in a time like COVID-19 pandemic that needed higher education, team coherence, and lack of skill with the emerging demands of industry. The study also focuses that training can be a long-term driver for productivity, and can also align with the capability building and well-being of the employee. Willment *et al.*, (2025) have conducted a qualitative case study analysis to see the disruptive changes in productivity in the manufacturing industry, showcasing the requirement

of cross-functional skills, for example, technical skills, in the rapid era of technology. The study has addressed that 80% of the participants have considered that the skills gap is one of the major issues, where firms have failed to retrain the morale of the employees and output. This also relates to the participatory change strategy, which addresses the requirement for both soft and technical skills by retaining the role of leadership to navigate changes, and also maintaining productivity. In relation to this, Grozev *et al.*, (2025) have discussed that meaningful work-based design can influence productivity. Based on the model of "Hackman and Oldham", the researcher has suggested considering skill variety, task significance, and task identity to increase employee output and engagement. The researcher has found that redesigning the employees' roles can not only increase the variety of skillset, but also help employees to feel important. The findings of the research have been valued in the digital transition. This is also aligned with the addressable productivity indicators, for example, process ownership, as well as adaptability. The findings of the research have also supported the usage of feedback loops as well as autonomy in the time of implementation phases, while exploring factors that mediate productivity during changes.

## **2.4 Employee Motivation During Organisational Change**

In terms of addressing employee motivation in the time of organisational changes, several factors are related to this. In this regard, a study by Errida and Lotfi (2021) addressed that for successful change in a firm, the researcher has showcased that clear participation, transfer, communication, along leadership support can increase the well-being and motivation of employee. The researcher has also been able to address that about 72% of the employees have stated that they have achieved high morale when they are involved in change strategies. This is also linked with the challenges of the manufacturing industry in terms of sustaining deep productivity in times of change, addressing the significance of communication, as well as involving motivated staff to reduce resistance.

In another study, Bagga *et al.*, (2023) have addressed transformational addressing along with organisational culture in affecting the change management within virtual teams. The researcher has used PLS-SEM analysis of 118 IT employees and able to found that transformational leadership strategy can increase employees' morale by creating a culture of empowerment and trust, which can positively influence the overall change outcomes. The researcher has also addressed that more than 65% participants have addressed the commitment and motivation to work, and this increase when leaders in their organisation use transparent and participative

communication strategies. This result has also been supported by the self-determination theory, where employees have felt more competent and autonomous after providing clearer and supportive communication from readers. The research has also shown that the impact of change through efficient leadership on employees' motivation has increased.

Patwary *et al.* (2024) have also applied self-determination theory for examining inclusive and green leadership along with employee environment, and have applied a conceptual study among 374 employees. The study has showcased that pro-environmental attitudes that have been set among the employees of the environment and leadership communication increased proactive behaviours. The mediation analysis has also revealed a significant effect of  $\beta$  value 0.42 ( $p < 0.05$ ), indicating that the staff has been committed and motivated to sustainability changes if they are highly involved, as well as involved with higher repercussions.

In addition to this, De-la-Calle-Durán and Rodríguez-Sánchez (2021) have also created a 5C model that is "Consolation, Cultivation, Convention, Confidence and Communication" for improving employee engagement in the time of the COVID-19 pandemic. One of the external changes has hampered English productivity as well. The systematic peer literature review has showcased that participative culture and communication have been critical; it was also found there are 78% of reviewed articles help to minimise burnout and improve employee motivation as well. The researchers have also highlighted that organisations listening to employees' concerns as well as offering rewards can help to improve their contribution, increasing especially productivity and morale.

Qureshi *et al.*, (2022) in this regard, addressed the implementation of lean strategy within manufacturing, focusing on the involvement of employees being one of the success factors as well. The research has used a "MICMAC" and "ISM" analysis within SMS and has found that 'employee involvement' has been found to be a top critical factor, stated by 70% of managers. The researchers also addressed that staff engagement and employee involvement can increase productivity the lean changes in projects. The researchers also criticized that employees who faces lacked in participative input and active participation have seen a 40% lower morale and high resistance. The research by Chatterjee *et al.* (2021) has demonstrated the need for technical changes and motivational strategies that are rooted in competency recognition and autonomy as well strategy has also examined the implementation of industry 4.0 technologies within the manufacturing industry with the help TAM-TOE model.

The researcher has surveyed about 340 employees and highlighted the importance of communication and leadership support being a crucial aspect for employees to attract new technologies. The researcher has also found that 62% participants have considered that motivation and higher productivity offered by leaders can be increased if leaders offer participative planning and transparent communication about the adaptation of technology, such as artificial intelligence. This finding from the researcher aligns with the key aspect of involving employees in co-designing their new modified workflows, which links to willingness and more immorality of employees and managing changes.

Zhang and Chin (2021) have also focused on the implementation of TPM or "Total Productive Maintenance" within SMEs and applied qualitative methods for engaging employees within the change process. The research has reported that equipment efficiency has improved by 18% after implementation, where employee motivation has also increased. Post active involvement of the Total Productive Maintenance in problem solving and training approach, leaders who empower workers and communicate openly have been able to co-design, the overall maintenance practice has increased morale and minimised resistance as well.

In another study by Patmawati *et al.*, (2023), it was found that long-term and short-term learning for QIM is quality improvement management. In the time of organisational change, the researcher has used a quantitative descriptive model and showcases that blending the managerial structures in empowerment approaches can improve product innovation with time, especially employee recognition, and along with involvement, can increase workforce commitment. The researcher has showcased that short-term remorse, for example, training certificates, along with the long-term motivators, for example, candidate advantages, can foster these changes, which were noticed in 68% of the cases. Zhu *et al.*, (2023) have also evaluated the short-term and long-term equity incentives and pay-related incentives that have driven the enterprise innovation within SMEs. The researcher has used final information from the observation data of 5483 over the last 10 years and found that by applying an economic model, the executive pay, along with share incentives, can increase the enterprise's willingness for innovation, despite high work pressure and risks, as well. This address key aspects of immediate bonuses and future-oriented rewards for sustaining enterprise willingness.

To improve employee motivation during organisational change, greater instances of participation and involvement have been ensured. Active involvement helped employees to directly contribute

to organisational decision-making and provide valuable feedback to improve organisational output. Along with transparent communication, a need for recognizing and rewarding exceptional effort from employees improved employee morale and engagement during the change management process (Zhu *et al.*, 2023). Use of incentive programs has been encouraged so that new behaviour can be sustained in the long run. Achievable goals have been developed to provide direction for employees during the change management stages.

The study by Omodara (2023) has investigated the impact of short-term debt directly addressing manufacturing firms and their performance, shedding light on the motivational well-being of employees. This research has found that with considering a 15-year panel data set of different manufacturing firms, that high short-term debt-related ratio can constrain the capacity of firms for retaining and rewarding employees and also affect the ROA or "return on assets". This addresses how resource-strapped change-related initiatives can affect an employee morally if firms have short-term financial waste pressure. In another study by Kalogiannidis (2021) it was addressed the importance of motivation and the reverse, being one of the non-financial motivators for career progression and public praises to increase employee morale. The researcher, by applying "Arksey and O'Malley's framework", has addressed a positive linkage between efficient job performance and recognition practices. Addressing the role of motivation and vice versa, it has also been supported that a positive linkage exists.

## **2.5 Employee Well-being and Psychological Impact of Organisational Change**

The need for businesses to transform is a necessity and a driver for gaining sizable opportunities within the competitive business environment. Galanti *et al.*, (2023) state that, even though the change is a necessity for opportunity, it creates an environment of risk, in terms of employee well-being and satisfaction, especially heightened in the present times, in the post-COVID era, where change is not a necessity but inevitable. The study of Galanti *et al.*, (2023) uses an interview-based approach to infer that learning and training programs are crucial for helping employees cope with the stress and anxiety associated with change. The systematic literature review conducted by Khaw *et al.*, (2023) elucidates that organizational change triggers diverse psychological responses amongst the employees. The high levels of uncertainty associated with change directly translate into elevated levels of stress, anxiety, and especially resistant behaviours.

The majority of the present workforce demonstrates a high level of burnout and depression as a result of being able to change continuously, meeting the new demands. In the work of McIntosh

*et al.*, (2023), a change management model named CHaMP (Center for Healthy Minds and Practice) has been designed based on Kotter's 8-step model of change. Implementation of this model has been proven to be a significant benefit and extension of support to the 631 employees surveyed. The CHaMP model has been found to increase employee resilience to change and overall well-being. Kotter's change management process can be identified as being used within the mining company in the study by Laig and Abocejo (2021). This study uses a survey strategy, including 192 employees selected randomly. A significant correlation ( $\alpha < 0.01$ ) has been found when Kotter's change management process has been used. Furthermore, the usage of this change approach resulted in a 75% increase in job satisfaction, which had a direct impact on productivity. The change management process requires preparing the employees for change so that resistance is reduced. The study of Memon *et al.*, (2021) uses a survey strategy to understand the relation between employee readiness and engagement with satisfaction, within the telecom manufacturing sector, by collecting data from mid-level senior employees. The research deploys the Lewin 3-step model to infer that preparing employees and making them aware of the changes facilitates the process of adopting changes, and subsequently, higher satisfaction and engagement during the change process. The survey response indicates employees have high readiness to change, satisfaction, and low fear of uncertainty when Lewin's approach is deployed. Harwood Manufacturing, which is a textile manufacturing business, faced challenges like employee turnover, low productivity, low morale, and employee training as operations shifted to Virginia from London. Using the Lewin model, turnover reduces, and workers feel more engaged and valued (Bangura, 2025),

In a similar study by Gazi *et al.*, (2024), the authors focus on the shift in employees working within the garment manufacturing industry. The aspect of change management is associated with high levels of employment uncertainty, which leads to stress and anxiety amongst the employees. Deployment of the Lewin change management model, the employees have been able to strive towards improved "quality of work-life" (QWL), which includes different aspects of being happy, optimistic, stress-free, physically sound, productive, and committed to the organization. This has been established by an extensive survey of 420 employees of the garment manufacturing industry. Even though the study also highlights the need for motivators like salary, incentives, and work autonomy, the usage of Lewin's model improves QWL.

The necessity to improve performance is one of the most pressing aspects, that directs organizations towards change. The ability to incorporate change adequately, aligned with consumer behaviour, regulatory changes, and evolving technologies, requires a change within the employees as well. Microsoft's hardware manufacturing division is a case study focused on the research of Bangura (2025). The study highlights the successful integration of the ADKAR model by Microsoft to encourage employees towards change, by focusing on developing the employees' abilities.

Psychological impact on employees during organisational change involves effectively addressing uncertainty and ambiguity. Feelings of uncertainty have been developed due to chances of job losses. However, use of training and upskilling programmes has contributed to reducing resistance to change. Employees have been recorded with lower instances of fatigue as need for change and strategies implemented for change are adequately discussed with the stakeholders (Bangura, 2025). Use of transformational leadership has been followed to improve communication among employees and other stakeholders to prevent erroneous information sharing. Development of a change-oriented organisational culture has been possible as organisations attempt to continue learning from frequent changes.

## **2.6 Leadership during change and maintaining employee morale**

Leadership emerges as a crucial element when organizational change management is investigated. In studies of Imran *et al.*, (2021) and Mukhuty *et al.*, (2022), leaders are identified as the architects of successful change management implementation. In this respect, Mukhuty *et al.*, (2022), which uses a literature review research methodology, identify transformational leaders as the communicators of change, who transfer the compelling vision of change requirement from the management to the employees, and ensure low resistance while maintaining productivity. The author also emphasises that their selected style of leadership influences how the employees are able to embrace change, by celebrating short-term wins like in Kotter's' change management. In addition, the research by Imran *et al.*, (2021) states that leaders using transformational leadership are able to successfully create urgency for change. Using a systematic literature review methodology, the author has been able to demonstrate that the usage of the transformational leadership approach is a driver towards the formation of a compelling vision associated with the need for change. This helps to build a desire to acknowledge change, lowering resistance and increasing motivation. The study by Rasheed *et al.*, (2021), which adopts a PLS-predict analysis

methodology, states that employee innovation within the textile manufacturing segment has increased by 35% as a cumulative impact of change management and adoption of transformational leadership. The approach to leadership adopted during change management has an impact on the morale of employees. The component of inspiration makes transformational leadership beneficial during the challenging periods of change. The work of Imran *et al.*, (2021) points out that despite the success of transformational leadership towards change, it is challenging during the stabilisation phase, aligned with Lewin's change management. Constant emphasis on innovation leads to fatigue among employees.

Transactional leaders excel in ability building, which acts as a catalyst for change. The transactional reward mechanism has an inherent reward mechanism embedded within the leadership style itself. In the works of Mahfouz *et al.*, (2022), it has been emphasized that during change, employees are required to hone new capabilities and competencies. In this context, transactional leaders are able to create a motivating environment for the employees, driving them towards adopting new skills. The study, which adopts a survey and structural equation modelling strategy, states that integration of transactional leadership lowers resistance and encourages skill development, which leads towards seamless change management, maintaining productivity levels. Moreover, the success rate is calculated to increase by 45% when transactional leadership is involved. A limiting aspect has been highlighted in the works of Skopak and Hadzaihmetovic (2022), where the authors conducted an intensive literature review to indicate that transactional leadership bears limitations during change management, as it inhibits innovation and problem-solving ability within employees. Employee satisfaction aspect associated with transactional leadership is lower.

Transparent and frequent communication has been maintained to enhance employee morale during the change management process. It has been found that greater involvement of employees in the process provided them a sense of ownership, which further enhances employee engagement. Use of transformational leadership helped in recognising and celebrating progress during the changed landscape (Skopak and Hadzaihmetovic, 2022). A culture of trust and psychological safety has been developed in organisations, positively impacting employee morale. The leadership also plays a vital role in continuous monitoring and adaptation.

Another predominant style of leadership is the authoritative leadership, which, according to Moosa *et al.*, (2023), is very commonly adopted by organizations to lower resistance and maintain their

productivity levels. The work of Moosa *et al.*, (2023) uses a literature review methodology and the Lewin change management model to state that employees are a key element in determining the success of organizational change. The research states the need for an engaged workforce to implement change. In this context, adopting authoritative leadership lowers the morale and productivity of employees in the workplace. The work of Kumar and Siddiqui (2021), which uses a survey methodology using 325 self-administered questionnaires and a PLS smart methodology, bears similar results. This study shows a high correlation value of autocratic relation with decision to quit and poor job satisfaction, leading to a 28% increase in stress level. The research also recommends the capability of mentoring ability of leaders to be able to overcome these challenges.

## **2.7 Integration: Linking Change Management to Long-term Organisational Success**

Proactive readiness towards change helps organizations demonstrate a high capability for resilience, which is transformed into long-term success for the organization and a sustained competitive advantage. In the study by Kalbermatten (2024), which surveys 2162 employees within different manufacturing sectors, it has been proven that companies that invest actively in increasing change readiness are able to gain significantly high implementation success. The study attempts to reorganise change management from reactive crisis management to a proactive strategic position. Olafsen *et al.*, (2021) reaffirm the findings of Kalbermatten (2024), by emphasizing that, in order to keep pace with the changing markets, a culture of readiness to change is indispensable. Organisations that do not focus on the aspect of employee readiness within change management encounter multifaceted challenges in the effort to change. Using an intensive literature review methodology, Olafsen *et al.*, (2021) have established that employee transformation and awareness toward change transform them into components that facilitate change. In contrast to findings of Olafsen *et al.*, (2021) and Kalbermatten (2024), Engida *et al.*, (2022) have stated that employee readiness is not a single determining factor towards organizational change management. In contrast, the study focuses on change leadership which helps to foster a supportive environment within the organisation, driving a positive environment, which enables deployment of change models.

According to the research of Ferede *et al.*, (2024), a sense of awareness has taken place among consumers regarding the sustainability practice. Not only do the consumers benefit, but a sustainable practice also benefits the organisation and the employees. Along with that, sustainability-led change management has also reduced the uncertainty by spreading the outcome

of the change management process, which decreases the doubt among the employees and consumers as well. Because uncertainty or unknown facts can create doubt in the mind of employees and customers, which decreases operational efficiency, and proves the negative sides of sustainability-led change management.

The process of integration has provided a scope for developing a shared organisational objective. Integration also allowed opportunities for proactive identification of issues linked with change management. Better mitigation of obstacles has been associated with providing roles in a changed environment, as per employee strengths and weaknesses (Olafsen *et al.* 2021). Efficient resource allocation has been obtained due to the process of integration. Hence, embedding change into organisational culture facilitated continuous learning-oriented performance. As a result, higher rates of project success have been recorded due to use of integration approaches.

## **2.8 Theoretical analysis**

Theoretical analysis for this exercise can be drawn from several established theories of change management structures. This has been discussed below.

- **Lewin's Change Management Model**

Lewin's model involves unfreezing, then changing and lastly refreezing, which provides an efficient approach for understanding employees' transition from older aspects to newer forms in an organisation. Ojenike (2023) has applied Lewin's framework especially in manufacturing firms and has been able to address the "systematic preparation" or unfreeze, along with "reinforcement" or refreeze has improved the performance of employees. This was found by the result of the correlation coefficient, of more than 0.722, indicating the value to manage employees morally during the time of complex change transition. This also addresses that the framework of Lewin is crucial for the organisation.

The Lewin model is crucial for justifying for examining employee motivation and productivity. Considering this theory, it can also help to guide how such changes disrupt and then re-establish the productivity of the employee.

- **Kotter's 8-Step Change Model**

Kotter's 8-Step Change Model also offers a practical and granular approach to addressing several roadmaps, such as establishing agency, developing a coalition, communicating the firm's vision, empowering action, as well as consolidating gains, focusing on addressing employee participation and engagement. Mauss *et al.*, (2023) have considered incorporating Kotter's eight-step model

within their qualitative analysis in terms of addressing the circular economic model within manufacturing firms able to focus as stakeholder engagement is crucial in changing.

This is because such engagement is rooted deeply in the habits of linear production. Mauss *et al.*, (2023) while interviewing stakeholders were able to find that, through Kotter's model, they were able to promote behaviour acceptance, especially the systematic shift. This makes it suitable for manufacturing firms, as here the buy-ins of employees are crucial in terms of avoiding resistance and minimising productivity loss. In this regard, Kotter's eight stages also align with the aim of this research to evaluate the principles of leadership while supporting employees' productivity and helping employees morally in times of change.

- **ADKAR model**

The ADKAR model encompasses awareness, knowledge, desire, ability, along reinforcement, which develops a person-based lens for change management. Regarding this, Quiroz-Flores *et al.*, (2023) address that considering the ADKAR model within the lean tool in middle working small middle-sized organisation has been able to demonstrate that the mindset of workers has been able to improve, and equipment effectiveness and productivity have been able to increase by about 17.6%. Quiroz-Flores *et al.*, (2023) have addressed that employees are not only able to adapt new skills, but also able to sustain their performances by clear reinforcement, which reflects the model of ADKARs to promote long-term productivity. In this regard, applying this model can help to increase productivity. In this regard, the ADKAR model can help to address how change management strategies and models can empower employees while embracing change and also safeguarding their well-being and motivation.

The theories that have been considered here, have been also tested through primary analysis with the help of SPSS test to address several variables "IV1: Change Management Strategies", "IV2: Employee Motivation During Change", "IV3: Leadership Characteristics During Change" and "DV: Employee Productivity" and establish the relation among them.

## **2.9 Literature gap**

Despite the adequate research on change management in the manufacturing sector of the UK, there are still certain gaps that need to be taken into focus. Firstly, most of the studies highlighted such productivity improvements through digital as well as lean transformations, but there is a lack of a longitudinal view of how sustained productivity can be well maintained after implementation (Rossini *et al.*, 2022; Li, 2023). Apart from that, most of the existing literature strongly reports

about “short-term efficiency gains,” but there is a lack of evidence on the “long-term employee performance stability” as well as burnout risk, especially under continuous changes (Galanti *et al.*, 2023; Imran *et al.*, 2021).

Secondly, although different studies emphasized the role of leadership in the area of change management whereas most of the research seemed to be polarized between the transformational as well as transactional styles, which limited the core focus in “situational leadership approaches” (Mukhutty *et al.*, 2022; Mahfouz *et al.*, 2022). For instance, while transformational leadership is able to enhance innovation, it also causes such fatigue during the prolonged change period (Rasheed *et al.*, 2021; Imran *et al.*, 2021). Transactional leadership is relevant for ensuring skill development, whereas it affects the satisfaction level of employees (Skopak and Hadzaihmetovic, 2022). Yet, very few studies integrated those styles within “dynamic change environments” where flexibility within leadership can be even more effective.

Although Lewin’s and Kotter’s “change management models” are widely applied but their comparative impact on the “psychological well-being” and job satisfaction is still unexplored, especially in SMEs of the manufacturing industry of the UK (Imtiaz and Muzaffar, 2025). Apart from that, there are several studies that emphasised communication along with participation but lack in detailing how suitable “participative mechanisms” mediate the motivation of employees during change. There is also a growing recognition about reward systems and past studies focused on financial outcomes most rather than anything (Zhu *et al.*, 2023). There is a strong need to analyse other positive outcomes that can also be gained through effective change management. Hence, this research is going to cover all these gaps and develop new insights on such unexplored areas.

## 2.9 Conceptual framework



**Figure 2.1: Conceptual framework**

(Source: Developed by the researcher)

## 2.10 Summary

Based on the overall context, it can be summarised that through adequate change management, it can be possible for the manufacturing firms of the UK to gain certain effective outcomes. With the help of the theoretical contexts, it has been possible to evaluate the research context more deeply. The identified gap areas are still unexplored and need to be taken into focus to gain further developed insights.

## **Chapter 3: Methodology**

### **3.1 Introduction**

The chapter has provided a detailed justification of methodological steps followed in this research to generate research findings. An account of the objective of research and specific framework followed in this research has been discussed. Justification for selecting an appropriate research philosophy and approach has been presented to guide data collection methods. A detailed analysis of data collection and analysis methods showed how researchers refined the process of collecting data that highlighted the impact of change management on employee productivity. Finally, ethical approaches followed in the research have also been included in this chapter.

### **3.2 Objective of research**

Two objectives for research have been listed as follows:

- “To address the impact that several change management strategies have on employees' productivity, motivation, and well-being in the manufacturing Industry of the UK.”
- “To address the key characteristics along with principles of effective leadership on impacting employee morale and output during change, particularly in the UK-based manufacturing industry”.

### **3.3 Research framework**

A research framework considered for following transparency in methodological steps is a research onion. As developed by Saunders, Lewis and Thornhill, use of a research onion guided the process of research design (Sahay, 2020). A coherence has been established between each aspect of the methodological decision-making process. It facilitates justification so that a logical approach for each methodological element can be provided for readers. An approach of critical thinking has been followed while applying the framework to justify the selection of specific methodological elements and rejection of other alternatives. Hence, standardized communication has been provided along with avoiding methodological mismatch in this research.

### **3.4 Research philosophy**

A research philosophy has been considered to evaluate the reasoning behind collecting and analysing given data. It values an underlying set of assumptions to develop knowledge about the given context. The alternatives of research philosophy are positivism, pragmatism, interpretivism and realism. In this research, pragmatism research philosophy has been considered. The justification for selecting pragmatism is based on its problem-centred and results-oriented

characteristics (Hampson and McKinley, 2023). As it provides a strong philosophical foundation, pragmatism has been used to solve practical issues involving multiple disciplines. On the other hand, pragmatism offered methodological flexibility, which played an important role in ensuring compatibility with mixed methods in research. It allows use of quantitative and qualitative methods in finding appropriate knowledge for answering the research questions. Hence, greater relevance in practice has been noticed as researchers have had the opportunities to generate insights due to enhanced flexibility in research.

Apart from that, pragmatism allows a scope for addressing complex phenomena involved in dealing with various dimensions of change management affecting employee productivity. Practical outcomes and relevance of the given research topic have been valued while considering pragmatism. A focus on consequences of action revealed how leadership's decisions in the manufacturing sector provided insights for appropriate interventions during change management. On the other hand, pragmatism has been used to ensure 'acceptance of fallibility' so that an iterative nature of data collection can be used to address complex phenomena and adjust the process of generating research findings (Mbanaso *et al.*, 2023). Besides, incorporation of ethical and moral aspects of leadership in decision-making has also been strategically addressed with the help of pragmatic research. The importance of social context has been highlighted as the research topic has involved the perspectives of employees, managers and leaders while addressing change management elements.

Creativity and critical thinking in obtaining and interpreting ideas have been valued with the help of pragmatism. A focus on 'action, flow and movement' of research steps has been obtained through pragmatism. Solution-oriented and flexible nature of investigation has been valued while considering pragmatism philosophy over other alternatives such as positivism or interpretivism (King, 2022). Highlighting the importance of findings in diverse organisational settings has also been possible with the help of selected research philosophy.

### **3.5 Research methodology approach**

a) Out of abductive, deductive and inductive alternatives of research approaches, an abductive research approach has been considered. The approach allows a scope of generating logical inference from recorded observations. An iterative process has been developed so that data can be used to verify theory and vice versa. Highlighting unexpected observations in the given context generated scope for identifying patterns in collected data. Considering plausible and most

comprehensive explanation has been possible with the help of abductive research (Hulst and Visser, 2024). It has also allowed scope for testing and refinement of research results. Higher practical relevance and flexible approach have made abductive research compatible with mixed methods of research. Validating existing theories has also been undertaken while working with the mentioned research approach. It has also provided scope for understanding complex and emerging phenomena that can influence overall research outcomes. Informed decision-making has been prioritised in the research due to the use of the abductive research approach.

b) A descriptive research method has been followed in this research as it provided an opportunity to explain key findings. It assisted in developing a foundational understanding of the given context while exploring multiple characteristics and events associated with it. Description and explanation of research findings have been used in forecasting and strategic planning of change management processes followed in manufacturing companies. It has been viewed as a low-cost and time-efficient research method, which improved utilisation of research materials (Stanley, 2023). A relatively less manipulation of variables has occurred while preferring descriptive research. Moreover, its selection allowed opportunities to explore cause-and-effect relationships between research variables. Clear definition of variables helped in data collection and ensuring internal and external validity in conducting descriptive research. Compatibility with primary research tools such as quantitative questionnaire surveys and secondary research methods further enhanced its applicability in the present case of mixed-method research.

### **3.6 Data collection approach**

a) A qualitative approach has been selected in selecting the data collection approach as it has assisted in conducting a thematic analysis. To address two research objectives, two themes have been developed based on research findings. In the thematic analysis, a focus has been laid on finding commonly repeating patterns in change management in the manufacturing sector. Each factor of change implementation has been linked with employee productivity and employee output. Use of a qualitative approach also assisted in understanding the need for responding to changes in the external environment in the manufacturing sector. It further assisted in understanding the perspective of surveyed participants on cognitive and emotional support offered by leadership to develop a psychologically safe working environment during change management activities. Better in-depth understanding and contextual understanding have been achieved due to following a

qualitative approach (Lim, 2024). A better scope of flexibility and adaptability in research has also been obtained by following the mentioned approach.

b) A quantitative data collection approach has also been followed in this research. In the present context, it has been found that responses of participants have been collected and presented in the form of pie charts. It has been used as a visualization tool with clear identification of percentage of population agreeing or disagreeing with respective claims or questions asked in the context of employee motivation during change management. Exploration of complex phenomena has been considered while addressing responses to questions asked of participants (Ghanad, 2023). A greater scope of generalizability has been obtained due to following a quantitative approach. The findings can be interpreted to show similar results for larger populations in the manufacturing industry. Highlighting objectivity and measurability has been favored with the quantitative approach. This approach also reduced researcher bias and personal interpretation as quantitative data has been directly presented from research results. Moreover, replicability of findings and their reliability have been ensured through a quantitative approach.

### **3.7 Data collection method**

In order to collect data, a mixed method approach has been taken into focus that combines both qualitative and quantitative techniques for getting a holistic understanding of how change management strategies are able to influence employee productivity within the manufacturing sector of the UK. The primary method mainly includes a structured and “closed-ended questionnaire” and a thematic analysis of “secondary qualitative sources” that ensured breadth and depth to capture employee experiences and organisational practices.

The decision to use a structured questionnaire seemed to be strongly supported by past research, suggesting that quantitative surveys mostly enable objective measurement and statistical testing through which generalizable findings are gained across large populations (Archibong and Ibrahim, 2021). Employees aged between 25-45 years were taken into focus for the survey, and the Google Form has been used to ensure wide distribution and convenience in responding. The structured design also allows for effective standardization that helps to improve both reliability and enable the analysis for detecting patterns and connections between leadership traits as well as employee productivity.

Apart from that, the secondary analysis has been employed for qualitatively exploring nuanced experiences along with practices within the organisational change (Johnson and Sylvia, 2023).

Here, Google Scholar has been used as the primary database from which relevant journals were collected to conduct the thematic analysis.

The questions regarding the primary survey were designed based on the identified key themes from the literature review, such as employee involvement, change communication, leadership empathy, and proper training during the change. Several items were acquired from the “previously validated instruments,” such as those which were used by Chu and Murrmann (2006), by keeping focus on employee motivation along with change adaptability. “Likert scale responses” were used as well for measuring the perceptions within a quantifiable format.

The final questionnaire for the survey seemed to be divided into three particular areas that are:

- Demographics (age, gender, and work experience).
- “Change management approaches” (leadership practices, structured change, participation, and communication).
- Employee outcomes (employee morale, motivation, well-being, and productivity).

A total of 18 questions were developed by maintaining alignment with the research objectives, and the questions were made to gather effective insights from those who are associated with the manufacturing industry for several years. A total of 81 employees were taken part in the survey who are associated with the manufacturing industry of the UK for certain years.

The use of “closed-ended Likert scale questions” has been justified by their proven validity within organisational behavioral research and offered greater consistency along with “ease of interpretation”. Similar scales were used previously as well to measure emotional intelligence and change readiness, as observed within the research of Chu and Murrmann (2006) and Qureshi *et al.*, (2023), ensuring proper construct validity and suitable internal consistency.

A cover letter has been developed for the survey participants by evaluating the research purpose, voluntary participation, data confidentiality, and the right to withdraw at any moment.

Dear Participant,

You are invited to take part in the research that explores the impact of “change management strategies” on employee productivity within the “UK manufacturing sector”. Your insights will help to assess how organisational practices are relevant to influence employee morale, performance, and motivation during the change process. The survey will take 10-15 minutes to complete. Participation is completely voluntary, and your responses will be anonymous and

confidential. You can withdraw at any stage without any hesitation. Data collected through the survey will be used fully for academic purposes.

Thank you for giving your time and contribution.

Kind regards,

[Researcher's Name]

[University Name]

[Contact Email]

A pilot survey was conducted before making the final questionnaire, considering 10 participants from the target population along with 4 questions [Refer to Appendix 2]. However, several mistakes were found there, such as for none of the questions, the “required” option was on, including the consent one, which resulted in uneven collection of responses for each question. Moreover, none of the questions were in the sequence, like objective-wise. Hence, it was well understood that both of the perceptions should be fulfilled to develop an appropriate questionnaire and get proper responses.

### **3.8 Sample selection**

Sampling is the crucial process in research as it allows individuals for selecting a particular subset of people that are representative of the whole population. Literature reflects that there are two main approaches to sampling, such as probability sampling and “non-probability sampling”. In case of probability sampling, each member of the targeted population has an equal chance of being selected, which enhances generalizability and reduces bias (Rahman *et al.*, 2022). On the other hand, non-probability sampling does not rely on random selection and it is mainly used when the researcher has a strong aim to explore certain characteristics within the defined group (Stratton, 2023).

Hence, by keeping focus on the research purpose, a combination of both strategies has been taken into focus:

- A probability-based “simple random sampling” technique has been applied for the primary quantitative survey.
- Another one is the “non-probability purposive sampling approach” that has been used for the secondary analysis.

For the primary data, participants were selected mainly from professionals working in the manufacturing sector of the UK, using the “simple random sampling strategy”. A mailing list as

well as professional forums were used for distributing the questionnaire randomly to ensure the unbiased selection of participants across different departments and experience levels. The strategy delivered a statistically reliable view of the experiences of employees with the change management.

Moreover, for the secondary data, purposive sampling has been taken into focus for selecting relevant articles and journals that mostly address leadership, employee productivity and organisational change with the manufacturing perceptions (Stratton, 2023). These sources were selected based on their relevance, credibility along with the alignment with research objectives. The dual sampling approach mainly ensured proper balanced analysis where the quantitative sample offers greater generalizable insights, and qualitative sources deepen the understanding level of contextual nuances (Rahman *et al.*, 2022). Together, these approaches provided the view of how change management strategies are able to impact employees' outcomes in UK's manufacturing sector.

### **3.9 Data presentation and analysis**

In order to analyse and present data for this research, a combination of narrative text along with visual representation has been taken into focus to maintain proper clarity and accessibility. Quantitative findings from the survey have been displayed through graphs that were automatically generated while collecting responses via Google Form. These visuals have been accompanied by narrative interpretations as well for explaining trends, variations, and key patterns related to the research objectives (Taherdoost, 2022). The selection of the data analysis technique mostly depends on the type of data collection, and here, for analyzing primary data, the primary quantitative method has been used. The developed graphs have been collected and based on those visuals, it has been possible to easily identify the opinions of participants along with the provided narratives behind each of them.

For the secondary data, a secondary qualitative or thematic analysis method has been used. This method mainly involved the identification of recurring patterns as well as categorizing them within two themes based on research objectives (Lochmiller, 2021). Key themes mostly include leadership communication, involvement of employees, relevance of the change model, and productivity impact. The above-selected methods seemed to be most appropriate, as there is a possibility to gain immense depth and breadth to understand how the "change management practices" are responsible for impacting employee productivity in this sector.

### **3.10 Ethical considerations**

The principle of informed consent has been followed in this research where the participants have been informed about the purpose of questionnaire survey before enrolling them as survey respondents. Detailed information about nature, risks, benefits and procedures of quantitative survey has been presented to the participants. No participant has been coerced to provide any typical answer to any question. Voluntary participation has been followed and the participants had the option of quitting the questionnaire survey whenever they deemed fit. The right to withdraw has been provided to participants to ensure research integrity (Drolet *et al.*, 2022). Anonymity and confidentiality have been followed in the given research. Hence, no names or identities of participants have been revealed in any area of research. It has been ensured to minimise harm to survey participants. Integrity and objectivity of research have been followed at each step of data collection.

Apart from that, secondary research has also been included within the mixed-method approach. As a result, intellectual property regulations have been followed in developing the research article (Armond *et al.*, 2021). Appropriate citations have been used and original authors have been credited in the process of data collection and analysis. Appropriate use of data has been favoured to prevent misrepresentation of findings. An ethical obligation has been considered to interpret collected data from academic research articles without being influenced by personal views or biases of researchers.

### **3.11 Limitations**

Despite the application of methodological rigor, there are several limitations associated with the method section. Firstly, the collection of quantitative data through the online questionnaire can introduce response bias, as here participants might have answered in the “socially desirable ways” or misunderstood different items without any clear clarification. Apart from that, although the use of the “simple random sampling” was well justified but the sample size might not fully capture the diversity of the whole “UK manufacturing workforce”. This is responsible for limiting the generalizability as well. Focusing on the qualitative aspect, it has been observed that the thematic analysis relied on secondary data, most of which indicates that the gained insights are shaped by the interpretation of literature rather than “face-to-face interview”. This might limit the ability for capturing real-time perceptions of employees associated with the manufacturing industry during the change. Moreover, excessive reliance on “self-reported data” for each method is also

responsible for introducing subjectivity, which can affect the accuracy level eventually. Time constraints and resource availability are also responsible for restricting the capability for conducting more in-depth analysis.

### **3.12 Conclusion**

Based on the overall context, it can be concluded that the use of the relevant data collection methods, such as both primary and secondary, helped to develop greater insights regarding the effectiveness of "change management strategies" in the manufacturing industry of the UK. With the help of adequate analysis, it has also been possible to gather in-depth insights. Ethical perceptions have been maintained throughout the research process, and although certain limitations exist, the selected methods delivered a strong foundation to collect and interpret data for meeting research objectives.

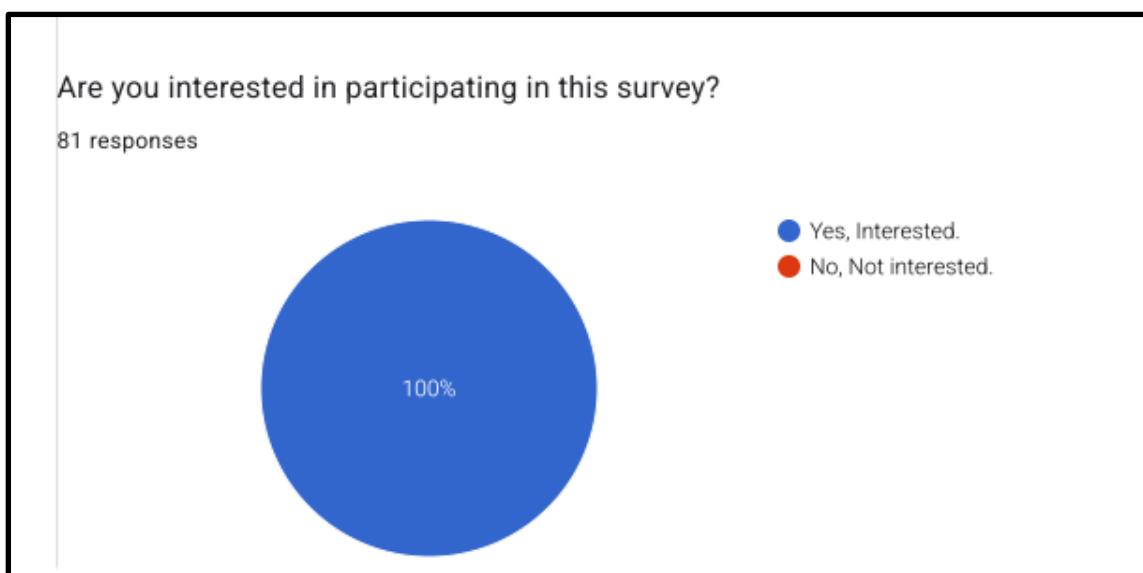
## Chapter 4: Findings and analysis

### 4.1 Introduction

The findings and analysis chapter is going to present both survey data and thematic analysis for exploring how different change management approaches are responsible for affecting employee productivity. Quantitative insights are mainly derived from the structured questionnaire, whereas qualitative themes are identified through secondary data, ensuring a comprehensive understanding of employee experiences during the organisational change.

### 4.2 Primary findings and analysis

#### Consent



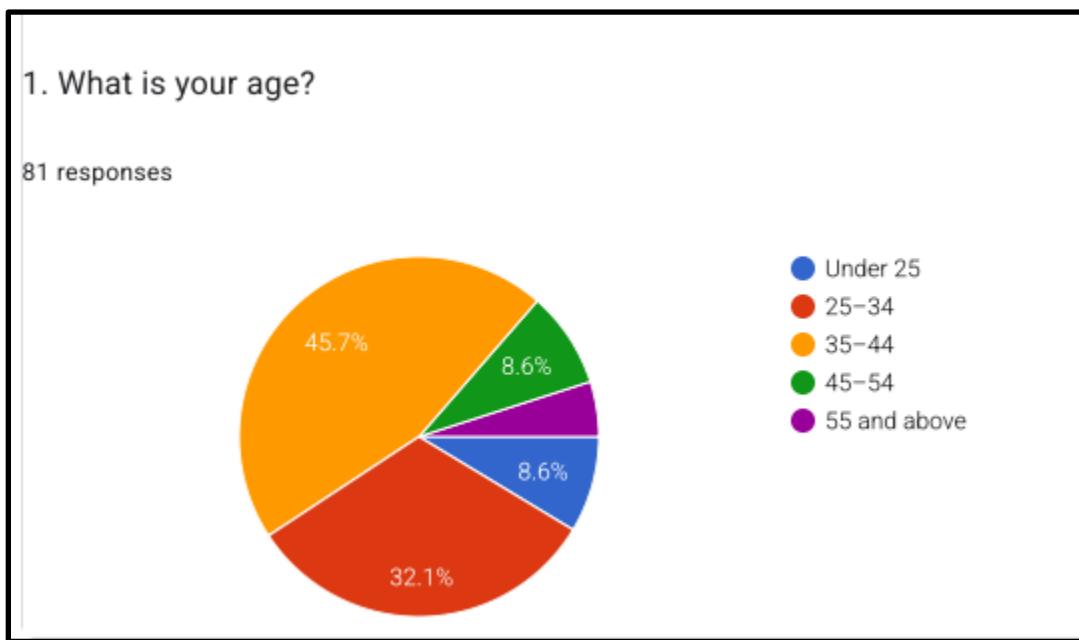
**Figure 4.1: Gathered consent**

(Source: Google Form)

The survey was conducted by considering a total of 81 respondents, and all of them provided full consent before taking part in the survey.

## Demographic analysis

### Question 1



**Figure 4.2: Age group of respondents**

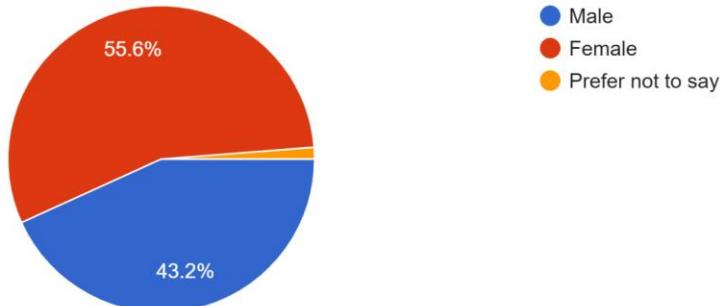
(Source: Google Form)

The above figure showcased that the maximum respondents, such as 45.7% belonged to the “35-44 years age group” and 32.1% of respondents belonged to the “25-34 years age group”. Moreover, 8.6% of respondents belonged to under 25 and “45-54 years age group” respectively. The least number of participants, such as 4.9% were identified from the age of 55 and above. Hence, from the overall analysis, it is clear that the maximum employees were from the middle age group who could deliver better insights regarding “change management strategies” and their impacts on employee morale, output, and well-being in the manufacturing sector of the UK.

## Question 2

2. What is your gender?

81 responses



**Figure 4.3: Gender of respondents**

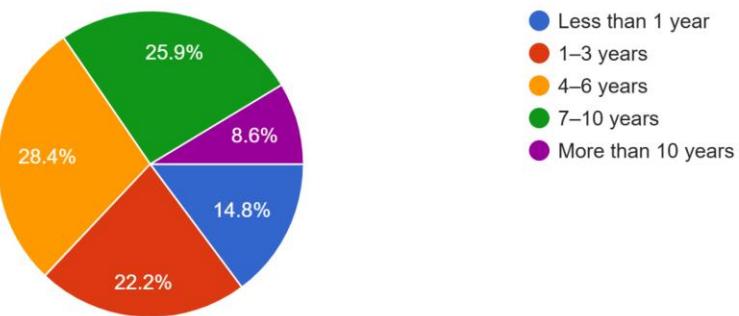
(Source: Google Form)

Based on the perception of gender, it has been observed that the maximum female employees such as 55.6% were female, and 43.2% of respondents were male. However, 1.2% of individuals who took part in the survey had not disclosed their gender. Henceforth, it is clear that most of the female employees preferred to take part in the survey and state their perceptions regarding the impact of change management on employee productivity, morale, and well-being.

## Question 3

3. What is your working experience in the manufacturing sector

81 responses



**Figure 4.4: Working experience of respondents in the UK manufacturing sector**

(Source: Google Form)

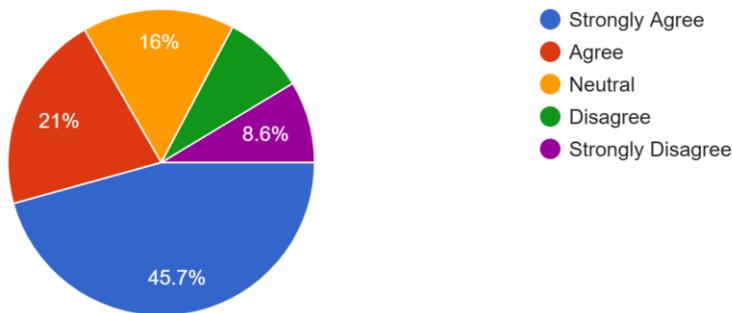
In terms of working experience, it has been found out that 28.4% of respondents have been associated with the UK manufacturing industry for 4-6 years, and 25.9% of individuals have worked here for 7-10 years. 22.2% of respondents are associated with the industry for 1-3 years, and 14.8% of respondents seem to associate with the industry for less than 1 year. However, only 8.6% of respondents have worked here for more than 10 years. Hence, it can be stated that it is possible to get in-depth perceptions regarding the impact of the "change management" on employee morale, output and well-being quite properly as maximum respondents had a minimum of 4-6 years working experience in this industry although to get more brief perceptions, strong focus on experienced employees' perceptions must be provided.

### Contextual analysis

#### Question 4

4. Do you believe that your organisation adopts a structured and phased approach to implementing change (e.g., planning, executing, reinforcing)?

81 responses



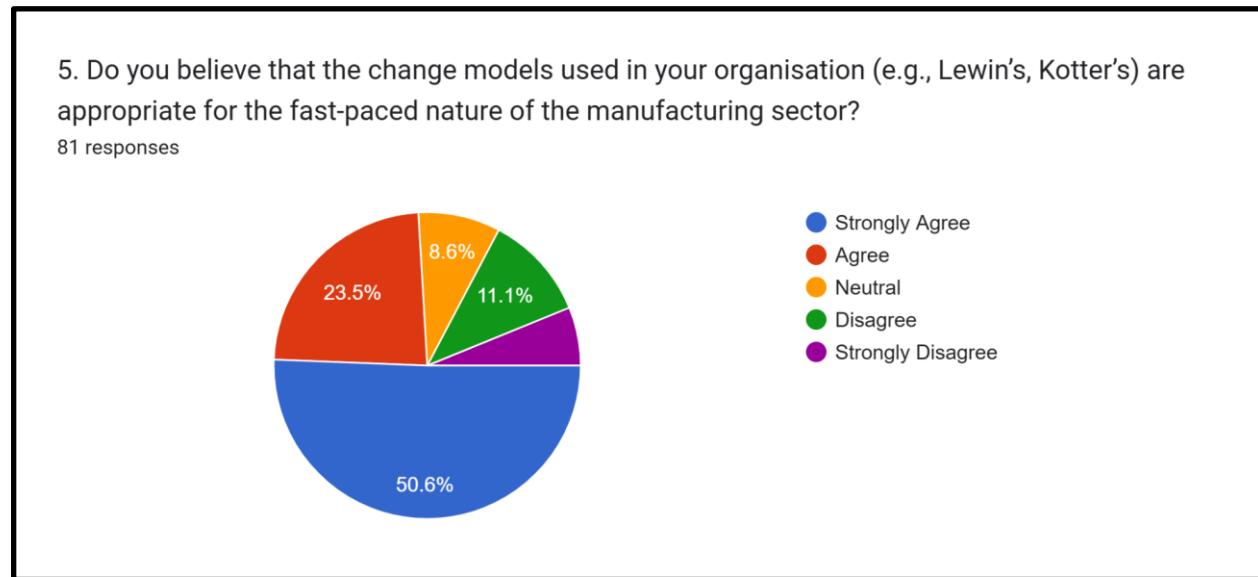
**Figure 4.5: Adaptation of a structured and phrased approach for implementing changes within organisations**

(Source: Google Form)

As per above, 45.7% of respondents "strongly agreed" with the fact that their organizations have already adopted a structured and phased approach for implementing changes like planning, execution, and others. However, 8.6% of respondents "strongly disagreed" with this, which indicates there are still gap areas for structured adoption. 21% of them seemed to agree with the matter, and 16% stayed neutral. Based on the past literature, "structured change management" when properly phased through execution and planning, seemed to be capable of supporting

organisational transitions without compromising the productivity area (Errida and Lotfi, 2021). There is a need for systematic preparation as well as reinforcement to enhance employee performance and minimise the resistance area. The findings seemed to be well connected with the first research objective by evaluating the effectiveness of “structured change practices” to manage changes for coping up with the evolving trends of the manufacturing industry.

### Question 5



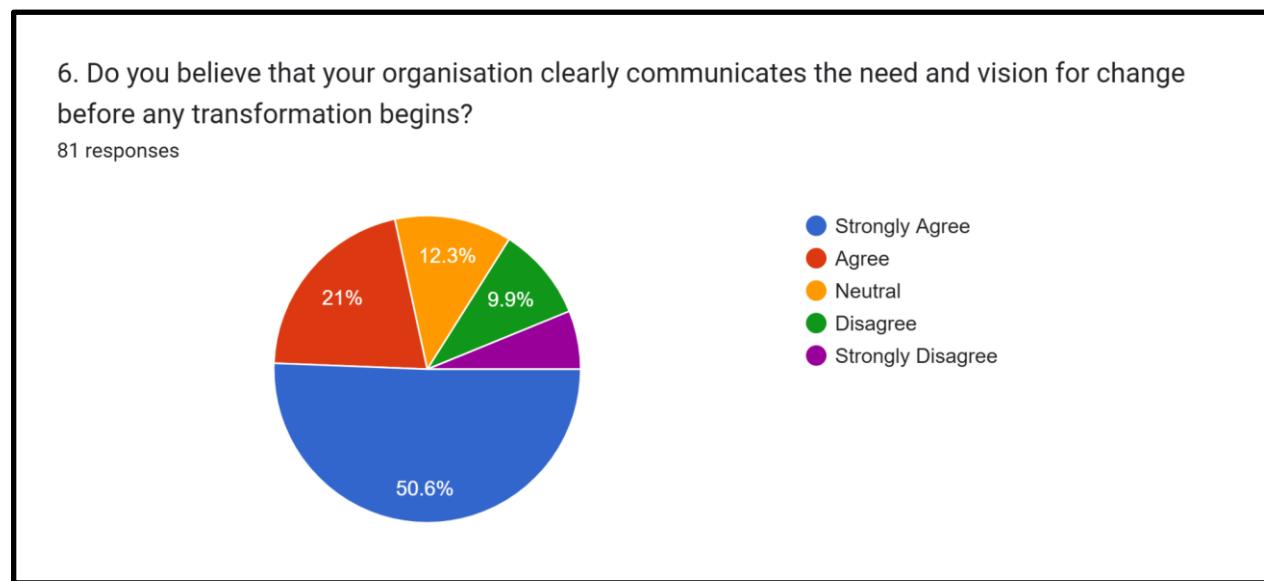
**Figure 4.6: Appropriateness of the used change models within organisations**

(Source: Google Form)

It has been identified that 50.6% of survey respondents “strongly agreed” with the fact that the change models used within their organisations are quite relevant for the “fast-paced nature” of the manufacturing sector of the UK. 23.5% of individuals agreed with the fact, and 8.6% stayed neutral. Moreover, 6.2% of individuals “strongly disagreed,” and 11.1% of respondents seemed to disagree only. Based on the perception of McIntosh *et al.*, (2023), a “change management model” named CHaMP has been developed by keeping focus on the “Kotter's 8-step model of change”. This seemed to be effective for increasing employee resilience to change, along with the overall well-being. Another research by Laig and Abocejo (2021), showcased that Kotter's model is relevant to increase employee job satisfaction by 75% and it also has a direct impact on productivity. Henceforth, the first research objective has been well-addressed by highlighting how relevant change models, such as Kotter's, improve employee well-being and productivity within

the manufacturing sector of the UK, supporting its focus on strategic impact on workforce outcomes.

### Question 6



**Figure 4.7: Clear communication regarding the need and vision for change within organisations**

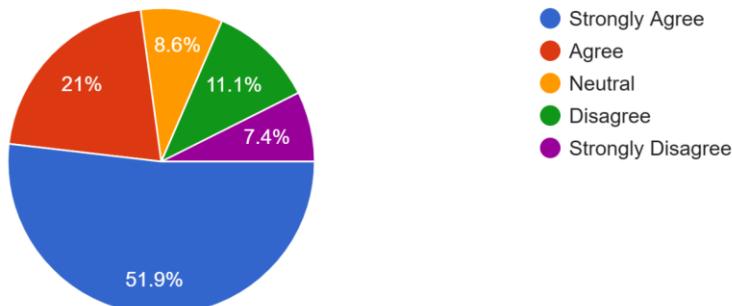
(Source: Google Form)

In this regard, it has been observed that 50.6% of respondents “strongly agreed” with the fact that their organisations properly communicate the need and vision for change before starting any kind of transformation. 21% agreed with the fact, and 12.3% seemed to stay neutral. However, 6.2% of respondents “strongly disagreed” with this, and 9.9% disagreed. From the previous literature, it has been found out that the implementation of digital leadership within organisations helped to increase productivity by 23% along with a strong improvement in work satisfaction, only if there is a presence of strong communication (Abdallah *et al.*, 2021). This helps to inform individuals about the upcoming change, and they are able to prepare themselves for the transition under proper guidance. These findings supported the second research objective by evaluating how effective communication works as an essential leadership trait that directly influences employee preparedness as well as morale during the change, therefore sustaining productivity within “UK manufacturing settings”.

## Question 7

7. Do you believe that you and your colleagues are given opportunities to participate in shaping how organisational change is implemented?

81 responses



**Figure 4.8: Getting opportunities to shape the implementation of organisational change**

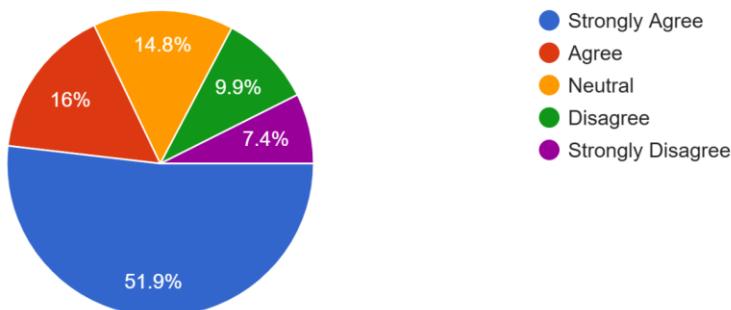
(Source: Google Form)

As per above, 51.9% of respondents “strongly agreed” with the aspect that they get opportunities for participating in shaping the implementation of the organisational change. 21% of them agreed with the fact, and 8.6% of individuals stayed completely neutral. 7.4% of respondents “strongly disagreed” with the fact, whereas 11.1% disagreed with it. From the viewpoint of Grozev *et al.*, (2025), under proper training and leadership within “digital material passport” implementation in the area of manufacturing, it has been possible to facilitate employee engagement in transition. Here, employees get the flexibility to state their opinions and learn new skills throughout the transition. The overall findings strongly addressed the first research objective by showcasing how the direct “employee participation” and “leadership-driven training” during the change foster the area of motivation and engagement that directly impacts well-being as well as productivity in the UK manufacturing industry.

## Question 8

8. Do you believe that your organisation provides sufficient motivation (e.g., recognition, autonomy, or training) to maintain performance during change?

81 responses



**Figure 4.9: Getting proper motivation through organisations for maintaining performance during change**

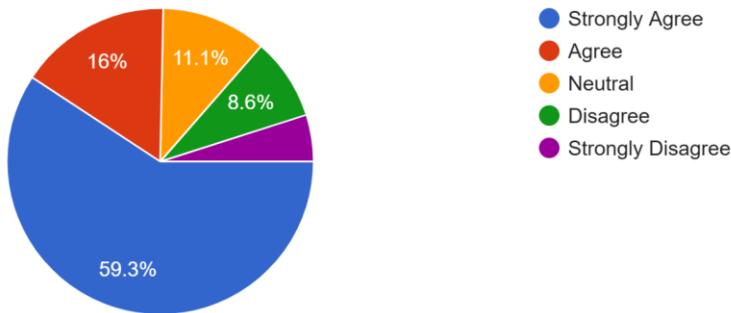
(Source: Google Form)

It has been observed from the above figure that 51.9% of respondents “strongly agreed” with the context that their organisations provide sufficient motivation, like training, recognition, and others, for maintaining performance during the change. 16% of them agreed with this, 14.8% of individuals stayed neutral, and 9.9% of respondents disagreed with this. However, 7.4% of respondents “strongly disagreed” with this fact as they think that they have not gotten the required motivation, which affects their performance areas the most. Based on the previous literature, it has been identified that clear participation, communication, transfer, and effective leadership support are the major sources of employee well-being and motivation during the change (Errida and Lotfi, 2021). In this regard, 72% of employees stated that they achieved high morale through these aspects when they are engaged in change strategies, and as an impact, they are capable of performing better as well. These findings have addressed the first research objective throughout by highlighting how motivational strategies such as training and recognition during the change impact employee morale, along with performance, which confirms the literature on motivation’s role in the area of productivity.

## Question 9

9. Do you believe that transparent and regular communication from leadership helps you stay motivated during periods of change?

81 responses



**Figure 4.10: Effectiveness of transparent and regular communication from leadership to stay motivated during change**

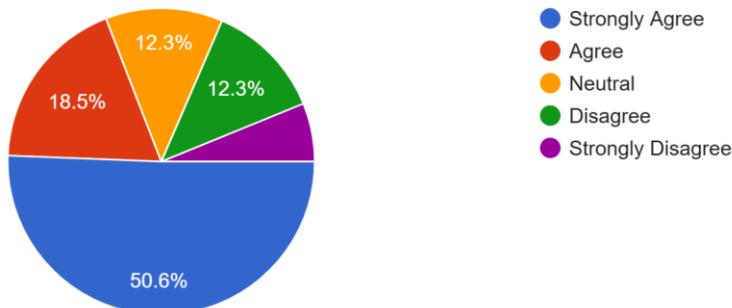
(Source: Google Form)

From above, it is clear that 59.3% of respondents “strongly agreed” with the fact that the existence of transparent and regular communication is actually beneficial to keep employees motivated during the change. However, only 4.9% of respondents “strongly disagreed” with this, and 8.6% of them seemed to disagree eventually. 16% of respondents agreed with the fact as well, and 11.1% of individuals stayed totally neutral. From the literature section, it has been observed that a survey was conducted considering 340 respondents to identify the importance of communication to stay motivated during change. Results showcased that 62% of participants stated that motivation and productivity offered by leaders can be facilitated even more if leaders are capable of offering participative planning, along with transparent communication regarding the adoption of technological advancements (Chatterjee *et al.*, 2021). The findings also supported the first research objective by demonstrating that transparent communication during changes mostly boosts motivation and reinforces change strategies to get positive outcomes.

## Question 10

10. Do you believe that your role in the change process (e.g., feedback, co-designing workflows) contributes to your sense of value and ownership?

81 responses



**Figure 4.11: Contribution of roles in the change process**

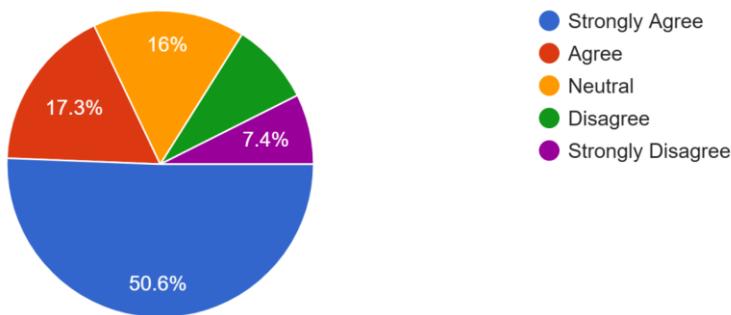
(Source: Google Form)

The above figure demonstrated that 50.6% of respondents “strongly agreed” with the perception that their roles in the change processes contribute to their sense of values and ownership. On the contrary, 6.2% of respondents “strongly disagreed” with the fact. From the previous literature, it is clearly evident that the usage of feedback loops along with autonomy while implementing the change is really effective to enhance employee productivity (Grozev *et al.*, 2025). With the help of the feedback on skill adoption, managing change, and contribution to handling changes are not only effective to keep employees motivated or engaged, but also to make them feel as an essential part of the change process that contributes to their sense of values and ownership. Above all, the findings have showcased how employee involvement within change, through feedback and autonomy, facilitates motivation and ownership, which are the key indicators of productivity, directly highlighting the impact of change strategies outlined in objective 1.

## Question 11

11. Do you believe that the organisation's values during change align with your own, positively affecting your motivation and commitment?

81 responses



**Figure 4.12: Alignment of values of organisations during change with employees' perceptions**

(Source: Google Form)

From above, it has been observed that 50.6% of respondents “strongly agreed” with the fact that values of organisations during change are aligned with their own, which positively affects their motivation and commitment. 17.3% of respondents agreed with the matter, and 16% of them were neutral. However, 7.4% of respondents “strongly disagreed” with this matter, and 16% stayed neutral. In this regard, He *et al.*, (2022), stated that the implementation of change within the manufacturing industry of the UK is quite crucial, and there is a need to align organisational values with employees' perceptions so that they can feel even more motivated and engaged through the entire process. The findings seemed to align with the first objective by highlighting how the alignment of adequate organisational values during the change influences employee motivation, along with commitment.

## Question 12



**Figure 4.13: Clear communication about the purpose and steps of the change process by leaders**

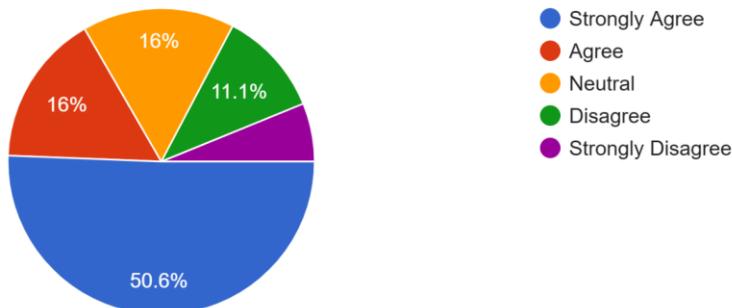
(Source: Google Form)

Considering the above aspect, it has been identified that 54.3% of respondents “strongly agreed” with the fact that their leaders in organisations clearly communicate regarding the purpose and steps of the change process. Moreover, 17.3% of individuals agreed with this, and 14.8% of them stayed neutral. Only 4.9% of respondents “strongly disagreed” with the matter, and 8.6% of participants disagreed. As stated by Bagga *et al.*, (2023), communication is the utmost key to facilitate employee morale, and in the survey of 118 IT employees, 65% of participants felt more committed in the change process when their leaders used transparent communication along with “participative communication strategies”. Through fluent and transparent communications, employees are capable of understanding the entire change properly, which reduces the chances of making errors, and with a strong purpose, they feel quite engaged. The second objective has been addressed through these findings by exploring leadership principles such as communication clarity and their strong impact on employee output, especially in transitional periods in the UK manufacturing organisations.

### Question 13

13. Do you believe that your leadership team actively listens to employee concerns and incorporates feedback during change?

81 responses



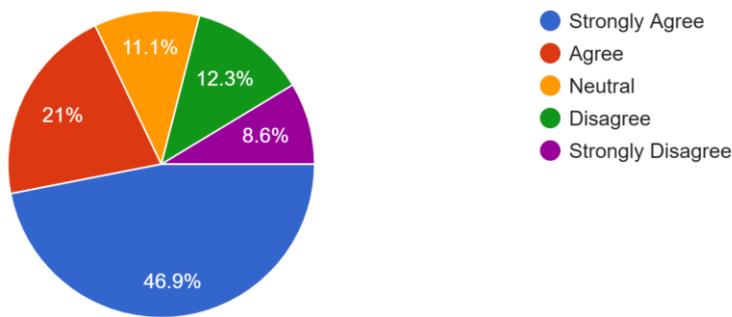
**Figure 4.14: Listening actively by the leadership team regarding employee concerns**

(Source: Google Form)

As per above, 50.6% of respondents “strongly agreed” with the fact that their leadership teams actively listen to the concerns of employees and incorporate required feedback during the change. 16% of participants agreed with the fact as well, and 16% stayed neutral. Moreover, 11.1% of respondents disagreed with the fact, whereas 6.2% of participants “strongly disagreed”. Considering the literature section, it has been observed that in order to boost employee productivity during the change, most of the organisations prefer to acquire autocratic leadership, whereas this reduces morale due to excessive control of leaders (Kumar and Siddiqui, 2021). This is quite evident based on the respondents' disagreements with the above-stated fact. Listening carefully to the employee concerns and assuring them with proper guidance seems to be effective in executing the change successfully. Incorporating feedback is also effective here to provide employees with enough awareness about their abilities to manage the change in the manufacturing industry of the UK. The “second research objective” seemed to be connected with these findings that seek to examine how different characteristics influence employee morale and output. Disagreement levels also underscored gaps within leadership effectiveness, impacting the area of productivity.

## Question 14

14. Do you believe that your manager demonstrates empathy and provides emotional or practical support during change initiatives?  
81 responses



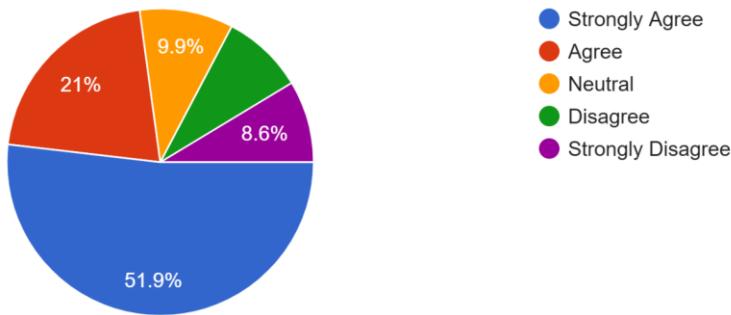
**Figure 4.15: Demonstrating empathy and emotional support by managers during change initiatives**

(Source: Google Form)

From the above figure, it is clear that 46.9% of respondents “strongly agreed” with the fact that their managers showcase proper empathy along with emotional or practical support during change initiatives. 21% of respondents agreed with this, and 11.1% stayed neutral, whereas 12.3% disagreed. On the other hand, 8.6% of respondents “strongly disagreed” with the matter eventually. From the literature section, it has been found out that with the help of an executive pay structure, shared incentives, and being emotionally available for employees, there is a possibility to motivate employees for acquiring change despite high work pressure and risks (Zhu *et al.*, 2023). This finding directly supported the second objective of the research, as this emphasized the role of “empathetic leadership” to maintain morale during the change.

## Question 15

15. Do you believe that strong leadership in your organisation helps maintain team morale and reduces stress during organisational transitions?  
81 responses



**Figure 4.16: Impact of strong leadership on maintaining team morale and reducing stress**

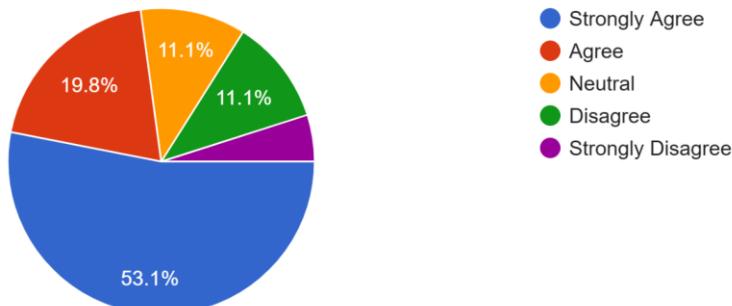
(Source: Google Form)

It has been identified from above that 51.9% of respondents “strongly agreed” with the perception that the presence of effective leadership in their organisations helps to maintain team morale and reduce stress during such organisational transitions. However, 8.6% of respondents “strongly disagreed” with this matter. Based on the research of Imran *et al.*, (2021), leaders who mainly acquire “transformational leadership style” are able to create the “urgency for change successfully” and keep employees motivated to achieve the desired change rather than being stressed. With proper support and collaboration, team morale is effectively enriched, and positive outcomes are gained. The findings supported objective 2 by highlighting the aspect of how transformational leadership eventually fosters morale and stress during the change, especially in the “UK-based manufacturing industry”.

## Question 16

16. Do you believe that your productivity is sustained or improved when change is managed using structured strategies and clear communication?

81 responses



**Figure 4.17: Improvement of productivity when a change is managed through strategies and clear communication**

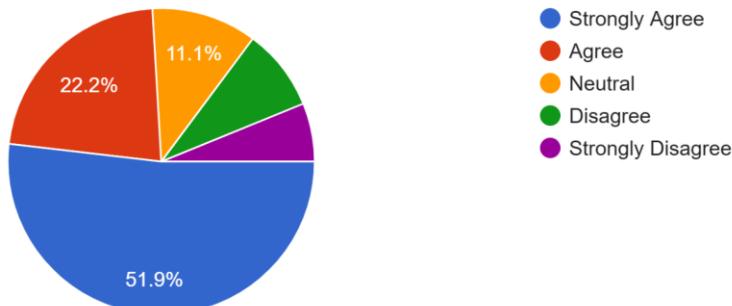
(Source: Google Form)

As per above, 53.1% of respondents “strongly agreed” and 4.9% of respondents “strongly disagreed” with the perception that productivity is sustained or improved when the change is well-managed. In this case, Mukhutty *et al.*, (2022), stated that transformational leaders are the communicators of change, and they are able to transfer the compelling vision of the change requirement along with low resistance and high productivity. These leaders clearly communicate about change visions to keep team members informed and set strategies to execute the plan successfully, which ultimately sustained productivity. The findings have addressed the second objective, as it discussed how transformational leadership helps to sustain or improve “employee productivity” during change through vision and clear communication.

## Question 17

17. Do you believe that change initiatives at your organisation help you work more efficiently or reduce workflow errors?

81 responses



**Figure 4.18: Impact of change initiatives at organisations**

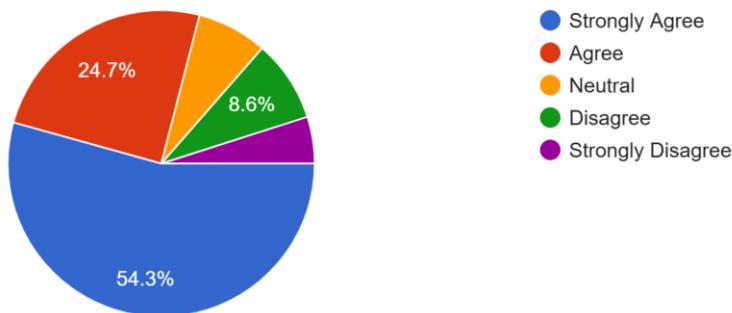
(Source: Google Form)

The above figure shows that 51.9% of respondents “strongly agreed” with the fact, whereas 6.2% of respondents “strongly disagreed”. Apart from that, 22.2% of respondents agreed with this, 11.1% stayed neutral and 8.6% of participants completely disagreed. In this case, Abdallah *et al.*, (2021), stated that change initiatives within organisations, especially in the post-pandemic era, in association with digitalization, helped to increase productivity by 23% along with employee satisfaction. With the help of digitalisation, it has also been possible to conduct work efficiently and reduce the area of errors. The analysis has well supported the first objective by demonstrating how the structured change and digitalisation are mostly relevant to improve productivity, aligning with the goal to understand “change strategies’ impact” on employee performance in the manufacturing industry of the UK.

## Question 18

18. Do you believe that being trained or supported during change helps you complete your tasks more effectively and on time?

81 responses



**Figure 4.19: Impact of training and support during change to help employees**

(Source: Google Form)

From the above figure, it is evident that 54.3% of respondents “strongly agreed” with the fact, whereas 4.9% of respondents “strongly disagreed”. Moreover, 24.7% of respondents seemed to be agreed, 7.4% stayed neutral and 8.6% disagreed. From the literature part, it has been found out that training must be considered as the “long-term driver” to enhance productivity during change, and with adequate support, employees of the manufacturing industry are able to complete their tasks properly as well as on time (Focacci and Perez, 2022). The data and literature supported the first objective mainly by evaluating that “structured change strategies” and training are able to positively impact employee productivity, confirming how the “change management approaches” shape the workforce outcome.

### 4.3 Secondary findings and analysis

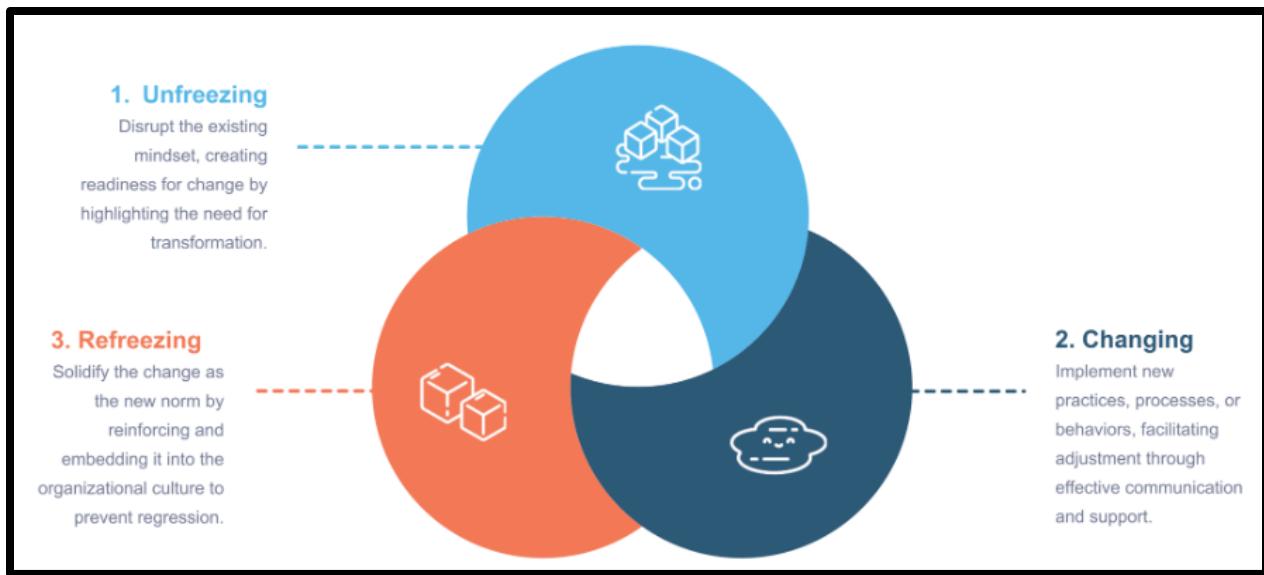
#### **Theme 1: Evaluation of the impact of change management strategies on employee productivity, motivation and well-being in the UK manufacturing industry**

Digital transformation is a key trend followed in modern organisations, which requires implementation of change management strategies to ensure employee productivity and motivation. In the present context, it can also be said that following the protocols of ‘Industry 4.0’ also changed outcomes and influence of change drivers. For example, it can be seen that disruptive technologies such as AI, robotics, data analytics and IoT have generated scope for significant shifts in processes,

skills and organisational structures (Abbas *et al.*, 2024). On the other hand, a need for skill development has been identified to reduce resistance to change while adopting new technologies in the manufacturing sector. As digital systems have been integrated with existing automated machinery, an increased risk of cyberattacks has also been noticed. As a result, the change management strategies included training and development of staff to build resilience against cybersecurity risks.

Exposure to training facilities has contributed to higher employee engagement in the changing industry landscape, leading to higher employee productivity and retention. Direct involvement in decision-making improves employee engagement and they act as change agents at mid-level and execution level. Use of transformational leadership has been preferred to increase capabilities of employees and mid-level managers. On the contrary, employees have faced challenges such as job insecurity and loss of familiar routines. A root cause analysis shows that a lack of participation and insufficient support are primary causes for resistance to change. The leadership at manufacturing companies also plays a vital role in clearly articulating the vision for adopting new technologies or following norms of 'Industry 4.0' (Hughes *et al.*, 2022). As a result, multi-channel communication strategies have been preferred so that employee feedback can be considered before making new changes to the existing systems.

External factors have also been involved in influencing change urgency and facilitating changes in processes and structures of organisations. For example, geopolitical factors such as the Russia-Ukraine war, US-China trade wars and others contribute to global disruptions in supply chains, which cause material and labour shortages. In the present case, the UK has made notable changes in supply chain and employment rules in post-Brexit stages. Such changes further compel manufacturing organisations to adopt change management strategies for survival and growth. It has allowed management to provide reskilling offers to employees, resulting in higher employee well-being. On the other hand, legal provisions also facilitated the process of adopting change management strategies in organisations. As per 'Practice Adoption Rates' (UK, 2012), 61% of manufacturing companies have followed ISO 14000 (standards) (Zimon *et al.*, 2022). Besides, 41% organisations in the manufacturing sector have opted for continuous improvement and total productive maintenance (TPM) to ensure adoption of change management strategies to maximise employee productivity and motivation.



**Figure 4.20: Stages of Lewin's change management model**

(Source: Suela, 2024)

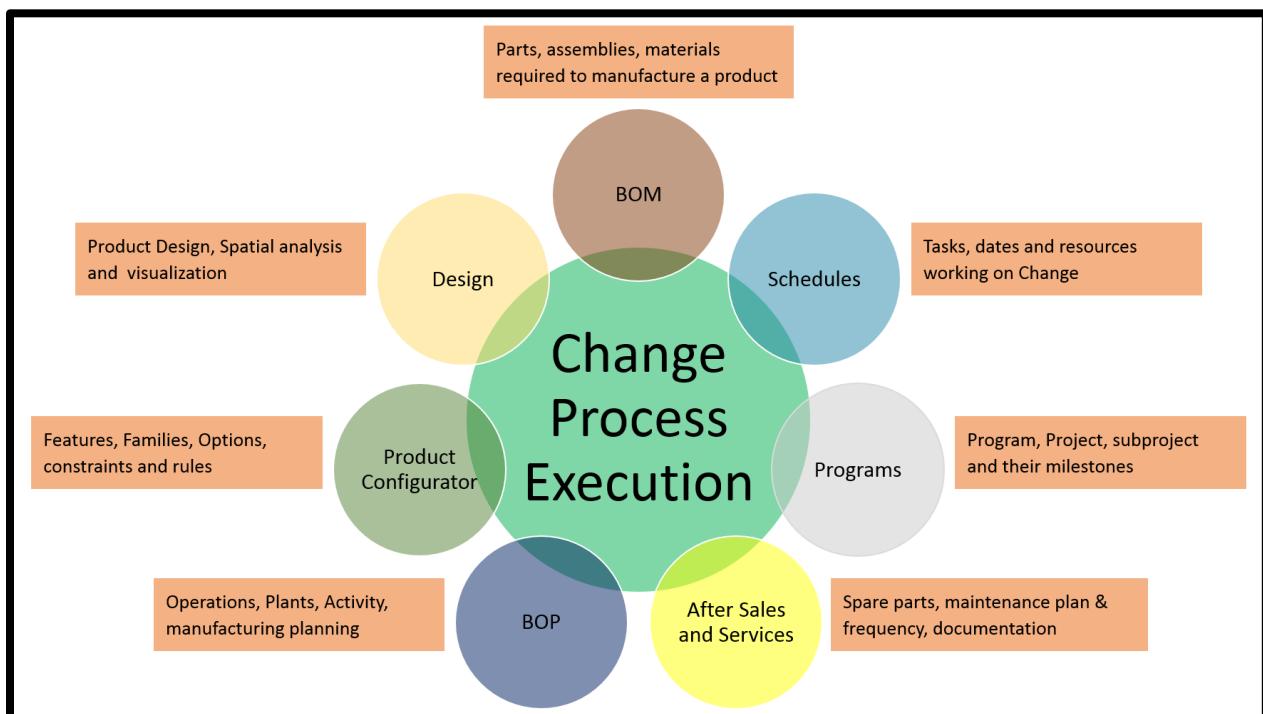
Apart from that, Lewin's change management model has been used to adopt a process of 'freeze, change and unfreeze' to make specific changes in certain areas and then integrate them with remaining systems (Memon *et al.*, 2021). Besides, an organisational culture has been developed that favors change management so that continuous learning and adaptability can be prioritised. Also, change management practices have been linked with talent retention as a supportive work environment increases worker retention in the UK manufacturing sector.

### **Theme 2: Effective leadership principles and practices influenced employee morale and output during change: trend analysis in the UK's manufacturing industry**

Leadership practices in the UK manufacturing industry potentially impacted employee morale and output. A shift in the work execution process from 'command-and-control' to 'collaboration' has led to facilitation of teamwork. Development of a psychologically safe work environment has been possible due to leadership's decision to prioritise inclusion and value diverse perspectives. As trust has been developed among team members while incorporating change into existing processes and practices, the leadership in the UK's manufacturing sector has facilitated development of emotional intelligence and soft skills to improve empathy and relationship-building skills among employees (Chin, 2021). Faster resolution of conflicts has been highlighted as a key leadership characteristic to maximise team output. In the present context, cultural sensitivity skills have been developed among employees so that collaboration with team members from global locations can be carried

out to improve efficiency of manufacturing processes. It assisted in creating a competitive advantage against global auto manufacturers. Responding to trends, addressing skill gaps and talent shortages along with ensuring supply chain resilience, economic viability and development of a competitive advantage.

Adoption of latest trends in people management includes following a lean methodology so that adaptability and agility can be maximized in organisational processes. It provides clear direction and stability to the change management process, resulting in higher employee morale. Following an agile leadership style has reduced disruptions and fostered resilience among the workforce. For example, frequent changes in technological, market and labor practices require adopting a resilience framework that can provide faster feedback on changing organisational processes to improve productivity in changed external environments (Fowler, 2023). Besides, leadership articulates a clear change mindset and set of change management policies so that employees can anticipate upcoming changes within manufacturing organisations. Strategic communication between leadership and employees contributes to higher empowerment and accountability of employees in the manufacturing sector. It reduces stress in employees caused by disambiguity in role determination. Besides, continuous personal development through training and upskilling provided greater fulfilment among employees, resulting in higher productivity.



## **Figure 4.21: Elements of software-based change management practices in UK manufacturing sector**

(Source: Zimon *et al.*, 2022)

An analysis of principles of leaders that impact change management in UK manufacturing companies shows key characteristics - purpose-driven, feedback-oriented and sustainability-focused leadership. It has been found that leadership has to ensure alignment of organisational change initiatives with employees to increase engagement rates in change management practices. Constructive feedback has been provided to mid-level managers so that they can create a safe environment where employees can voice their concerns and identify areas that require changes (Wei and Vasudevan, 2022). While valuing responsiveness and engagement in organisational practices, employees are encouraged to voice their opinions and keep track of changes to ensure appropriate changes in work practices. Instances of role modelling have been noticed in several organisations where leaders have been directly involved in implementing change with a top-down approach. Investing in learning and development along with fostering a culture of continuous improvement has also been integrated as a part of following trends in changing business landscape in the UK manufacturing industry.

### **4.4 Summary**

The findings from both primary and secondary analysis revealed that “structured change strategies”, adequate leadership empathy, clear communication, and high employee involvement mostly enhance morale and productivity in the manufacturing sector of the UK. Both survey data and literature also confirmed that suitable “change management models” and proper training play the most essential role in maintaining employee engagement, performance, and well-being during change.

## Chapter 5: Discussion

### 5.1 RO1

The first research objective is associated with addressing the impact of different “change management strategies” on employee productivity, motivation, and well-being, especially in the manufacturing industry of the UK, which has been effectively addressed by literature and both primary and secondary findings. One key insight is the significant influence of leadership styles, particularly transformational and transactional, on employee motivation and performance during change.

Transformational leadership, as emphasised by Imran *et al.*, (2021) and Mukhuty *et al.*, (2022), plays a pivotal role in inspiring employees, fostering innovation, and maintaining emotional connection throughout the transition process. These leaders are noted for their ability to articulate strategic visions clearly and translate them into actionable goals, which helps maintain employee morale and reduce resistance to organisational changes. Imran *et al.*, (2021) also evaluated that these leaders are capable of reducing the area of resistance and creating a strong urgency for change, which ultimately facilitates motivation and output. The primary data also reflects these qualities; a majority of respondents (56.8%) indicated that their leaders clearly communicated the objectives and stages of organisational change. Furthermore, over half of participants (51.9%) agreed that leaders actively listen to employee concerns, and 53.1% recognised the display of empathy and emotional support by managers, demonstrating that transformational leadership traits are widely present in UK manufacturing settings.

These findings corroborate Rasheed *et al.*’s (2021) study in the textile industry, where employee innovation rose by 35% under transformational leadership. The relevance of such leadership in enhancing productivity, especially when embedded with emotional intelligence and inclusive practices, is evident across both sectors. Additionally, 45.7% of surveyed employees confirmed that their organisations followed a structured approach to implementing changes. This supports the claims of Errida and Lotfi (2021), who argued that well-defined change strategies help to lower resistance and maintain consistent performance levels during transition periods.

Effective communication and psychological safety are also central components of successful change management. Abdallah *et al.*, (2021), showcased how digital leadership, along with communication, helps to improve the productivity level by 23% which emphasises the clarity of purpose and guidance to reduce stress levels during the change. Likewise, Laig and Abocejo

(2021) found that 75% of job satisfaction improvements could be linked to Kotter's change model, which relies heavily on leader-led communication. These insights align with survey results, where more than half of respondents (50.6%) confirmed that the vision and purpose of change were clearly communicated, and leadership adequately addressed both emotional and informational needs. This supports the argument that inclusive communication and transparency are crucial to strengthening trust, morale, and output during uncertain periods. Hence, it is essential for leaders to keep those things in mind while integrating change in the organisation to gain positive outcomes. The CHaMP model, as discussed by McIntosh *et al.*, (2023), further reinforces this by showing that structured leadership communication can enhance employee resilience and satisfaction. These findings emphasise the importance of leadership practices that cultivate psychological safety, particularly relevant during times of structural transition and sustainability-driven change in the UK manufacturing sector.

Additionally, participative leadership approaches have been identified as vital in shaping positive change outcomes. Literature by Bagga *et al.*, (2023) underscores that participatory leadership builds trust and encourages commitment. In their study, 65% of employees felt more motivated when involved in transparent planning processes. Similarly, Qureshi *et al.*, (2022) found that 70% of managers implementing lean strategies believed employee involvement was key to success. These insights are supported by primary data, where 51.9% of respondents strongly agreed that they had opportunities to contribute to shaping change implementation. This suggests that participative strategies not only elevate employee motivation but also foster a shared sense of ownership, reducing resistance and enhancing productivity. Training seemed to be a long-term drive for productivity, and this was reinforced by the positive responses to questions regarding the role of training and support during change (Focacci and Perez, 2022). Both the quantitative and thematic analyses of this study affirm that employee involvement in designing and executing change initiatives leads to greater morale and improved output.

It is also crucial for leadership to transcend traditional hierarchical approaches and adopt co-creative methods, working collaboratively with employees to design and implement effective change strategies. The thematic analysis confirmed that fostering psychological safety within the workplace is a foundational element in achieving successful and productive transitions. Emotional intelligence in leadership, particularly the ability to empathise and offer motivational support, emerges as another essential factor in maintaining employee productivity. The study by Patwary

*et al.*, (2024) illustrated a clear link between empathetic leadership and heightened employee motivation during sustainability transformations. Supporting this, 53.1% of respondents in the current research strongly agreed that their managers demonstrated empathy, and 64.2% affirmed that leadership played a significant role in reducing stress and improving morale.

From the overall context, it can be stated that the first objective of the research has been comprehensively met through the support of literature, primary findings, and thematic insights. The impact of effective leadership has been validated as an essential component to maintain and enhance employee morale as well as productivity during change within the manufacturing sector of the UK. The integration of transformational, participative, and emotionally intelligent leadership strategies under “structured change frameworks” has been shown to positively impact employee productivity, motivation, and well-being, thereby fully addressing the first research objective.

## **5.2 RO2**

A critical review of primary and secondary findings in the present research revealed that leadership characteristics potentially impact employee morale and output while undergoing change in the UK manufacturing industry. Considering survey questionnaire responses of selected participants who have been involved with the industry for several years, it has been found that transparent and regular communication from leadership helped maintain employee motivation during change. From the survey results, it has been noted that 75% respondents have agreed on the impact of leadership decisions in handling change and maintaining employee motivation during change management. Hence, the importance of clear, consistent and regular communication has been recognised as an effective leadership characteristic during change management (Machado *et al.*, 2021). Regular communication includes feedback and follow-up from authorities so that the purpose of making change can be communicated to eliminate misunderstanding among employees. As a result, leaders play a vital role in illustrating the change roadmap to company stakeholders. Apart from that, the survey results have shown that nearly 67% respondents have agreed that the leadership’s decision to adopt a structured or phased approach in change implementation improved employee output while undergoing changes in processes. Following a phased approach allowed scope for listening to employee feedback and addressing employee concerns. It has been found that faster implementation of changes creates gaps and inconsistencies in knowledge transfer among employees. Hence, lack of understanding of job expectations negatively affects overall

employee morale and productivity. From the context of applying Lewin's change management model, employee feedback provides the leadership with insights on appropriate time for preparing (unfreezing), implementing (changing) and sustaining (freezing) change (Harrison *et al.*, 2021). An iterative approach has been followed in the manufacturing industry to recognize the need for change and create a vision for change management. For example, the need for adoption of new technology (e.g., automation, AI) has been identified as a change driver in the manufacturing sector.

The leadership provided guidance on managing change due to shifts in market demand, supply chain disruptions or increased regulatory pressure to ensure sustainability in operations. As a result, leadership decisions guide the coalition among several departments including production, engineering, HR and others. It creates credibility and consensus in the change management processes within the manufacturing industry. Analysing current status of operations also assisted in assessing readiness and impact of changes in diverse roles and processes. In the implementation phase, feedback culture has been prioritised in developing steps, timeline and responsibilities in the change management process (Dempsey *et al.*, 2021). Regular updates on change implementation processes generated insights on the need for training and skill development for existing employees. It also impacted the recruitment process due to modification of job design and responsibilities. Barriers to change such as outdated systems, conflicting policies and employee resistance are rapidly addressed due to active involvement of leadership.

In addition, the role of leadership in providing adequate support and motivation to maintain employee performance during change has been addressed. It has been found that 68% respondents agreed that leadership behaviour improved the aspects of recognition, autonomy and training during change management. An application of transformational leadership has been favored in the present context as it encouraged intellectual stimulation and fostered industry-wide innovation. Development of a shared purpose helped in building trust and coordination among various companies in the manufacturing sector. As a significant shift in practices and processes can be noticed in the context of Industry 4.0, transformative leadership has shown better potential in empowering employees and aligning their interests with organisational interests (Borland and Hall, 2021). Besides, instances of adaptive leadership have also been noticed where flexible and responsive leadership behaviour contributed to development and adjustment of change management strategies.

Context-dependent application of leadership principles has been noticed in analysing the case of modifying communication standards during change implementation. It has been found that changes in frequency, tone or medium of communication during change management are aimed at maximizing employee motivation during change phases. 75.3% participants have agreed that leadership's active involvement in improving communication efficiency improved employee engagement and output. It has also been noticed that the leadership takes an active role in increasing participation of employees from all levels in the change management process. Shared decision-making and creation of a work environment that values psychological safety have been developed to accept more innovative changes to deal with recent changes in the manufacturing industry (Amis and Greenwood, 2020). In the present context, empathetic communication has also been viewed as a leadership characteristic. It has been necessary to guide employees through the rapidly changing business landscape in the manufacturing sector.

A need for aligning existing organisation values with new change management principles adopted has been identified. 67.9% participants agreed that a match in values is required to ensure motivation and commitment of employees to prescribed changes. In the present context, it is clear that the leadership follows an approach of adaptability and resilience while making changes in organisational processes. For example, values such as quality and excellence have been prioritised in the manufacturing sector in adopting new technologies such as process automation and lean six sigma implementation (Kumar *et al.*, 2021). Hence, these tools have been applied to enhance product and process consistency. On the other hand, optimisation of operations and reduction of cost are valued before and after changes. It has been utilized in implementation of new product lines, supply chain optimisation and digital transformation. Improvement in efficiency while maintaining quality has also been valued in manufacturing operations.

From the survey responses, it has also been clarified that 71.6% respondents agreed that leaders effectively communicate purpose and steps in the change process. The leaders developed a comprehensive communication plan so that safety standards and protocols can be followed during change management practices. For example, extensive training on safe operating procedures has been provided to employees to improve efficiency of change processes. Ergonomic improvements have also been included to ensure safety and well-being of staff during change management processes. Providing sequential information helped in developing standard operating procedures to inform changes made in operational details. Use of open communication channels, agile

methodologies and feedback loops has been considered to make employees aware of standardized work procedures (Chukwunweike and Aro, 2024). Leadership roles helped in establishing values such as collaboration, adaptability and continuous improvement in the manufacturing sector.

The review results have revealed that 66.6% survey participants have agreed that leadership in the UK manufacturing sector listens to employee concerns. The leadership is also involved in incorporation of feedback during change. On the other hand, 72.9% respondents have agreed that strong leadership helps boost team morale and significantly contributes to reduction of stress and burnout. A deeper analysis shows that following standardized work procedures and allowing opportunities for open dialogue with management improved communication during change processes (Errida and Lotfi, 2021). It has been found that highlighting key areas of concern such as limited knowledge and expertise in handling new tools and technologies has been communicated to leadership teams. As a result, training opportunities have been provided and employee output has been followed up to gauge improvement in change management processes. Hence, emotional stress and burnout during change implementation are reduced by developing a psychologically safe environment.

### **5.3 Theoretical reestablishment**

Among the three theories reviewed in the literature section, such as Lewin, ADKAR, and Kotter, “Kotter’s 8-step change management model” has emerged as the most appropriate for this research. Kotter positions mostly change as the leadership-driven and the “step-by-step journey” that begins with the creation of urgency and ends in institutionalising new practices. The model also has a high emphasis on employee empowerment, vision communication, and “short-term wins” that are aligned closely with the research aim and objectives. Based on the literature, it has been observed that the model is capable of raising job satisfaction by 75% in the manufacturing industry (Laig and Abocejo, 2021). Moreover, it is also embedded with “circular economy shifts” through effective stakeholder engagement (Mauss *et al.*, 2023).

#### ***Connecting the steps of Kotter with key findings***

- **Creation of a sense of urgency:** More than half of the respondents, such as 53.1% “strongly agreed” with the fact that productivity can be easily sustained when the change is well managed through adequate strategies and clear communication. These findings also supported the first stage of Kotter’s, which frames urgency as the effective catalyst for the productive effort.

- **Forming the powerful coalition and developing a vision:** 50.6% of respondents agreed with the fact that their organisations already adopted a structured as well as phased approach regarding change, confirming that guiding coalitions along with shared vision are also perceived within practice.
- **Communicate the vision:** Clear as well as frequent messaging is quite essential in step 4 of Kotter, and from the findings, it has been observed that 50.6% of respondents “strongly agreed” with the aspect that leadership effectively communicates the need as well as vision for the change.
- **Empowerment of the board-based action:** Employee participation is quite crucial in this stage, and from findings, it has been observed that a majority of participants, such as 51.9% “strongly agreed” with the fact that they get opportunities for shaping implementation.
- **Generation of short-term wins and consolidation of gains:** Proper training and recognition of employees seem to be effective motivators. From the findings, it has been observed that 54.3% of participants “strongly agreed” with the aspect that such support helps them maintain their performance. These early wins are also relevant for reinforcing commitment, which allows greater momentum to build towards deeper cultural change.
- **Anchor new approaches within the culture:** 50.6% of survey participants “strongly agreed” with the fact that organisational values during the change are well aligned with their own, which highlights the reinforcement of new norms.

The application of Kotter’s model has enabled the questionnaire for mapping directly onto the “tangible leadership behaviours” like empathy & communication, and process factors such as training & structured stages. Quantitative items were eventually clustered around core constructs of Kotter’s and evaluated their connections through the Google Form analysis. The framework also guided qualitative thematic aspects, where themes like “leadership communication” and “consolidation through training” were properly coded from the steps of Kotter’s and enriched by literature after that. This integration satisfied all of the research objectives as well by demonstrating stepwise as well as “leadership-oriented change approaches” that raise morale and output. Re-establishment of this theoretical approach also clarified why leadership behaviors like urgency framing, “transparent vision sharing”, continuous reinforcement, and others were statistically and thematically linked to the higher productivity level (Mauss *et al.*, 2023). The model not only explained how the structured change effectively works but also showcased why each change

matters to the employee morale within the manufacturing industry of the UK. Consequently, managers who will seek to replicate the positive outcomes of the study can deploy Kotter's steps as the roadmap, which facilitates communication channels, training bursts, and participation mechanisms to each phase of the “sustainability-driven transformation”.

#### **5.4 Limitations**

The research results considered responses from 81 participants involved in the manufacturing industry in the UK. It can be said that an increase in sample size can further enrich research results due to probable variation in distribution of responses. On the other hand, the study has been concentrated on the manufacturing industry in the UK. However, broadening of study scope could have led to further exploration of leadership's contribution in reducing barriers in change management processes. An analysis of demographic information of the participants showed that only 8.6% of respondents had more than 10 years of experience in the industry. An increase of members in this category could have led to a detailed analysis of leadership's role in change management practices. Their insights could have generated greater value as such respondents have experienced several changes within industry while being aware of processes followed by leadership to deal with industry-level changes.

Apart from that, other limitations of the study include that the research has focused on generating insights in the given industry. However, several industries other than manufacturing have also adopted change management policies and practices (Mauss, Bühner and Fottner, 2023). In such cases, roles of leadership have not been addressed in this research. On the other hand, a quantitative and qualitative approach has been followed in quantifying employee productivity. However, if the research scope includes the opportunities to compare research results with multiple manufacturing companies and roles, the analysis would have shifted from its underlying research objectives. Hence, comparative analysis of change management strategies of multiple companies has not been integrated with research scope. A critical analysis of the responses showed that employees have shown reluctance to reveal company's process details or may have shared information with less precision. It may have slightly reduced the efficiency of overall interpretation of research findings.

## **Chapter 6: Conclusion**

### **6.1 Conclusion**

A thorough research on the effects of change management approaches on employee productivity in the UK manufacturing sector has been conducted. Analysing the results of primary and secondary data collection, two relevant themes have been developed to address the research objectives. The findings revealed that use of a transformational leadership style has been mainly preferred to empower employees as organisations undergo changes in operations. It has also been noted that potential external factors and the need to create a competitive advantage in the market compels manufacturing companies to implement change management strategies. The scope of change management practices includes adoption of new technologies including AI and automation so that scope and scale of manufacturing operations can be increased. A need for employee guidance and support has been identified to reduce resistance to change. It also allowed for the scope of organizing upskilling programmes to bridge the knowledge and skill gaps of employees in the changing business landscape. The leadership in UK-based manufacturing companies has also played an important role in developing a psychologically safe working environment so that feedback from employees can be considered to modify change management strategies and boost employee productivity.

### **6.2 Linking with Objectives**

**RO 1:** Multiple change management strategies have been adopted in UK-based manufacturing companies to enhance employee productivity and motivation. It has been found that most companies are aligning their operations with 'Industry 4.0' norms, which favour digital transformation. As a result, changes in organisational structures and processes have become necessary for manufacturing companies. It required adoption of change management techniques such as "Lewin's change management model". Hence, a model of 'freeze, change and unfreeze' has been followed to prepare the workforce for change, implement changes and sustain them respectively. It ensured homogeneity in the change implementation process, resulting in greater participation and engagement of employees (Hughes *et al.*, 2022). In the present context, the management has focused on ensuring transparency in communication. Multiple communication channels have been utilized to provide instructions and gain necessary feedback to improve efficiency of training resources. In some cases, use of other change management strategies such as

the ADKAR model has been preferred to improve change implementation. Hence, the first research objective has been met.

**RO 2:** Leadership principles and practices have been modified to improve the efficiency of change management practices in the manufacturing sector. It has been found that the leadership played a vital role in articulating a vision for change, which aligns with the organisational values. It assisted in securing support from internal and external stakeholders in the process of adopting changes in organisational strategies and structures. A shift from 'command-and-control' to collaborative leadership has been noticed. Hence, it also offered greater scope of transformative leadership where intellectual stimulation and individualised consideration have been prioritised. Listening to employee concerns and faster resolution of conflicts have been followed to maximise employee productivity during change implementation (Fowler, 2023). Changes in product design, schedules, configuration and after-sales services have been followed under homogeneous change policies issued by the leadership. Encouraging a mindset among employees that highlights resilience during changes in the external environment has been valued. As a result, "purpose-driven, feedback-oriented and sustainability-focused leadership" have been implemented to enhance efficiency of change management strategies. Hence, the second research objective has been met.

### **6.3 Future scope**

Future aspects of research may include insights on the 'automation gap' where manufacturing companies can implement end-to-end automation to reduce scope of human errors in design and production of vehicles. It can lead to a transition of human engagement into more value-added activities to improve overall organisational efficiency. From a change management perspective, skill gaps and areas for urgent need for upskilling and reskilling can be considered. The insights can indicate gaps in digital literacy and scope of implementing data analytics to improve employee productivity. On the other hand, scope of applying IoT and data analytics in data-driven decision-making can also be analysed in future research (Presciuttini and Portioli-Staudacher, 2024). Impact of the use of immersive technologies (AR/VR) can be discussed in future aspects of research in the given context. It has been found that extensive process visualization capabilities improve coordination and collaboration among employees to improve output. The process of using technology to attract and retain employees in the changed environment can also be analysed.

#### 6.4 Recommendations

Based on the given research, recommendations have been provided to maximise the efficiency of change management to improve employee productivity in the UK-based manufacturing companies. It is recommended that organisations conduct an audit of performance before and after adoption of automation or other disruptive technologies. It can provide information about the rate of success of implementation of change management strategies. Increasing awareness of technology among employees can be ensured to maximize digital communication tools (Schönfuß *et al.*, 2021). AI and data analytics have been recommended to be integrated within change management protocols that can facilitate long-term changes within manufacturing operations. Adoption of technology stack while fulfilling the norms of ‘Industry 4.0’ has been considered to guide managers in developing training facilities for employees to address skill gaps. Guiding the learning process and introducing employees from less automated environments to highly automated environments has been recommended.

Apart from that, it has also been recommended to develop a psychologically safe environment where employees can share their concerns and feedback. It can play a vital role in dealing with psychological and emotional aspects of change. In the present context, it is also recommended that the leadership promote EI (emotional intelligence) skills among managers and workers (Shaik *et al.*, 2024). It can positively enhance the willingness to adapt, resulting in a further increase in productivity. A combination of incremental and transformative change has been recommended so that employees show relatively less resistance to radical changes. Conducting employee surveys on engagement has been recommended so that it can be used as feedback for designing future change management or upskilling programmes. Overdoing change practices or a lack of clear communication should be prevented to minimise confusion or burnout among employees. Effective and regular communication among stakeholders is also recommended to address unforeseen challenges or opportunities in change management practices in the manufacturing industry.

## References

Abbas, F., Iftikhar, A., Riaz, A., Humayon, M. and Khan, M.F., 2024. Use of Big Data in IoT-Enabled Robotics Manufacturing for Process Optimization. *Journal of Computing & Biomedical Informatics*, 7(01), pp.239-248.

Abdallah, Y.O., Shehab, E. and Al-Ashaab, A., 2021. Understanding digital transformation in the manufacturing industry: a systematic literature review and future trends.

Amis, J.M. and Greenwood, R. 2020. Organisational Change in a Post- Pandemic World: Rediscovering Interests and Values. *Journal of Management Studies*, 582.

Archibong, U. and Ibrahim, U.A., 2021. Assessing the impact of change management on employee performance: Evidence from Nile University of Nigeria. *International journal of research in business and social science*, 10(4), pp.525-534.

Armond, A.C.V., Gordijn, B., Lewis, J., Hosseini, M., Bodnár, J.K., Holm, S. and Kakuk, P. 2021. A scoping review of the literature featuring research ethics and research integrity cases. *BMC Medical Ethics*, 221.

Bagga, S.K., Gera, S. and Haque, S.N., 2023. The mediating role of organizational culture: Transformational leadership and change management in virtual teams. *Asia Pacific Management Review*, 28(2), pp.120-131.

Bah, M.O.P., Sun, Z., Hange, U. and Edjoukou, A.J.R., 2024. Effectiveness of organizational change through employee involvement: Evidence from telecommunications and refinery companies. *Sustainability*, 16(6), p.2524.

Bah, M.O.P., Sun, Z., Hange, U. and Edjoukou, A.J.R., 2024. Effectiveness of organizational change through employee involvement: Evidence from telecommunications and refinery companies. *Sustainability*, 16(6), p.2524.

Bangura, S., 2025. AN INTEGRATIVE REVIEW OF THE EFFECT OF ORGANISATIONAL CHANGE MANAGEMENT ON EMPLOYEE PERFORMANCE.

Barcia, K.F., Garcia-Castro, L. and Abad-Moran, J., 2022. Lean Six Sigma impact analysis on sustainability using partial least squares structural equation modeling (PLS-SEM): a literature review. *Sustainability*, 14(5), p.3051.

Berggren, B.P., 2023. 70% Organisational change failure rate – still a “living” myth? Available at:<https://www.linkedin.com/pulse/70-organisational-change-failure-rate-still-living-myth-berggreen/> [Accessed on 19/6/2025]

Borland, M. and Hall, A. 2021. *Industry 4.0 : Overcoming the barriers of Industry 4.0 by effective change management*. [www.diva-portal.org](http://www.diva-portal.org).

Business Insider, 2024. The UK is improving productivity through new technologies and industrial digital transformation. Available at:<https://www.businessinsider.com/sc/how-the-uk-is-helping-the-manufacturing-sector-improve-productivity>[Accessed on 18/6/2025]

Chatterjee, S., Rana, N.P., Dwivedi, Y.K. and Baabdullah, A.M., 2021. Understanding AI adoption in manufacturing and production firms using an integrated TAM-TOE model. *Technological Forecasting and Social Change*, 170, p.120880.

Chaudhary, S., Dhir, A., Gligor, D., Khan, S.J. and Ferraris, A., 2022. Paradoxes and coping mechanisms in the servitisation journey. *Industrial Marketing Management*, 106, pp.323-337.

Chin, S.T.S., 2021. Influence of emotional intelligence on the workforce for industry 5.0. *Journal of Human Resources Management Research*, 2021(2021), p.882278.

Chu, K.H.L. and Murrmann, S.K., 2006. Development and validation of the hospitality emotional labor scale. *Tourism Management*, 27(6), pp.1181-1191.

Chukwunweike, J. and Aro, E. 2024. Implementing agile management practices in the era of digital transformation. *World Journal of Advanced Research and Reviews*, 241, pp.2223–2242.

Cqmltd.co.uk, 2025. Transforming Delivery & Driving Sustainability: Carlsberg Britvic's Lean Six Sigma Journey with CQM. Available at:<https://cqmltd.co.uk/carlsberg-britvics-lean-six-sigma-journey>/[Accessed on 18/6/2025]

De-la-Calle-Durán, M.C. and Rodríguez-Sánchez, J.L., 2021. Employee engagement and wellbeing in times of COVID-19: a proposal of the 5Cs model. *International Journal of Environmental Research and Public Health*, 18(10), p.5470.

Dempsey, M., Geitner, L., Brennan, A. and Mcavoy, J. 2021. A Review of the Success and Failure Factors for Change Management. *IEEE Engineering Management Review*, 501, pp.1–1.

Drolet, M.-J., Rose-Derouin, E., Leblanc, J.-C., Ruest, M. and Williams-Jones, B. 2022. Ethical Issues in Research: Perceptions of Researchers, Research Ethics Board Members and Research Ethics Experts. *Journal of Academic Ethics*, 212, pp.269–292.

Engida, Z.M., Alemu, A.E. and Mulugeta, M.A., 2022. The effect of change leadership on employees' readiness to change: the mediating role of organizational culture. *Future Business Journal*, 8(1), p.31.

Errida, A. and Lotfi, B. 2021. The Determinants of Organizational Change Management success: Literature Review and Case Study. *International Journal of Engineering Business Management*, 131, pp.1–15.

Errida, A. and Lotfi, B., 2021. The determinants of organizational change management success: Literature review and case study. *International Journal of Engineering Business Management*, 13, p.18479790211016273.

Ferede, W.L., Endawoke, Y. and Tessema, G., 2024. Change management through strategic leadership: the mediating effect of knowledge management in public organizations, Ethiopia. *Future Business Journal*, 10(1), p.93.

Financial Times, 2025. Output in UK energy-intensive industries hits 35 year low. Available at:<https://www.ft.com/content/a4301149-af90-4dc8-a4dc-250a98da509d>[Accessed on 18/6/2025]

Focacci, C.N. and Perez, C., 2022. The importance of education and training policies in supporting technological revolutions: A comparative and historical analysis of UK, US, Germany, and Sweden (1830–1970). *Technology in Society*, 70, p.102000.

Forterro, 2024. Three-quarters of UK manufacturers report increased profitability because of more sustainable operations. Available at:<https://www.forterro.com/en/news/study-highlights-growing-sustainability-focus>[Accessed on 18/6/2025]

Fowler, D.S., Epiphaniou, G., Higgins, M.D. and Maple, C., 2023. Aspects of resilience for smart manufacturing systems. *Strategic Change*, 32(6), pp.183-193.

Galanti, T., De Vincenzi, C., Buonomo, I. and Benevene, P., 2023. Digital transformation: Inevitable change or sizable opportunity? The strategic role of HR management in Industry 4.0. *Administrative Sciences*, 13(2), p.30.

Gazi, M.A.I., Al Masud, A., Yusof, M.F., Islam, M.A., Rahman, M.K. and Wang, Q., 2024. Factors affecting the quality of work life for industrial labour force: empirical evidence from a developing country. *BMC psychology*, 12(1), p.589.

Ghanad, A. 2023. An Overview of Quantitative Research Methods. *International Journal of Multidisciplinary Research and Analysis*, 68, pp.3794–3803.

Gibbs, M., Mengel, F. and Siemroth, C., 2023. Work from home and productivity: Evidence from personnel and analytics data on information technology professionals. *Journal of Political Economy Microeconomics*, 1(1), pp.7-41.

Grozev, V.H., Axtell, C., Zhang, H. and Nielsen, K., 2025. Behavior at work: propositions for optimizing the human and organizational challenges of digital materials passports. *Frontiers in Manufacturing Technology*, 5, p.1511735.

Hampson, T. and McKinley, J. 2023. Problems Posing as solutions: Criticising Pragmatism as a Paradigm for Mixed Research. *Research in Education*, 1161, pp.124–138.

Harrison, R., Fischer, S., Walpola, R.L., Chauhan, A., Babalola, T., Mears, S. and Le-Dao, H. 2021. Where do models for change management, improvement and implementation meet? A systematic review of the applications of change management models in healthcare. *Journal of Healthcare Leadership*, 132, pp.85–108.

He, X., Lou, B., Yang, H. and Lv, C., 2022. Robust decision making for autonomous vehicles at highway on-ramps: A constrained adversarial reinforcement learning approach. *IEEE Transactions on Intelligent Transportation Systems*, 24(4), pp.4103-4113.

Huang, J., Irfan, M., Fatima, S.S. and Shahid, R.M., 2023. The role of lean six sigma in driving sustainable manufacturing practices: an analysis of the relationship between lean six sigma principles, data-driven decision making, and environmental performance. *Frontiers in Environmental Science*, 11, p.1184488

Hughes, L., Dwivedi, Y.K., Rana, N.P., Williams, M.D. and Raghavan, V., 2022. Perspectives on the future of manufacturing within the Industry 4.0 era. *Production Planning & Control*, 33(2-3), pp.138-158.

Hulst, M. van and Visser, E.L. 2024. Abductive analysis in qualitative public administration research. *PAR. Public administration review/Public administration review*, 852.

Imran, F., Shahzad, K., Butt, A. and Kantola, J., 2021. Digital transformation of industrial organizations: Toward an integrated framework. *Journal of change management*, 21(4), pp.451-479.

Imtiaz, A. and Muzaffar, M., 2025. Trade Barriers and Broken Supply Chains: Economic Fallout of Brexit. *Journal of Development and Social Sciences*, 6(2), pp.80-90.

Johnson, E. and Sylvia, M.L., 2023. Secondary data collection. *Clinical Analytics and Data Management for the DNP*,, pp.41-69.

Kalambayi, J.L., Onojaefe, D.P., Kasse, S.N. and Tengeh, R.K., 2021. The influence of leadership styles on employee performance in construction firms. *EUREKA: Social and Humanities*, (4), pp.34-48.

Kalbermatten, C.J., 2024. Employee readiness for change: examining the combined effects of individual and organizational demands in public school reform. *International Journal of Public Sector Management*, 37(5), pp.613-629.

Kalogiannidis, S., 2021. Impact of employee motivation on organizational performance. A scoping review paper for public sector. *The Strategic Journal of Business & Change Management*, 8 (3), 984, 996(3).

Khaw, K.W., Alnoor, A., Al-Abrow, H., Tiberius, V., Ganesan, Y. and Atshan, N.A., 2023. Reactions towards organizational change: a systematic literature review. *Current Psychology*, 42(22), pp.19137-19160.

King, R. 2022. The Utility of Pragmatism in Educational Research. *Creative Education*, 1310, pp.3153–3161.

Kumar, P. and Siddiqui, D.A., 2021. Autocratic Leaders, Diversity Climate, and Employee Outcomes: The Role of Moral Values and Collectivism. *Diversity Climate, and Employee Outcomes: The Role of Moral Values and Collectivism* (October 13, 2021).

Kumar, P., Bhadu, J., Singh, D. and Bhamu, J. 2021. Integration between Lean, Six Sigma and Industry 4.0 technologies. *International Journal of Six Sigma and Competitive Advantage*, 131/2/3, p.19.

Laig, R.B.D. and Abocejo, F.T., 2021. Change management process in a mining company: Kotter's 8-step change model. *Journal of Management, Economics, and Industrial Organization*, 5(3), pp.31-50.

Lamb, W.F., Grubb, M., Diluiso, F. and Minx, J.C., 2022. Countries with sustained greenhouse gas emissions reductions: an analysis of trends and progress by sector. *Climate Policy*, 22(1), pp.1-17.

Li, M., Malik, M.S., Ijaz, M. and Irfan, M., 2023. Employer responses to poaching on employee productivity: The mediating role of organizational agility in technology companies. *Sustainability*, 15(6), p.5369.

Li, P., 2023. The Impact of Digital Transformation on the Management Change of Manufacturing Enterprises—Taking Enterprise H as an Example. *Academic Journal of Business & Management*, 5(18), pp.83-87.

Lim, W.M. 2024. What Is Qualitative research? an Overview and Guidelines. *Australasian Marketing Journal AMJ*, 332, pp.199–229.

Lochmiller, C.R., (2021). Conducting thematic analysis with qualitative data. *The qualitative report*, 26(6), pp.2029-2044.

Machado, C.G., Winroth, M., Almström, P., Ericson Öberg, A., Kurdve, M. and AlMashalah, S. 2021. Digital organisational readiness: experiences from manufacturing companies. *Journal of Manufacturing Technology Management*, 329, pp.167–182.

Mahfouz, S., Abd Halim, M.S., Bahkia, A.S. and Alias, N., 2022. Mediating role of employee commitment in the relationship between transactional leadership and employee performance. *Journal of Governance and Regulation/Volume*, 11(1), pp.337-350.

Malhotra, R. and Malhotra, D.K., 2023. The Impact of Technology, Big Data, and Analytics: The Evolving Data-Driven Model of Innovation in the Finance Industry. *Journal of Financial Data Science*, 5(3).

Manufacturingmanagement.co.uk, 2024. Digital Transformation and Sustainability in UK Manufacturing. Available at:<https://www.manufacturingmanagement.co.uk/content/in-depth/digital-transformation-and-sustainability-in-uk-manufacturing>[Accessed on 18/6/2025]

Mauss, N.-A., Bühner, D. and Fottner, J. 2023. Applicability and Limitations of Change Management for Circular Economy in Manufacturing Companies. *Procedia Computer Science*, 217, pp.998–1007.

Mbanaso, U.M., Abrahams, L. and Okafor, K.C. 2023. Research Philosophy, Design and Methodology. *Research Philosophy, Design and Methodology*, 11, pp.81–113.

McIntosh, M.S., Garvan, C., Kalynych, C.J., Fallucco, E.M., Ventura, A.B. and Chesire, D.J., 2023. Champ: a model for building a center to support health care worker well-being after experiencing an adverse event. *The Joint Commission Journal on Quality and Patient Safety*, 49(4), pp.207-212.

Mehta, A.M., Rauf, A. and Senathirajah, A.R.B.S., 2024. Achieving World Class Manufacturing Excellence: Integrating Human Factors and Technological Innovation. *Sustainability*, 16(24), p.11175.

Memon, F.A., Shah, S. and Khoso, I.U., 2021. Improving Employee's Engagement in Change: Reassessing Kurt Lewin's Model. *City University Research Journal (CURJ)*, 11(1).

Memon, F.A., Shah, S. and Khoso, I.U., 2021. Improving Employee's Engagement in Change: Reassessing Kurt Lewin's Model. *City University Research Journal (CURJ)*, 11(1).

Mensah, N.K., Adzakpah, G., Kissi, J., Taylor-Abdulai, H., Johnson, S.B., Agbeshie, P.A., Opoku, C., Abakah, J., Osei, E., Agyekum, A.Y. and Boadu, R.O., 2024. Health Professionals' Ethical, Security, and Patient Safety Concerns Using Digital Health Technologies: A Mixed Method Research Study. *Health Services Insights*, 17, p.11786329241303379.

Moosa, M.D., Moosa, V. and Faheem, S., 2023. Prevailing leadership styles in change management: Evidences from existing research. *International Journal of Professional Business Review: Int. J. Prof. Bus. Rev.*, 8(5), p.6.

Mta.org.uk, 2025. UK manufacturing workers lead the world in productivity gains over the last five years. Available at:<https://www.mta.org.uk/uk-manufacturing-workers-lead-the-world-in-productivity-gains-over-the-last-five-years/> [Accessed on 18/6/2025]

Mukhutty, S., Upadhyay, A. and Rothwell, H., 2022. Strategic sustainable development of Industry 4.0 through the lens of social responsibility: The role of human resource practices. *Business Strategy and the Environment*, 31(5), pp.2068-2081.

Mwamba, J., 2023. Effective Leadership in Change Management: Ensuring Success in Organizational Transformation. *Journal of Policy Options*, 6(1), pp.28-38.

Nadler, D.A., 2024. The effective management of organizational change. In *Revitalizing Manufacturing* (pp. 185-200). CRC Press.

Nagadi, K., 2022. Implementation of green, lean and six sigma operations for sustainable manufacturing. A Review. *International Journal of Production Management and Engineering*, 10(2), pp.159-171.

Ojenike, J.O., 2023. Change Management and Employees' Performance in the New Normal: A Study of Manufacturing firm in Nigeria. *ACU Journal of Social and Management Sciences*, 4(1).

Olafsen, A.H., Nilsen, E.R., Smedsrud, S. and Kamaric, D., 2021. Sustainable development through commitment to organizational change: the implications of organizational culture and individual readiness for change. *Journal of Workplace Learning*, 33(3), pp.180-196.

Omodara, O.V., 2023. The Dynamics of Short-Term Debt Ratio and Firm Performance: A Comprehensive Study of Nigerian Manufacturing Firms. *Fuoye Journal of Accounting and Management*, 6(2).

Patmawati, S., Dewi, V.M. and Asbari, M., 2023. THE Effect of Short-Term and Long-Term Learning in Quality Management and Innovation. *Journal of Information Systems and Management (JISMA)*, 2(1), pp.21-26.

Patwary, A.K., Rasoolimanesh, S.M., Hanafiah, M.H., Aziz, R.C., Mohamed, A.E., Ashraf, M.U. and Azam, N.R.A.N., 2024. Empowering pro-environmental potential among hotel employees: insights from self-determination theory. *Journal of Hospitality and Tourism Insights*, 7(2), pp.1070-1090.

Phinnemore, D., 2023. The United Kingdom: Turning its Back on Influencing the EU?. *JCMS: Journal of Common Market Studies*, 61(6), pp.1488-1511.

Presciuttini, A. and Portioli-Staudacher, A. (2024). Applications of IoT and Advanced Analytics for manufacturing operations: a systematic literature review. *Procedia computer science*, 232, pp.327–336.

PWC, 2023. Manufacturing productivity peaks in Scotland - but still room for growth - according to new research. Available at:<https://www.pwc.co.uk/press-room/press-releases/regions/scotland/scotland-productivity-tracker-2023.html>[Accessed on 18/6/2025]

Quiroz-Flores, J.C., Cancho-Alvaro, B. and Rodriguez-Arcos, J., 2023. Increased machine efficiency through a production model integrating Lean tools and the ADKAR model in an SME of the metalworking industry. *LACCEI*, 1(8).

Qureshi, K.M., Mewada, B.G., Alghamdi, S.Y., Almakayeel, N., Qureshi, M.R.N. and Mansour, M., 2022. Accomplishing sustainability in manufacturing system for small and medium-sized enterprises (SMEs) through lean implementation. *Sustainability*, 14(15), p.9732.

Qureshi, K.M., Mewada, B.G., Buniya, M.K. and Qureshi, M.R.N.M., (2023). Analyzing critical success factors of lean 4.0 implementation in small and medium enterprises for sustainable manufacturing supply chain for industry 4.0 using PLS-SEM. *Sustainability*, 15(6), p.5528.

Rahman, M.M., Tabash, M.I., Salamzadeh, A., Abduli, S. and Rahaman, M.S., (2022). Sampling techniques (probability) for quantitative social science researchers: a conceptual guidelines with examples. *Seeu Review*, 17(1), pp.42-51.

Rasheed, M.A., Shahzad, K. and Nadeem, S., 2021. Transformational leadership and employee voice for product and process innovation in SMEs. *Innovation & Management Review*, 18(1), pp.69-89.

Riyanto, S., Endri, E. and Herlisha, N., 2021. Effect of work motivation and job satisfaction on employee performance: Mediating role of employee engagement. *Problems and Perspectives in Management*, 19(3), p.162.

Rossini, M., Costa, F., Tortorella, G.L., Valvo, A. and Portioli-Staudacher, A., 2022. Lean Production and Industry 4.0 integration: how Lean Automation is emerging in manufacturing industry. *International Journal of Production Research*, 60(21), pp.6430-6450.

Sagar, S., 2023. Innovation and sustainability in business: Navigating the future landscape. *IOSR Journal of Business and Management (IOSR-JBM)*, 25(12), pp.51-60.

Sahay, A. 2020. *Peeling Saunder's Research Onion*. [online] ResearchGate. Available at: [https://www.researchgate.net/profile/Arunaditya-Sahay/publication/309488459\\_Peeling\\_Saunder](https://www.researchgate.net/profile/Arunaditya-Sahay/publication/309488459_Peeling_Saunder).

Schönenfuß, B., McFarlane, D., Hawkridge, G., Salter, L., Athanassopoulou, N. and de Silva, L. (2021). A catalogue of digital solution areas for prioritising the needs of manufacturing SMEs. *Computers in Industry*, 133, p.103532.

Shaik, S.A., Batta, A. and Parayitam, S. (2024). Unfolding the relationship between change management, employee engagement and productivity: resistance to change and emotional intelligence as moderators. *Journal of Advances in Management Research*, 22(2).

Shaik, S.A., Batta, A. and Parayitam, S., 2025. Unfolding the relationship between change management, employee engagement and productivity: resistance to change and emotional intelligence as moderators. *Journal of Advances in Management Research*, 22(2), pp.153-182.

Shankar, V., Kalyanam, K., Setia, P., Golmohammadi, A., Tirunillai, S., Douglass, T., Hennessey, J., Bull, J.S. and Waddoups, R., 2021. How technology is changing retail. *Journal of Retailing*, 97(1), pp.13-27.

Skopak, A. and Hadzaihmetovic, N., 2022. The impact of transformational and transactional leadership style on employee job satisfaction. *International Journal of Business and Administrative Studies*, 8(3), p.113.

Stanley, M. 2023. Qualitative Descriptive. *Qualitative Research Methodologies for Occupational Science and Occupational Therapy*, pp.52–67.

Statista, 2020. How ambitious is the UK's emissions target? Available at: <https://www.statista.com/chart/23691/uk-greenhouse-gas-emissions-timeline/> [Accessed on 18/6/2025]

Stratton, S.J., (2023). Population sampling: Probability and non-probability techniques. *Prehospital and Disaster Medicine*, 38(2), pp.147-148.

Suela, T. (2024). *Lewin's Change Management Model: Everything You Need To Know*. [online] Human Capital Hub. Available at: <https://www.thehumancapitalhub.com/articles/lewins-change-management-model-everything-you-need-to-know> [Accessed 22 Jul. 2025].

Taherdoost, H., (2022). What are different research approaches? Comprehensive review of qualitative, quantitative, and mixed method research, their applications, types, and limitations. *Journal of Management Science & Engineering Research*, 5(1), pp.53-63.

The manufacturer, 2025. UK Manufacturing Statistics. Available at:<https://www.themufacturer.com/uk-manufacturing-statistics/> [Accessed on 18/6/2025]

Vereycken, Y., Ramioul, M., Desiere, S. and Bal, M., 2021. Human resource practices accompanying industry 4.0 in European manufacturing industry. *Journal of Manufacturing Technology Management*, 32(5), pp.1016-1036.

Wei, L. and Vasudevan, H.L., 2022. Leadership style and company performance in the manufacturing industry. *International Journal of Human Capital in Urban Management*, 7(3), p.14.

Willment, N., Jones, B., Swords, J. and Brereton, J., 2025. The importance of professional skills within the changing media landscape of the UK screen industries: a case study of the 'disruptive' phenomenon of virtual production. *Media Practice and Education*, 26(1), pp.1-19.

Zhu, Z., Guo, Y., Jiang, Z. and Chen, X., 2023. The perspective of long-term and short-term incentives on the business environment, executive incentive contracts, and enterprise innovation. *SAGE Open*, 13(4), p.21582440231206960.

Zimon, D., Madzik, P., Dellana, S., Sroufe, R., Ikram, M. and Lysenko-Ryba, K., 2022. Environmental effects of ISO 9001 and ISO 14001 management system implementation in SSCM. *The TQM Journal*, 34(3), pp.418-447.

## **Appendices**

### **Appendix 1: Questionnaire**

#### **Demographic Information**

##### **1. What is your age?**

- Under 25
- 25–34
- 35–44
- 45–54
- 55 and above

##### **2. What is your gender?**

- Male
- Female
- Prefer not to say

##### **3. What is your working experience in the manufacturing sector**

- Less than 1 year
- 1–3 years
- 4–6 years
- 7–10 years
- More than 10 years

#### **Section B: Contextual Items**

##### **IV1: Change Management Strategies**

##### **4. Do you believe that your organisation adopts a structured and phased approach to implementing change (e.g., planning, executing, reinforcing)?**

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

##### **5. Do you believe that the change models used in your organisation (e.g., Lewin's, Kotter's) are appropriate for the fast-paced nature of the manufacturing sector?**

- Strongly Agree

- Agree
- Neutral
- Disagree
- Strongly Disagree

**6. Do you believe that your organisation clearly communicates the need and vision for change before any transformation begins?**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**7. Do you believe that you and your colleagues are given opportunities to participate in shaping how organisational change is implemented?**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

#### **IV2: Employee Motivation During Change**

**8. Do you believe that your organisation provides sufficient motivation (e.g., recognition, autonomy, or training) to maintain performance during change?**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**9. Do you believe that transparent and regular communication from leadership helps you stay motivated during periods of change?**

- Strongly Agree
- Agree
- Neutral

- Disagree
- Strongly Disagree

**10. Do you believe that your role in the change process (e.g., feedback, co-designing workflows) contributes to your sense of value and ownership?**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**11. Do you believe that the organisation's values during change align with your own, positively affecting your motivation and commitment?**

Strongly Agree

Agree

Neutral

Disagree

Strongly Disagree

#### **IV3: Leadership Characteristics During Change**

**12. Do you believe that leaders in your organisation clearly communicate the purpose and steps of the change process?**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**13. Do you believe that your leadership team actively listens to employee concerns and incorporates feedback during change?**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**14. Do you believe that your manager demonstrates empathy and provides emotional or practical support during change initiatives?**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**15. Do you believe that strong leadership in your organisation helps maintain team morale and reduces stress during organisational transitions?**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**DV: Employee Productivity**

**16. Do you believe that your productivity is sustained or improved when change is managed using structured strategies and clear communication?**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

**17. Do you believe that change initiatives at your organisation help you work more efficiently or reduce workflow errors?**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

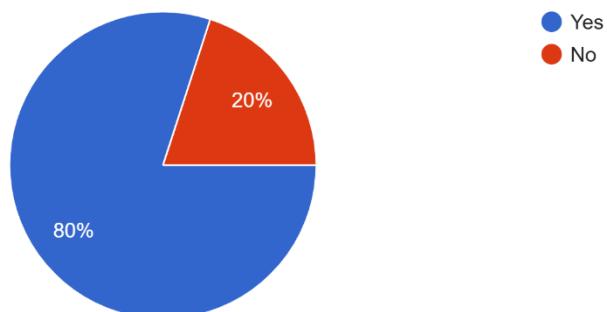
**18. Do you believe that being trained or supported during change helps you complete your tasks more effectively and on time?**

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree

## Appendix 2: Results of pilot study

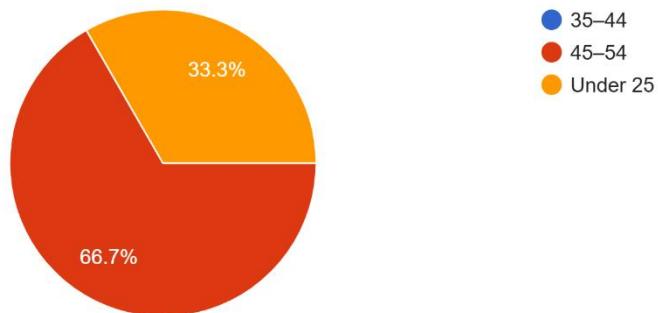
Are you interested in participating in this survey?

10 responses



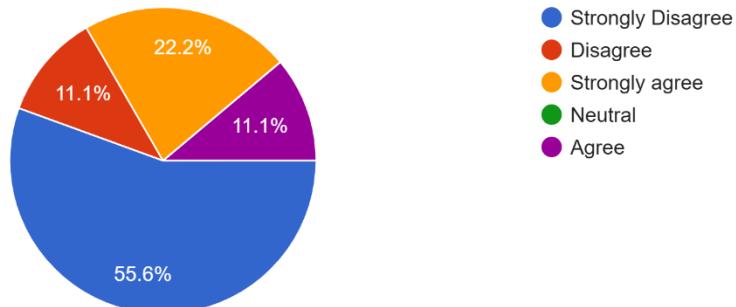
What is your age?

6 responses



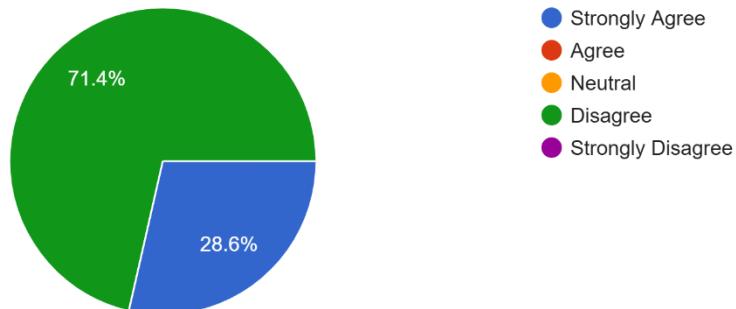
Do you believe that your organisation adopts a structured and phased approach to implementing change (e.g., planning, executing, reinforcing)?

9 responses



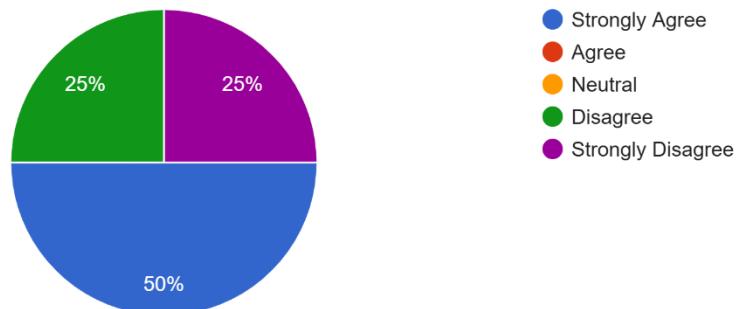
Do you believe that strong leadership in your organisation helps maintain team morale and reduces stress during organisational transitions?

7 responses



Do you believe that the organisation's values during change align with your own, positively affecting your motivation and commitment?

4 responses



(Source: Google Form)