

MIDOCEAN UNIVERSITY

College of Management

Master of Business Administration

**THE IMPACT OF ENTERPRISE SYSTEM TRANSITION ON ROLES, RESPONSIBILITIES, KPIs,
AND AFTERSALES PERFORMANCE IN SAUDI ARABIA**

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Introduction

Enterprise systems play a central role in coordinating business processes, recording operational activities, supporting decision-making, and measuring organizational performance. In automotive aftersales operations, these systems connect several interdependent functions, including customer reception, repair-order creation, vehicle inspection, estimation, parts ordering, workshop scheduling, repair monitoring, quality control, invoicing, and customer follow-up. The effectiveness of an enterprise system therefore depends not only on its technical capabilities but also on how well it supports the operating structure of the organization and the responsibilities of the employees who use it (Davenport, 1998; DeLone & McLean, 2003).

Organizations commonly replace existing enterprise systems to improve process control, information accuracy, visibility, accountability, and operational efficiency. However, changing from one enterprise system to another is not merely a technical replacement. The transition may alter how work is distributed, which employee is responsible for each activity, how departments interact, and how individual and departmental performance is measured. Enterprise systems can reshape organizational routines and can create significant changes in job content, authority, and accountability (Davenport, 1998; Pasmore et al., 2019).

This issue is particularly important when the new system introduces more detailed process controls and performance indicators than the previous system. Under an earlier system, an employee may have been evaluated mainly through broad outcomes such as revenue, customer satisfaction, or overall departmental results. Following the transition, the same employee may become accountable for specific operational activities, such as creating repair orders correctly, completing parts-related stages, updating system statuses, closing assigned tasks, or meeting defined processing times. As a result, the system transition may reshape the employee's role even when the formal job title remains unchanged.

For example, parts advisors and supervisors in automotive bodyshop operations may previously have been assessed mainly through parts revenue and customer satisfaction. Under a new enterprise system, their performance may also be evaluated through the number of repair orders successfully processed, parts-completion status, accuracy of system updates, task closure, and related process measures. Similar changes can affect service advisors, estimators, workshop controllers, supervisors, branch managers, technicians, invoicing employees, and other system users.

These changes can strengthen accountability by making responsibility for each process stage more visible. They can also provide management with more detailed information about bottlenecks, incomplete activities, and performance differences between branches or employees. Nevertheless, problems may arise when revised responsibilities are not clearly communicated, when employees are measured against activities they do not fully control, or when new KPIs are not aligned with actual job responsibilities. Role ambiguity and role conflict can reduce employee effectiveness and weaken the intended value of a performance measurement system (Rizzo et al., 1970; Hall, 2008).

Performance measurement is therefore a central element of enterprise system transition. KPIs are not only reporting tools; they influence employee priorities, managerial decisions, accountability, and operational behaviour. A well-designed KPI should be relevant to organizational objectives and sufficiently controllable by the person or department being measured. When KPIs are poorly designed or introduced without a clear reassessment of roles and responsibilities, employees may focus on completing recorded activities rather than achieving the intended operational result (Burney & Widener, 2007; Van de Ven et al., 2023).

In automotive aftersales operations, the effect of enterprise system transition may be visible across different functional areas. Revised workflows can affect repair-order completion, process compliance, cycle time, work-in-progress control, data accuracy,

revenue, gross profit, and customer satisfaction. The impact is unlikely to be identical across all roles because different employees interact with different stages of the repair process and have different levels of control over operational outcomes.

The Saudi Arabian context is relevant because organizations are continuing to invest in enterprise systems, digital integration, and performance-management capabilities. Prior research in Saudi Arabia has found that effective ERP use can be associated with improved financial and non-financial performance (AlMuhayfith & Shaiti, 2020). However, limited research has examined how a transition between two established enterprise systems changes practical roles, responsibilities, and KPI structures in automotive aftersales operations.

Much of the existing literature concentrates on first-time ERP adoption, technical implementation, critical success factors, system acceptance, or general organizational performance. Less attention has been given to detailed post-implementation changes in job responsibilities and performance measurement, particularly where employees move from broad outcome-based measures to specific process-based KPIs.

This proposed study will therefore examine the impact of enterprise system transition on employee roles, responsibilities, KPIs, and aftersales performance in Saudi Arabia. It will investigate how responsibilities and performance measures changed after the transition, whether employees clearly understand the revised requirements, and whether the new structure contributes to improved operational, financial, and customer-related performance. The study will use a mixed-methods approach combining an employee survey, semi-structured interviews, and analysis of selected performance indicators before and after the system transition.

The expected contribution of the study is both academic and practical. Academically, it will extend understanding of enterprise system transition by focusing on changes in work design, accountability, and KPI structures rather than examining technology alone. Practically, it may help automotive aftersales organizations assess whether

revised roles and KPIs are clearly defined, appropriately allocated, and aligned with operational objectives.

Research Problem

Enterprise system transitions are commonly undertaken to improve process integration, operational visibility, data accuracy, control, and organizational performance. However, the benefits of a new system are not produced by technology alone. They also depend on how the organization redesigns processes, allocates responsibilities, defines employee roles, and measures performance after implementation (Nah et al., 2001; Ram et al., 2013).

In automotive aftersales operations, enterprise systems support a sequence of closely connected activities, including customer reception, repair-order creation, inspection, estimation, parts ordering, workshop scheduling, repair monitoring, quality control, invoicing, and vehicle delivery. A change in the system used to manage these activities can therefore affect more than data entry or reporting. It can alter the distribution of work, introduce new process ownership requirements, change approval and control responsibilities, and establish more detailed measures of individual and departmental performance.

The practical problem addressed by this study arises when an organization moves from one established enterprise system to another and introduces new roles, responsibilities, and KPIs without fully assessing their alignment. Employees may retain the same job titles while becoming responsible for additional system activities or different operational stages. Tasks previously shared between departments may become assigned to a specific employee, while broad performance measures may be replaced by detailed process-based indicators.

Such changes can improve accountability and make operational bottlenecks more visible. However, they may also create management problems. Employees may not clearly understand their revised responsibilities, departments may have overlapping or conflicting ownership of the same process, and some employees may be evaluated using KPIs influenced by activities outside their direct control. The organization may also introduce a large number of system-generated measures without determining which indicators are most relevant to the employee's role or the organization's operational objectives.

Another aspect of the problem is that improved system visibility does not automatically demonstrate improved aftersales performance. A new system may generate more detailed information and track more activities while operational performance remains unchanged or temporarily declines during the transition and stabilization stages. The effectiveness of the transition should therefore be evaluated through changes in process execution and selected operational, financial, and customer-related results, rather than through system availability alone.

Existing research has examined enterprise system implementation, usage, critical success factors, employee attitudes, system quality, and organizational performance. Nevertheless, limited attention has been given to how a transition between two established systems changes employees' practical roles, responsibilities, accountability, and KPI structures in automotive aftersales operations.

The research problem is therefore the lack of clear evidence regarding whether the roles, responsibilities, and KPIs introduced during an enterprise system transition are properly understood, appropriately allocated, aligned with actual job control, and capable of improving aftersales performance. Without such evidence, management may be unable to determine whether performance changes result from the system, process redesign, reassignment of responsibilities, revised KPIs, or implementation difficulties.

Accordingly, the study seeks to examine changes in employee roles, responsibilities, and KPIs resulting from an enterprise system transition and to assess how these changes influence aftersales performance within an automotive organization in Saudi Arabia.

The central research problem is expressed through the following main question: How does enterprise system transition affect employee roles, responsibilities, KPIs, and aftersales performance in Saudi Arabia?

Significance of the Study

Academic Significance

The study is expected to contribute to the literature on enterprise systems, organizational change, job design, and performance measurement. Existing research has widely examined ERP implementation, technology acceptance, critical success factors, and system-related performance outcomes. Less attention has been given to detailed changes in employees' day-to-day responsibilities and KPI structures after an organization replaces one established enterprise system with another.

The study adds value by examining enterprise system transition as an organizational redesign process rather than as a purely technical implementation. It investigates how system-enabled process changes influence role clarity, responsibility allocation, accountability, and employee performance measurement. This connects areas that are often studied separately, including enterprise system implementation, role theory, KPI alignment, and operational performance.

The research also contributes by examining these relationships in the context of automotive aftersales operations in Saudi Arabia, a setting that has received limited attention in enterprise-system research. The use of mixed methods will combine employee perceptions, managerial insights, and selected performance data, providing a more balanced assessment than reliance on a single method.

Practical Significance

The study may help automotive aftersales organizations evaluate whether changes introduced by a new enterprise system are properly designed and managed. The findings may enable management to identify whether employees clearly understand revised roles, whether responsibilities are appropriately allocated, and whether new KPIs reflect activities employees can reasonably influence and control.

The study may also identify gaps between system design and operational reality. A system may formally assign responsibility for a process stage to one employee while completion depends on several departments. In such cases, individual KPIs may not accurately represent employee performance. The findings may support clearer responsibility matrices, more realistic job descriptions, and better-aligned performance indicators.

The study may support future training and change-management activities by identifying which role and KPI changes are most difficult for employees. It may also help management distinguish between useful performance indicators and measures that create duplication, confusion, or weak accountability.

Finally, the comparison of selected pre-implementation and post-implementation indicators may provide evidence regarding the actual effect of the transition on aftersales performance and may support decisions about process redesign, KPI revision, staffing, system configuration, and performance evaluation.

Research Objectives

General Objective

To examine the impact of enterprise system transition on employee roles, responsibilities, KPIs, and aftersales performance in an automotive organization in Saudi Arabia.

Specific Objectives

1. To identify the main changes in employee roles following the transition from the previous enterprise system to the new system.
2. To examine how responsibilities and process ownership were redistributed among employees and departments after the system transition.
3. To compare the KPIs used before and after the enterprise system transition.
4. To assess whether the revised KPIs are aligned with employees' actual roles, responsibilities, and level of control over operational outcomes.
5. To evaluate employees' understanding of and adaptation to revised roles, responsibilities, and performance expectations.
6. To assess the effect of the transition on selected operational performance indicators, including repair-order completion, process compliance, cycle time, work-in-progress control, and data accuracy.
7. To examine the effect of the transition on selected financial and customer-related indicators, where reliable data are available.
8. To identify the main operational and managerial challenges associated with changes in roles, responsibilities, and KPIs.
9. To develop practical recommendations for improving role clarity, responsibility allocation, KPI design, and performance management during future enterprise system transitions.

Research Questions

Main Research Question

How does enterprise system transition affect employee roles, responsibilities, KPIs, and aftersales performance in an automotive organization in Saudi Arabia?

Sub-Questions

1. What are the main changes in employee roles following the transition from the previous enterprise system to the new system?

2. How have responsibilities and process ownership been redistributed among employees and departments after the transition?
3. How have employee and departmental KPIs changed following the enterprise system transition?
4. To what extent are the revised KPIs aligned with employees' actual roles, responsibilities, and level of control over performance outcomes?
5. How clearly do employees understand their revised roles, responsibilities, and performance expectations?
6. How have employees adapted to the new system-related responsibilities and KPI requirements?
7. What effect has the transition had on selected operational performance indicators?
8. What effect has the transition had on selected financial and customer-related indicators, where reliable data are available?
9. What are the main operational and managerial challenges associated with the changes in roles, responsibilities, and KPIs?
10. What improvements can strengthen role clarity, accountability, KPI alignment, and aftersales performance during future enterprise system transitions?

Research Hypotheses

The hypotheses apply to the quantitative component of the study. The qualitative component will explain and contextualize the statistical findings.

Main alternative hypothesis (H1): Enterprise system transition has a statistically significant effect on employee roles, responsibilities, KPIs, and aftersales performance.

Main null hypothesis (H0): Enterprise system transition has no statistically significant effect on employee roles, responsibilities, KPIs, and aftersales performance.

H1a: Changes introduced through the enterprise system transition have a statistically significant effect on employee role clarity.

H1b: Changes introduced through the enterprise system transition have a statistically significant effect on employees' understanding of responsibilities and process ownership.

H1c: There is a statistically significant positive relationship between the alignment of revised KPIs with employee responsibilities and perceived job performance.

H1d: Employee understanding of revised roles, responsibilities, and KPIs has a statistically significant positive effect on adaptation to the new enterprise system.

H1e: Enterprise system transition has a statistically significant effect on selected operational performance indicators.

H1f: Greater alignment between revised KPIs and employee responsibilities is positively associated with improved operational performance.

H1g: The quality of training and communication has a statistically significant positive effect on employee understanding of revised roles, responsibilities, and KPIs.

H1h: Improvements in role clarity, responsibility clarity, and KPI alignment are positively associated with overall aftersales performance.

Previous Studies

The previous studies are organized thematically to show the development of the literature and to identify the specific gap addressed by the current study.

Enterprise Systems and Organizational Performance

AlMuhayfith and Shaiti (2020) examined the impact of ERP use on business performance among small and medium-sized enterprises in Saudi Arabia. The study used a quantitative approach and found that effective ERP use was positively associated with financial and non-financial performance. The study is relevant

because it provides evidence from the Saudi context. Its limitation is that it focused on broad ERP usage and organizational outcomes rather than changes in individual roles, responsibilities, and KPIs during a system-to-system transition.

Ram et al. (2013) investigated ERP implementation critical success factors and the mediating role of the implementation process. Their findings showed that implementation performance depends on how organizational and technical factors are managed during the implementation process. The study supports the view that system benefits do not arise automatically from technology. However, it did not focus on post-implementation changes in performance accountability at employee level.

Rajan and Baral (2015) examined factors influencing ERP usage and its impact on end users. Their study identified organizational support, compatibility, and user-related factors as important drivers of effective usage. The study is useful for understanding employee adaptation, but it focused on adoption and usage rather than detailed changes in roles and KPI structures.

Roky and Al Meriouh (2015) evaluated an industrial information system in an automotive company. Their case-based study is directly relevant to the sectoral context because it assessed system effectiveness from users' perspectives. Nevertheless, the study did not compare roles, responsibilities, and performance measures before and after an enterprise system transition.

System Success, Training, and Employee Adaptation

DeLone and McLean (2003) updated their information systems success model and proposed relationships among system quality, information quality, service quality, system use, user satisfaction, and net benefits. This framework remains useful for evaluating whether a system produces meaningful organizational benefits. However, it does not explicitly examine role redesign or KPI alignment.

Petter et al. (2008) reviewed measures used to assess information-systems success and highlighted the importance of carefully defining system-quality and benefit

constructs. Their work supports a multidimensional evaluation rather than relying only on user satisfaction or usage. The present study extends this logic by incorporating responsibility clarity and KPI alignment.

Jeyaraj (2020) conducted a critical meta-review of the DeLone and McLean models and identified continuing challenges in defining and measuring information-system success. The review supports the need for context-specific measures. In automotive aftersales, system success must therefore be connected to process execution, accountability, and operational results.

Venkatesh et al. (2003) developed the Unified Theory of Acceptance and Use of Technology. The model shows that performance expectancy, effort expectancy, social influence, and facilitating conditions influence technology acceptance. It provides a useful explanation of employee adaptation, although acceptance alone does not indicate whether revised responsibilities and KPIs are appropriately designed.

Roles, Responsibilities, and Work Design

Rizzo et al. (1970) developed influential measures of role conflict and role ambiguity. Their work established that unclear or incompatible expectations can affect employee behaviour and performance. The current study applies these concepts to system-generated responsibilities and performance expectations.

Hall (2008) examined the effect of comprehensive performance measurement systems on role clarity, psychological empowerment, and managerial performance. The findings indicated that performance measurement can improve performance indirectly by strengthening role clarity and empowerment. This provides a direct theoretical link between KPI design and employee effectiveness.

Burney and Widener (2007) examined strategic performance measurement systems, job-relevant information, role stress, and performance. Their findings demonstrate that performance measurement can influence employees through role-related

mechanisms. This is relevant where revised KPIs may either clarify priorities or create conflict.

Pasmore et al. (2019) revisited sociotechnical systems design and organizational change. They argued that effective change requires joint attention to technology, work systems, and human arrangements. This supports the current study's view that an enterprise system transition should be evaluated as an organizational redesign process.

KPI Alignment and Performance Measurement

Van de Ven et al. (2023) conducted a systematic review and developed a catalog of KPIs for business models. They found that KPI-management approaches remain fragmented and that organizations need structured methods to define, select, and use indicators. This is directly relevant to enterprise systems that generate numerous possible measures.

Davenport (1998) explained that enterprise systems impose integrated processes and can require organizations to change how work is performed. The article remains foundational because it emphasizes that enterprise systems embed organizational logic and therefore affect more than technology.

Nah et al. (2001) identified critical factors for successful enterprise-system implementation, including top-management support, change management, communication, teamwork, and project management. Their work supports the inclusion of training, communication, and management support as explanatory factors.

Creswell and Plano Clark (2018) provide the methodological basis for integrating quantitative and qualitative evidence. Their mixed-methods framework is relevant because employee perceptions, managerial explanations, and operational KPI trends need to be interpreted together.

Critical Synthesis of Previous Studies

The reviewed studies show broad agreement that enterprise systems can improve performance, but that benefits depend on organizational support, process alignment, training, user adaptation, and the quality of implementation. They also show that performance-measurement systems influence role clarity, role stress, and employee behaviour.

However, most enterprise-system studies examine first-time adoption, system use, or general implementation success. They provide limited explanation of what happens when an organization replaces one functioning system with another that assigns more detailed tasks and KPIs to employees.

The literature on role theory and performance measurement provides strong arguments for role clarity and KPI alignment, but it is rarely integrated with research on enterprise-system transition. There is also limited empirical research in automotive aftersales operations in Saudi Arabia. These limitations form the basis of the research gap.

Research Gap

System-to-system transition

Most previous research examines first-time ERP adoption rather than the replacement of one established enterprise system with another. The present context concerns a change between digital systems, not a move from manual work to digital work.

Changes in roles and responsibilities

Existing studies rarely compare actual job responsibilities before and after implementation or examine whether new process ownership is clear, realistic, and supported by sufficient authority.

Integration of ERP research and KPI design

Enterprise-system studies and performance-measurement studies are often separate. Limited research examines whether system-generated KPIs reflect the employee's actual responsibilities and control.

Mechanism linking transition to performance

Existing research often reports a relationship between ERP use and performance without explaining whether the effect occurs through role clarity, responsibility allocation, KPI alignment, or employee adaptation.

Before-and-after evidence

Many studies rely on cross-sectional perceptions. The proposed study combines perceptions with selected pre- and post-transition performance data where reliable comparison is possible.

Mixed-methods evidence

Quantitative surveys are common, but they may not explain why responsibilities became unclear or why certain KPIs failed. Interviews and operational data will address this limitation.

Automotive aftersales and Saudi context

There is limited research on enterprise-system transition within automotive aftersales operations in Saudi Arabia.

Statement of the Research Gap

Existing research provides substantial knowledge about enterprise system adoption, implementation success, user acceptance, and organizational performance. However, limited research has examined how a transition between two established enterprise systems changes employees' roles, responsibilities, process ownership, and KPI structures, or how these changes influence aftersales performance. This gap is particularly evident in automotive aftersales operations in Saudi Arabia and in studies

combining employee perceptions, managerial experience, and before-and-after operational data.

Theoretical Foundations of the Study

Sociotechnical Systems Theory

Sociotechnical Systems Theory argues that organizational performance depends on joint alignment between the technical system and the social system. The technical system includes technology, information, tools, and workflows, while the social system includes employees, skills, roles, responsibilities, relationships, and structure (Trist & Bamforth, 1951; Pasmore et al., 2019).

The theory is directly relevant because the enterprise system transition changes not only software but also the structure through which work is completed and monitored. Success depends on alignment among system workflow, actual operational processes, authority, employee capability, responsibilities, and performance measures.

Role Theory

Role Theory explains how employees understand and perform the expectations associated with their organizational positions. Role clarity refers to the extent to which employees understand duties, priorities, authority, and performance expectations. Role ambiguity arises when these expectations are unclear, while role conflict arises when an employee faces incompatible expectations (Rizzo et al., 1970).

The theory is central to this study because employees may retain the same job title while receiving new system tasks, process ownership, and KPIs. The study will assess whether these revised expectations are clear and whether employees are accountable for outcomes they can control.

DeLone and McLean Information Systems Success Model

The DeLone and McLean model links system quality, information quality, service quality, use, user satisfaction, and net benefits (DeLone & McLean, 2003). It provides a basis for evaluating whether the new system produces reliable information, effective use, user satisfaction, and organizational benefits.

The current study extends the model by including role clarity, responsibility clarity, KPI alignment, and employee adaptation as organizational mechanisms through which system transition may influence aftersales performance.

Performance Measurement and KPI Alignment

Performance measurement systems translate organizational objectives into indicators that influence attention, behaviour, and evaluation. Comprehensive performance information can improve role clarity and managerial performance, but poorly aligned measures can increase role stress and dysfunctional behaviour (Hall, 2008; Burney & Widener, 2007).

In this study, KPI alignment refers to the extent to which an indicator reflects actual responsibilities, measures an activity relevant to organizational objectives, is supported by reliable data, and can be influenced by the employee or department being evaluated.

Change Management Principles

Enterprise system transition is an organizational change process. Employees must learn a new system, adopt new processes, accept revised responsibilities, and understand different performance expectations. Change-management factors such as communication, training, participation, management support, and reinforcement are repeatedly identified as critical to successful enterprise-system implementation (Nah et al., 2001; Kotter, 1996).

Change management will be treated as an enabling factor rather than the primary dependent variable. The study will examine how training and communication influence employees' understanding and adaptation.

Proposed Conceptual Framework

The proposed conceptual relationship is: Enterprise System Transition -> Changes in Roles, Responsibilities, Processes, and KPIs -> Role Clarity, Responsibility Clarity, KPI Alignment, and Employee Adaptation -> Aftersales Performance.

Variable Type	Variable	Indicative Dimensions
Independent	Enterprise system transition	Process redesign; task allocation; workflow controls; responsibility allocation; KPI changes
Explanatory / Mediating	Role clarity and adaptation	Role clarity; responsibility clarity; training; communication; KPI alignment; employee adaptation
Dependent	Aftersales performance	Operational performance; selected financial indicators; selected customer indicators

Research Methodology and Methods

Research Design

The study will adopt an applied, descriptive, and explanatory research design using a mixed-methods approach. The design is appropriate because the research seeks to document what changed, test relationships among variables, and explain the organizational reasons behind measurable performance outcomes.

The study will use an explanatory sequential mixed-methods design. Quantitative survey data and selected operational KPI data will be analysed first, followed by qualitative interviews designed to explain the quantitative patterns.

Research Strategy

A single-organization case-study strategy will be used within the automotive aftersales sector in Saudi Arabia. The organization will remain anonymous and will be described as an automotive aftersales organization operating in Saudi Arabia.

The primary unit of analysis will be the employee or system user affected by the transition. A secondary unit of analysis will be the branch or functional department for selected KPI comparisons.

Sources of Data

Primary data will be collected through a structured questionnaire and semi-structured interviews. Secondary data may include operational KPI reports, pre- and post-implementation records, system reports, process maps, responsibility matrices, job descriptions, training materials, implementation documents, and KPI definitions.

Quantitative Component

The questionnaire will measure perceived changes in roles, responsibilities, KPI alignment, training, communication, adaptation, and aftersales performance. Most items will use a five-point Likert scale.

Selected performance indicators will be compared across pre-implementation, transition, and stabilized post-implementation periods. Equal periods, such as six months before and six months after stabilization, will be used where reliable and comparable data are available.

Qualitative Component

Semi-structured interviews will be conducted with selected managers, supervisors, key users, performance personnel, and implementation or IT representatives. Interviews will explore role changes, responsibility allocation, KPI design, training, process ownership, operational effects, and recommended improvements.

Validity, Reliability, and Ethics

Content validity will be assessed through review by the academic supervisor, methodology specialists, and relevant aftersales or system experts. A pilot study will test clarity, completion time, and initial reliability. Cronbach's alpha will assess internal consistency of multi-item scales.

Participation will be voluntary, responses will be confidential, and personal identifiers will be avoided. The organization will remain anonymous unless formal permission is obtained. The researcher will acknowledge professional familiarity with the organization and will use standardized instruments, anonymous responses, and triangulation to reduce bias.

Data-Collection Procedure

1. Obtain university approval and organizational permission.
2. Confirm eligible participants and available operational data.
3. Develop the questionnaire, interview guide, and KPI extraction form.
4. Conduct expert review and pilot testing.
5. Distribute the questionnaire and collect responses.
6. Collect and clean selected pre- and post-transition performance data.
7. Conduct preliminary quantitative analysis.
8. Select interview participants and conduct semi-structured interviews.

9. Analyse qualitative themes.
10. Integrate survey, interview, and operational findings.
11. Develop conclusions and practical recommendations.

Study Population and Sample

Study Population

The population will consist of employees who use, supervise, support, or rely on the enterprise system as part of their regular responsibilities within the selected automotive aftersales organization in Saudi Arabia. Potential participants include branch managers, service and bodyshop managers, service advisors, estimators, workshop controllers, parts advisors and supervisors, technicians who directly use the system, invoicing employees, finance users, performance employees, and IT or implementation-support employees.

Inclusion and Exclusion Criteria

Participants must have meaningful involvement with the enterprise system and sufficient knowledge of revised roles, responsibilities, processes, or KPIs. For direct before-and-after comparisons, they should have experience with both systems. Employees with no meaningful system interaction or insufficient exposure to the transition will be excluded.

Survey Sample

A census of all eligible system users is preferred. If a census is impractical, stratified sampling will be used to ensure representation across branches, functions, operational areas, and managerial levels. The final sample size will be determined after confirming the eligible population and will be based on a 95% confidence level and 5% margin of error where a sample calculation is required.

Interview Sample

Purposive sampling will be used for approximately 8 to 15 interviews. Participants will be selected based on their involvement in the transition, knowledge of old and new

processes, responsibility for KPI monitoring, and ability to explain operational changes. The final number will depend on data saturation.

Operational KPI Sample

Branches or operational units will be included in the before-and-after comparison only where reliable data are available, KPI definitions are sufficiently consistent, and implementation timing is known. Branches opened after the transition or affected by major structural changes may be excluded from specific comparisons.

Research Instruments

Structured Questionnaire

The questionnaire will contain approximately 35 to 45 items and will use a five-point Likert scale. It will include sections covering demographic and professional information, changes in roles, responsibility and process ownership, KPI changes and alignment, training and communication, employee adaptation, and perceived aftersales performance.

The questionnaire will be developed from the study objectives, theoretical framework, and established concepts in role clarity, information-system success, technology acceptance, and performance measurement. An Arabic version may be prepared using translation and back-translation if required.

Semi-Structured Interview Guide

The interview guide will contain approximately 10 to 15 main questions. It will examine changes in roles, responsibility transfer, process ownership, KPI changes, training, communication, operational effects, and recommendations. Interviews are expected to last 30 to 60 minutes and will be recorded only with participant consent.

Operational KPI Data-Extraction Form

A structured form will collect comparable performance data by branch, department, and period. Potential fields include repair orders opened and completed, parts-completion rate, cycle time, WIP ageing, process compliance, data corrections,

revenue, gross profit, average revenue per repair order, customer satisfaction, and complaint rate.

A KPI will be included only when it is relevant, clearly defined, consistently measurable, and available for comparable periods. Indicators with materially different definitions across the two systems will be excluded unless a reliable standardization method exists.

Instrument Validity and Reliability

Content and face validity will be evaluated through expert review and pilot testing. Exploratory factor analysis may be used if the sample is adequate. Cronbach's alpha will assess the internal consistency of each multi-item scale, with values of approximately 0.70 or higher generally treated as acceptable.

Statistical Analysis Methods

Data preparation and screening

Responses and operational records will be checked for completeness, duplication, missing values, outliers, coding accuracy, and consistency of KPI definitions.

Descriptive statistics

Frequencies, percentages, means, medians, standard deviations, minima, and maxima will summarize participant characteristics and study variables.

Reliability and validity

Cronbach's alpha will assess reliability. Exploratory factor analysis may assess construct validity when sample size permits.

Correlation analysis

Pearson or Spearman correlation will examine relationships among role clarity, responsibility clarity, KPI alignment, training, adaptation, and perceived performance.

Regression analysis

Multiple regression may test the predictive effect of role clarity, KPI alignment, training, communication, and adaptation on aftersales performance, subject to sample adequacy and assumptions.

Group comparisons

Independent-samples t-tests, ANOVA, Mann-Whitney U, or Kruskal-Wallis tests may compare major employee groups, departments, or implementation-experience categories.

Before-and-after comparison

Paired-samples t-tests or Wilcoxon signed-rank tests may compare selected KPIs before and after the transition. Trend and percentage-change analysis may be used for monthly operational data.

Effect size and significance

A significance level of $\alpha = 0.05$ will generally be used. Effect sizes and confidence intervals will be considered alongside p-values.

Qualitative analysis

Interview data will be analysed thematically through familiarization, coding, theme development, review, and interpretation.

Integration

Survey results, KPI evidence, and interview themes will be compared through triangulation and joint interpretation.

Study Limitations

Subject Limitations

The study focuses on roles, responsibilities, process ownership, KPI structures, employee adaptation, and aftersales performance. It will not evaluate every technical feature or provide a complete financial return-on-investment analysis.

Human Limitations

The study is limited to employees who use, supervise, support, or depend on the enterprise system. Some current employees may not have experience with both systems, and workplace concerns may influence willingness to provide critical feedback.

Geographical and Organizational Limitations

The study covers one automotive aftersales organization in Saudi Arabia. Findings may be transferable to similar organizations but cannot be statistically generalized to the entire sector.

Temporal Limitations

The study will examine defined periods before and after implementation. It may capture short- and medium-term effects rather than the complete long-term impact.

Data Availability and Comparability

Differences in KPI definitions, formulas, data detail, and historical completeness may limit direct comparison. Only sufficiently consistent indicators will be analysed quantitatively.

Implementation Timing

Branches or operational areas may have different implementation dates and maturity levels. These differences will be considered and may require separate analysis.

External Operational Factors

Performance may also be influenced by staffing, parts availability, supplier delays, insurance approvals, demand seasonality, pricing, customer mix, and management changes.

Self-Reported Data

Survey and interview evidence may be affected by recall bias, personal attitudes, and social desirability. Operational data and documents will be used for triangulation.

Researcher Bias

Professional familiarity with the organization provides useful access but may create bias. Neutral instruments, anonymous responses, transparent procedures, and triangulation will be used to reduce this risk.

Sample Size and Causality

The achieved sample may limit advanced statistical analysis. The case-study design can identify associations and plausible explanations but cannot prove strict causality.

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