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The impact of Kaizen culture, transformational leadership and the 4P model on organizational performance and employee commitment.

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Abstract-- This article discusses Kaizen culture and transformational leadership within the 4P model in improving organizational performance and employee engagement. Drawing on a literature review and empirical studies, this article illustrates the mechanisms by which these concepts are mutually reinforcing. The survey was conducted among 200 permanent employees in small and medium sized companies in Morocco and the SPSS was used to validate the research model. The results underline that Kaizen is conditioned by transformational leadership accompanied by rigorous applicability in terms of 4P principles in an environment conducive to innovation and continuous improvement, while at the same time achieving relative employee satisfaction. Recommended practices for companies wishing to incorporate these philosophies in various environments are also presented.

Index terms – Employee commitment, Job satisfaction, Kaizen culture, Leadership, Organizational performance, Transformational leadership, 4P model.

1.Introduction

In today's competitive landscape, small and medium-sized enterprises (SMEs) in Morocco face numerous challenges, including limited resources and organizational resistance. Reliable human resources remain a key lever for achieving strategic objectives, and optimizing employee performance is critical to ensuring competitiveness. To address these constraints, **Kaizen culture**, with its focus on continuous improvement, provides a valuable framework for driving sustainable change and enhancing organizational outcomes. While Kaizen practices have their roots in industrial environments, they offer significant potential for SMEs by enabling incremental improvements using existing capacities. However, the successful adoption of Kaizen requires an environment conducive to change, shaped by job satisfaction and effective leadership.

The core question underlying this research is: **How do the interactions between Kaizen culture, transformational leadership, and job satisfaction influence employee performance in Moroccan SMEs?** Moreover, what strategies can be employed to overcome organizational resistance and maximize the impact of these practices in a resource-constrained context? This issue highlights the dual necessity of fostering job satisfaction and leveraging transformational leadership to ensure the effective implementation of Kaizen practices and the optimization of employee performance. To address this question, this study was conducted with 200 permanent employees from various Moroccan SMEs, offering a diverse and representative sample to explore these interactions in depth. Specifically, the study aims to:

1. Explore the influence of Kaizen culture on job satisfaction.
2. Assess the impact of transformational leadership on job satisfaction.
3. Investigate the relationship between job satisfaction and employee performance.
4. Analyze the combined effects of Kaizen culture and transformational leadership on performance within SMEs.

The article is structured into three sections: a literature review addressing the core concepts and contextual challenges faced by SMEs, a methodological framework outlining data collection and analysis, and a presentation of findings and discussions. These findings will offer insights into overcoming organizational resistance and implementing solutions tailored to the local context, providing a roadmap for enhancing competitiveness in a rapidly evolving environment.

2.Litterature review

2.1. Kaizen concept

The Kaizen concept, which means "improvement" in Japanese, originated in Japan in the 1950s and was popularized by Toyota as part of its Toyota Production System (TPS). It is based on an approach of continuous, progressive and inclusive improvement, involving all members of the organization. Unlike radical, one-off transformations, Kaizen favors small, constant changes which, through their cumulated effect, bring about a significant improvement in overall performance. The fundamental principles of this methodology include the active involvement of all employees, from managers to operators, a focus on optimizing the underlying processes rather than finding the culprits, and a systematic orientation towards end-customer satisfaction. Decisions within this framework are guided by rigorous analysis of factual data and supported by practical tools such as 5S, the PDCA (Plan-Do-Check-Act) cycle and intensive workshops known as "kaizen blitz". Although initially developed for the manufacturing sector, Kaizen has demonstrated its effectiveness in other areas such as logistics, healthcare and services, where it helps to reduce waste and improve organizational performance (Ortiz & Cárdenas, 2022; Syaputra & Aisyah, 2022). In the specific context of small and medium-sized enterprises (SMEs), Kaizen presents a solution particularly suited to limited resource constraints and organizational flexibility, while enhancing employee commitment and overall competitiveness (Alshamary & Ramzi, 2024). However, the implementation of this method is not without its challenges, such as resistance to organizational change, the absence of active leadership or the lack of adequate employee training. Despite these obstacles, Kaizen's adaptability makes it a key philosophy for organizations seeking to promote a culture of continuous improvement and sustainable innovation (Hashim et al., 2022; "The Concept of Kaizen: A Root Exploration", 2023).

2.2. Leadership and Kaizen

The success of Kaizen, as a philosophy of continuous improvement, depends largely on leadership. Leaders, as drivers of change, play a crucial role in the adoption of Kaizen practices by employees. They are responsible for establishing a supportive organizational culture and for guiding, inspiring and mobilizing their teams to actively participate in improvement efforts (Alenezi, 2022).

2.3. Transformational leadership

Transformational leadership is particularly well-suited to Kaizen, as it focuses on inspiring and motivating employees, while cultivating a shared vision focused on innovation and continuous improvement. Transformational leaders succeed in generating strong commitment by defining clear objectives, reinforcing employee trust and autonomy, and creating an environment conducive to experimenting with new ideas (Keller, L., 2023). This leadership style also fosters positive organizational dynamics, essential for maintaining motivation in Kaizen initiatives (Suryadi et al., 2024). In addition, this style encourages alignment between Kaizen principles and organizational values, stimulating creativity and team commitment through personalized attention and constant support.

2.4. Employee satisfaction

Employee satisfaction or job satisfaction is defined by how positively or negatively individuals perceive various aspects of their work tasks. Robbins (2003) explains that job satisfaction refers to an individual's general attitude towards his or her job responsibilities. A person with high job satisfaction adopts a positive attitude, while a dissatisfied person tends to display a negative attitude. When we talk about employees' attitudes, we often refer to their job satisfaction. According to Hasibuan (2006), job satisfaction is a pleasant emotion that reflects appreciation of the work performed. This emotion is manifested in morale, discipline and job performance. Satisfaction can be experienced both inside and outside the workplace, or as a mixture of both. Robbins (2003) identifies four key factors that promote high levels of employee satisfaction:

1. Intellectually stimulating tasks;
2. Fair remuneration;
3. A favorable working environment;
4. Supportive colleagues.

However, it is difficult to define uniform criteria for job satisfaction, as each employee has his or her own expectations and criteria. According to Jihane NEJJARI & Mostafa Hassine (2022), the main indicators of job satisfaction include: - Employee loyalty; - Employee skill level; - Employee integrity; - Employee creativity; - Leadership quality; - Perceived salary; - Indirect compensation; - Work environment.

2.5. Specific challenges facing SMEs in adopting Kaizen

The adoption of Kaizen methodology by small and medium-sized enterprises (SMEs) offers a great opportunity to improve competitiveness and foster continuous improvement. However, a number of specific challenges make implementation difficult. First of all, resistance to change within the organization is one of the main obstacles. According to Bwemelo (2017), SMEs are often rooted in a traditional culture, where entrenched habits and a reluctance to change complicate the adoption of new practices. Employees, and sometimes even managers, often perceive Kaizen as an additional workload rather than an opportunity for improvement, which limits their commitment to this participative and collaborative approach. Another major challenge is the lack of training and skills. Dinka (2021) point out that SME employees and managers often do not have a sufficient understanding of the fundamental principles of Kaizen and associated tools, such as the PDCA cycle or 5S. This lack of training leads to ineffective or incomplete implementation of continuous improvement initiatives. Without investment in skills development, Kaizen efforts run the risk of becoming ineffective and leading to a gradual disengagement of teams. Resource constraints are also a major brake for SMEs. Dinka (2021) note that limited budgets restrict these companies' ability to invest in training programs or specific tools needed to implement Kaizen. In addition, small teams and high workloads leave little room to devote time to these improvement initiatives, limiting their scope and impact. Leadership, or the lack of it, is a crucial factor. In many small and medium-sized enterprises (SMEs), leaders, preoccupied with a multitude of missions, often find it difficult to adapt to sufficient time and, in part, skills to implement a culture of continuous improvement. Without a transformation or participatory leadership, it is hard to involve the workforce in Kaizen initiatives and provide ongoing strategic support (AL Ghazali ; 2020). In addition, the pressure of day-to-day vita activities is still a sufficient challenge. Urgent responsibilities, such as marketing management or customer satisfaction, often follow long-term approaches, such as Kaizen, diminishing commitment and gains. To overcome these challenges, some of the strategies are suggested to facilitate Kaizen adoption by the SMEs. It is therefore vital to train managers in participative and change leadership modes to engage employees. Optimal education, focusing on the immediate benefits of Kaizen, can also be implemented to mitigate resistance to change (Bwemelo, 2017). Furthermore, at SME level, inexpensive and simple actions can start now, such as 5S, to

quickly make both a tangible assessment and a call for team commitment. In addition, the bias towards accepting the Kaizen approach in everyday work is positive, and helps to combat the feeling of illegitimate xia of work all the time, while applying the operacological package. In short, if significant obstacles are identified to the use of Kaizen applications by SMEs, for example due to a lack of knowledge or experimentation, a strategic approach, based on appropriate training, communication and leadership can enable SMEs to overcome these obstacles and achieve the full value of the benefits of continuous problem solving (Kaizen).

3. Theoretical framework, Theories used

3.1. Transformational leadership theory

Transformational leadership theory, developed by Bass and Avolio (1994), has established itself as a major approach in leadership studies. Inspired by the work of Burns (1978), this theory stands out for its ability to transform the energies and behaviors of collaborators to achieve shared, ambitious goals. It emphasizes the creation of an environment conducive to innovation, motivation and personal development.

Key characteristics of transformational leadership

- **Idealized influence (charisma):** This dimension emphasizes the role of leaders as exemplary role models. They inspire respect, trust and admiration in their subordinates, fostering identification and imitation behavior (Bass, 1985; Avolio & Bass, 1995). Leaders embody strong values and inspire through their actions.
- **Inspiring motivation:** Transformational leaders articulate a clear and compelling vision. They encourage employees to believe in their ability to achieve this vision, demonstrating optimism and confidence (Bass, 1985). This ability to motivate transcends conventional expectations, instilling a sense of belonging and collective commitment.
- **Intellectual stimulation:** This dimension emphasizes innovation and challenging the status quo. Leaders encourage employees to rethink existing processes and find creative solutions to problems (Bass, 1985; Avolio & Bass, 1995). They value new ideas and encourage measured risk-taking.
- **Individualized consideration:** Leaders take into account the individual needs of their subordinates, fostering their personal growth and well-being (Bass, 1985). They pay

particular attention to and adapt their approach to the specifics of each team member, fostering two-way communication.

Transformational leadership has a significant impact on organizations, positively influencing employee motivation, commitment and overall performance. Research shows that organizations led by transformational leaders experience increased productivity, better job satisfaction and lower turnover rates (Gunawan et al., 2024). This leadership style also fosters greater collaboration between employees, encouraging them to become actively involved in achieving common goals. In approaches such as Kaizen, transformational leadership plays a key role in inspiring employees to participate fully in continuous improvement initiatives. Thanks to their ability to share a strong vision and promote collaboration around common goals, these leaders reinforce the culture of innovation and continuous improvement (Bass & Avolio, 1994). However, despite its many advantages, transformational leadership theory is not without its challenges. Empirical validation of its components has declined, raising questions about its theoretical robustness (Siangchokyoo, N. & al ; 2020). Furthermore, the effectiveness of this leadership style can vary according to organizational and cultural contexts, inviting further reflection on its adaptability. Future research will need to explore these dimensions further, while also looking at emerging concepts such as "green intellectual capital" (Vo et al., 2024). In conclusion, transformational leadership theory remains an essential approach to understanding and developing effective organizational dynamics. Its ability to mobilize, inspire and transform teams makes it an essential tool for modern organizations. However, further research is needed to refine its practical applications and respond to current theoretical challenges.

3.2. Organizational learning applied to Kaizen

Organizational learning is a fundamental concept for understanding how organizations acquire, share and apply knowledge in order to continuously adapt and improve. Developed by Argyris and Schön (1978), it is divided into two main levels: the single loop and the double loop. The single loop focuses on correcting errors without questioning underlying processes, while the double loop involves a critical re-evaluation of fundamental assumptions, enabling a more profound transformation of organizational practices. This ability to integrate lessons and question existing models finds a particular resonance in the Kaizen philosophy. Kaizen, a continuous improvement process, is based on organizational learning to promote systemic introspection and sustainable improvement of process activities. Emphasis is placed on the

transmission of knowledge, especially tacit knowledge, often transmitted through socialization and de-socialization processes (Bolduan, 2023). This information plays an important role in the implementation of Kaizen actions. Despite this, risk factors such as organizational apathy or the absence of engaged leadership can hinder this sharing, and limit the performance of continuous improvement practices (Bolduan, 2023). The organizational culture represents a further aspect of the relationship between the learning organisation and the Kaizen. A culture tool that respects Kaizen principles contributes to job satisfaction and employee dynamism, which are indispensable factors in the success of continuous improvement initiatives (Alehegn, 2023). Mastering Kaizen principles is, counterintuitively, behind a mismatch between the organizational culture approach and Kaizen principles, which could lead to disappointment at work and break the spirit of improvement initiatives (Alehegn, 2023). This link between organizational culture and learning highlights the importance of employee commitment in maximizing the benefits of Kaizen approaches. Kaizen has proven its effectiveness in diverse sectors such as manufacturing, healthcare and services, responding to a variety of operational challenges. Adhering to organizational learning principles, Continuous Improvement is able to demonstrate problem-solving action in quality, efficiency and waste management (Syaputra Aisyah, 2022; Ortiz Cárdenas, 2022). Such a systematic approach enhances not only the effectiveness of organization's performance, but also the ability of organization to learn and adapt to change. According to the latter, organizational learning is of fundamental importance for the application of Kaizen towards the implementation of continuous improvement and innovation in ironic systems. Although the benefits are widely acknowledged, challenges remain in terms of adapting organizational culture to Kaizen principles and the crescendo of blockages to knowledge communication. Future studies could question these dynamics and weld the returns of Kaizen methodologies in broader organizational contexts.

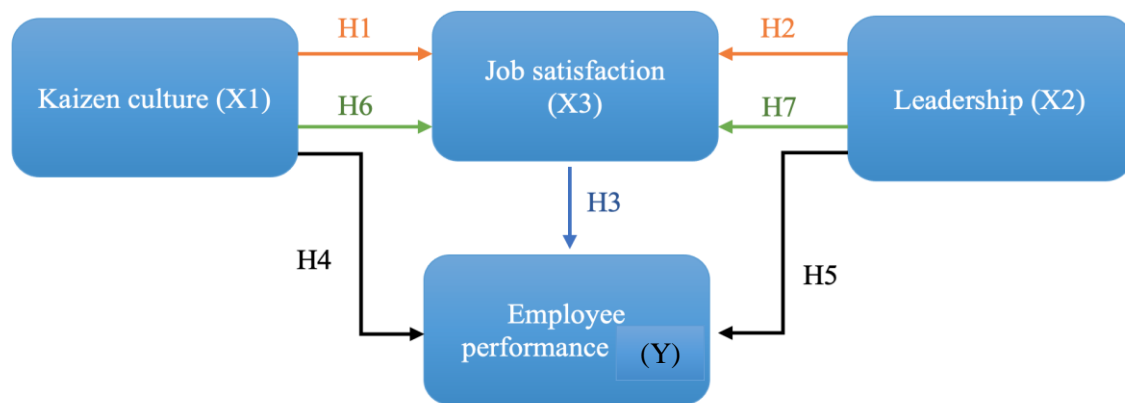
3.3. Lean Management 4P Model

Together, these concepts cover philosophy, process, players and partners, as well as problem-solving, with each component carrying its own significant weight in continuous evolution and organizational performance. The philosophy emphasizes a long-term vision focused on continuous improvement, going beyond immediate gains to concentrate on creating sustainable value for all stakeholders. Within the Kaizen framework, this philosophy fuels initiatives aimed at achieving consistent operational excellence. Processes focus on the

minimization of waste and standardization. The Lean practitioner, linked to this pillar, has the effect of streamlining workflows, eliminating weaknesses or inefficiencies, and optimizing committed resources. The implementation of a Lean 4.0 methodology in the pharmaceutical industry generated a 50-fold increase in the reliability of quality certification and a 57-fold decrease in the amount of inventory wastage (Tetteh-Caesar et al., 2024). The implementation of Industry 4.0 technologies to Lean practices also increases the efficiency and responsiveness of structures (Bueno et al., 2023). Individuals and partners emphasize the importance of engaging employees and stakeholders in continuous improvement efforts. The effectiveness of the Lean Management lies in the sense of active involvement on the part of teams, who not only discover the problems but it also find some out of the box solutions. This is particularly the case in sectors such as healthcare, where team involvement has led to improved performance of hospital services and greater user satisfaction (Djawa Oktamianti, 2023). Problem solving is a method of defining and solving problems at their source. This process leads to deep thinking and the adoption of sustainable solutions. This pillar is fundamental to the support of Kaizen points of view, which encourage the constant resolution of errors to achieve optimal operation. The four P model has proven itself to be versatile in many areas, for example, in the field of manufacturing, healthcare and retail trade. Applied to the healthcare sector, Lean principles have reduced patient waiting times and increased the efficiency of hospital care facilities, thus boosting patient attendance and satisfaction (Djawa Oktamianti, 2023). Similarly, in the retail sector, Lean tools have enabled competitive advantages to be gained by improving operational efficiency, even in an environment of increasing e-competition. After mentioning the advantages of this model, the Lean 4P model implies certain difficulties, such as the compatibility of current systems and operator training. These challenges must be overcome in order to fully utilize the capability of the Lean methodologies in modern organizational contexts. In conclusion, Lean Management's 4P model offers a robust framework for improving organizational performance. By focusing on philosophy, processes, people and problem solving, it promotes a systematic and sustainable approach to continuous improvement. Nevertheless, other steps are needed in order to overcome the challenges of its implementation and to extent its impact in many fields.

4. Conceptual research model

Figure 1: Theoretical framework



Source: Created by ourselves

H1: Kaizen culture has a positive influence on employee satisfaction in Moroccan SMEs.

H2: Leadership has a positive influence on employee satisfaction in Moroccan SMEs.

H3: Employee satisfaction has a positive influence on performance in Moroccan SMEs.

H4: Kaizen culture has a positive influence on employee performance in Moroccan SMEs.

H5: Leadership has a positive influence on employee performance in Moroccan SMEs.

H6: Employee satisfaction acts as a mediator between Kaizen culture and employee performance in Moroccan SMEs.

H7: Employee satisfaction mediates between leadership and employee performance in Moroccan SMEs.

6. Research Methodology

This type of research is explanatory, aiming to determine whether a factor has an influence on a given situation. The method used in this study is quantitative: a sample represents a portion of the population, selected on the basis of certain characteristics (Sugiyono, 2009). The sampling technique used in this research is judgmental sampling, which involves selecting elements of the population on the basis of predefined criteria (Sugiyono, 2009).

6.1. Sampling

The criteria for members of the population to be sampled are as follows:

- The worker selected as the sample assumes to be a merit worker in a permanent position in a Moroccan VSE. This specification is important, as the performance studied concerns that of permanent employees, and not that of managers or contract employees.
- The employee must have one year's experience with the company. An employee with at least one year's seniority is considered to have a good understanding of his or her role and to be familiar with the company's culture.
- In this study, the sample data is representative of a base of 200 employees of Moroccan SMEs.

Therefore, in this study, a group of independent employees have sufficient experience within the company to be able to assess the factors, which influence the feeling of satisfaction and efficiency at work.

6.2. Data Analysis Method

- **Normality test**

Normality test has been applied to the purpose of checking whether there is a normal distribution for the model of prediction of regression.

- **Descriptive analysis**

The descriptive analysis approach is used to interpret the information and data collected. This involves collecting, structuring and classifying the data so as to gain a complete overview of the variables under study.

- **Multiple linear regression analysis**

Multivariate linear regression analysis is used to estimate the effect of independent variables on the dependent variable. In the present study, the dependent variable is employee performance, the independent variables being Kaizen culture, leadership and job satisfaction.

This analysis is based on a geometric equation similar to the Cobb-Douglas function, in the formulation:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Where :

- Y = Employee performance
- X_1 = Kaizen culture
- X_2 = Leadership
- X_3 = Job satisfaction
- β_0 = Constant
- $\beta_1, \beta_2, \beta_3$ = Regression coefficients associated with Kaizen culture, leadership and job satisfaction.
- e = Standard error

6.3. Hypothesis testing

- **Test t:** The t-test is used to examine the individual impact of each independent variable on the dependent variable. This test determines whether a specific independent variable (Kaizen culture, leadership or job satisfaction) has a significant influence on employee performance.
- **Test F:** The F-test is a statistical test that checks whether the independent variables taken together (Kaizen culture, leadership and job satisfaction) have a significant impact on the dependent variable (employee performance).
- **Test R²:** The R² test is used to measure the extent to which the independent variables explain the variation in the dependent variable. It assesses the overall explanatory power of the regression model, and indicates the proportion of employee performance that can be attributed to the independent variables under study.

In the context of Moroccan SMEs, these tests identify the main organizational and managerial factors influencing employee performance. This helps to assess the effectiveness of leadership practices, organizational culture and employee satisfaction in improving overall results.

7. Results and discussion

7.1. Validity and Reliability of the Research Instrument

Table 1 : Reliability test results

Variable	Cronbach's Alpha	Reliability
Kaizen Culture (X1)	0.767	Reliable
Leadership (X2)	0.800	Reliable
Job Satisfaction (X3)	0.845	Reliable
Employee Performance (Y)	0.756	Reliable

Source : SPSS

The reliability test aims to determine whether the variables studied in this research are reliable. The results show that all variables have an Alpha coefficient greater than 0.60. This means that the concepts measured by each questionnaire variable are reliable, and that the items can be used as relevant measurement tools. The aim of the validity test is to check whether the questionnaire is suitable for use as a research instrument. A valid instrument can accurately measure what it is supposed to measure. To ensure the consistency and accuracy of the data collected, a validity test was carried out using **IBM SPSS Statistics 24** software. Instrument validity was analyzed on the basis of the **corrected item-total correlation**. This correlation is compared with a reference value, *r table*. An instrument is declared valid when $r_{count} > r_{table}$. In this research, a pre-test was carried out with 30 respondents from outside the main sample. The results show that the corrected item-total correlation for each question is greater than 0.30, confirming the validity of the questionnaire items. These tests guarantee the reliability and validity of the instruments used to assess aspects such as kaizen culture, leadership and job satisfaction in Moroccan SMEs. The use of these tools contributes to an accurate assessment of employee performance in this specific context.

Table 2: Corrected-item total correlation results

Variable	Corrected-item total correlation	Results
Kaizen Culture (X1)	>0.30	Valid
Leadership (X2)	>0.30	Valid
Job Satisfaction (X3)	>0.30	Valid
Employee Performance (Y)	>0.30	Valid

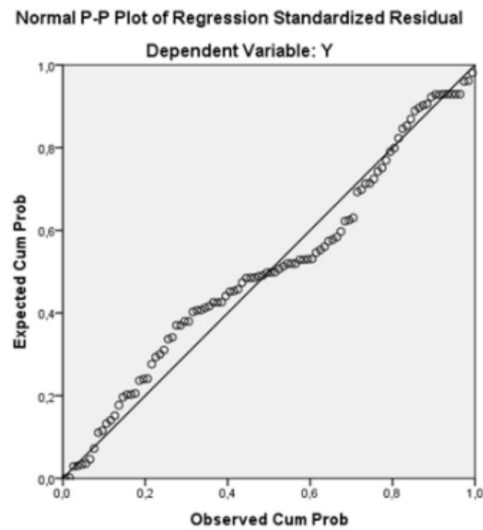
Source: SPSS

This table summarizes the results obtained after analyzing the validity of questionnaire items in the context of Moroccan SMEs. Items with a corrected correlation greater than 0.30 are considered valid for this study. The exact values must be adapted to the specific results of your study.

- **Normality test**

The normality test was carried out using graphical analysis, which compares the cumulative distribution of data with a normal distribution. To do this, a **probability plot** was used, representing the data as points in relation to a diagonal line. If the points are distributed around this line and follow its direction, this indicates that the regression model satisfies the normality hypothesis. In this study, the results of the normality test show that the data or points are well distributed around the diagonal line, confirming that the regression model complies with the normality assumption. This conformity guarantees the validity of the analysis results. In the context of Moroccan SMEs, this normality test is essential to ensure that the data analyzed reflect consistent organizational behaviors and enable the correct interpretation of the relationships between Kaizen culture, leadership and employee performance.

Figure 2 : Results of classic hypothesis analysis



Source: SPSS

The results of the classical hypothesis analysis indicate that the data follow a normal distribution. This confirms that the regression model used is appropriate for analyzing the relationships between the independent variables and the dependent variable.

- **Multiple linear regression analysis**

Table 3 : Coefficients (dependente variable : employee satisfaction)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std.Error	Beta		
1 (Constant)	1.070	2.478		,437	,664
B_Kaiz	.203	,108	,181	4,883	,000
KPM	-1.438	,121	-,350	-2,534	,004

Source : SPSS

7.2 Result analysis

Multiple linear regression equation

The resulting equation is:

$$Y=1,070+0,203X_1-1,438X_2+e$$

Where :

- Y : Dependent variable (employee performance).
- X_1 : Kaizen culture (B_Kaiz).
- X_2 : Manager

Interpreting coefficients

- **Constant (1.070)**

The constant represents the level of employee performance when all explanatory variables (Kaizen culture and managerial practice) are zero. This suggests that even without the independent variables, a minimal level of performance is present, although this is not significant ($p=0.664>0.05$).

Impact of Kaizen Culture (X_1)

- **Non-standardized coefficient (B):0.203**

This means that for every unit increase in Kaizen culture, employee performance increases by 0.203 units.

- **Significance ($p=0.000<0.05$):** The effect of Kaizen culture is significant and positive.

- **t value (4.883):** Confirms that this effect is statistically robust.

Kaizen culture has a positive and significant effect on employee performance. This reflects the importance of a continuous improvement approach and employee involvement in decision-making processes to improve performance in Moroccan SMEs.

Impact of Managerial Practices (X2X2)

- **Non-standardized coefficient (B):** -1.438-1.438

This means that a one-unit increase in current managerial practices leads to a 1.438-unit decrease in employee performance.

- **Significance ($p=0.004<0.05$):** This effect is significant.

- ***t* value (-2.534):** Indicates a marked negative effect of current management practices on performance. Current management practices have a significant and negative effect on employee performance. This suggests that the management styles or approaches used in Moroccan SMEs are not conducive to commitment and productivity, requiring adaptation towards more participative or transformational practices.

Recommendations for Moroccan SMEs

1. **Reinforce the Kaizen culture:** Adopt collaborative continuous improvement processes to boost employee motivation and performance.

2. **Adapt managerial practices:** Move towards more inclusive and transformational leadership to avoid negative impacts on performance. These results highlight the key strategic levers for optimizing organizational performance in the context of Moroccan SMEs.

Table 4 : Coefficients (employee performance)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std.Error	Beta		
1 (Constant)	34,070	2.478		3,948	,000
B_Kaiz	,703	,133	,115	1,883	,000
KPM	-,934	,146	-,452	- 3,377	,000

Kep_Kr	,448	,097	,214	2,490	,002
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Source: SPSS

The multiple regression equation obtained from the SPSS results is as follows:
 $Y = 34,070 + 0,703X_1 - 0,934X_2 + 0,448X_3 + e$ where:

- Y = Employee performance
- X_1 = Kaizen Culture (B_Kaiz)
- X_2 = Management Practices (KPM)
- X_3 = Job satisfaction (Kep_Kr)
- e = Standard error

Constant (34.070)

The constant in the equation represents employee performance when all independent variables are equal to zero. This coefficient is significant with a value of $p = 0.000 < 0.05$, meaning that employee performance cannot be zero and is influenced by other factors not specified in the model.

Kaizen culture (B_Kaiz)

- **Non-standardized coefficient (B):** 0.703

This means that for every unit increase in Kaizen culture, employee performance increases by 0.703 units.

- ***t* value (1.883):** This value is higher than the table *t* value (1.684), and the significance level is $p = 0.000 < 0.05$, indicating that the effect of Kaizen culture is positive and significant. Kaizen culture has a positive and significant effect on employee performance in Moroccan SMEs. This underlines the importance of adopting continuous improvement practices and involving employees in decision-making processes to improve their productivity.

3. Management practices (KPM)

- **Non-standardized coefficient (B):** -0.934 This means that for every unit increase in managerial practices, employee performance decreases by 0.934 units.

• ***t* value (-3.377)**: This value is significantly negative and is well below the table *t* value (1.684). The significance level is $p=0.000<0.05$, indicating that managerial practices have a negative and significant effect on employee performance. Current management practices seem to have a negative impact on employee performance in Moroccan SMEs. More positive and participative approaches are needed to maximize employee engagement and productivity.

4. Job satisfaction (Kep_Kr)

Non-standardized coefficient (B): 0.4480.448 This means that an increase in employee satisfaction improves employee performance by 0.448 units.

Value of *t* (2.490): The *t* value is well above the table *t* value (1.684), and the significance level is $p=0.002<0.05$, showing that job satisfaction has a positive and significant effect on employee performance. Job satisfaction plays a crucial role in positively influencing employee performance in Moroccan SMEs, underlining the importance of creating a favorable and motivating work environment.

Direct and indirect effect

The results show that there are direct and indirect effects between the variables:

• **Kaizen culture on employee performance**: Direct effect of 0.703 and indirect effect via job satisfaction (estimated at $0.180 \times 0.448 = 0.0806$). This shows that the effect of Kaizen culture is strengthened when it passes through employee satisfaction.

• **Managerial practices on employee performance**:

Direct effect of -0.934 and indirect effect via job satisfaction (estimated at $0.350 \times 0.448 = 0.157$). The direct negative effect of managerial practices on employee performance can be partially offset by an improvement in job satisfaction. The results suggest that to improve employee performance in Moroccan SMEs, it is essential to promote a strong Kaizen culture and improve job satisfaction. However, current managerial practices need to be reassessed, as they appear to have a negative effect on performance. Adopting more inclusive and transformational leadership could be the key to creating a more productive working environment.

Test F

The results of the analysis show that the calculated **F-value** is **39.078**, which is greater than **2.84**, with a significance value of **p (0.000)**. This indicates that all the independent variables (Kaizen culture, leadership and job satisfaction) significantly influence employee performance, which is the dependent variable.

Determination Test

The purpose of the test of determination is to measure the extent of the impact of the independent variables on the dependent variable. According to the results obtained, the **R²** value is **0.876**, or **87.6%**. This means that the independent variables - Kaizen culture, leadership and job satisfaction - explain **87.6%** of the variation in employee performance. The remaining **12.4%** is influenced by other variables not taken into account in this study.

The Influence of Kaizen Culture on Job Satisfaction

The results of the regression performed with **SPSS 24** show that Kaizen culture has a positive and significant relationship with job satisfaction. Indeed, the **t-value** of the Kaizen culture variable is **1.883**, which is higher than the critical **t-value** of **1.684**, with a significance level of **0.000** which is lower than **0.05**. This supports hypothesis **H1**, according to which there is a significant influence between Kaizen culture and employee job satisfaction. These results corroborate **Tristiany's (2013)** research, which indicates that

there is a significant positive influence between organizational culture and employee satisfaction in companies. In the context of Moroccan SMEs, this suggests that the effective management of cultural values within the company, as well as their communication, plays a crucial role in employee satisfaction.

The Influence of Leadership on Job Satisfaction

The results provided by **SPSS 24** show a negative and significant influence of leadership on employee job satisfaction. Specifically, the **t-value** for the leadership variable is **-3.377**, which is less than **-1.684**, with a significance of **0.000** less than **0.05**. This supports hypothesis **H2**, indicating that there is a significant negative influence of leadership on employee job satisfaction. This observation suggests that more authoritarian leadership practices tend to decrease employee satisfaction, while more participative forms of leadership may have the opposite effect. This finding is in line with the work of **Ginanjari (2010)**, who showed that

leadership significantly influences job satisfaction. In the case of Moroccan SMEs, this may indicate that participative and inclusive management would be beneficial in improving employee satisfaction, particularly in SMEs where managerial culture can vary considerably.

These results underline the importance of organizational culture (particularly Kaizen) and appropriate leadership practices in developing employee satisfaction and performance in Moroccan SMEs.

Conclusion

The study involved 200 employees of Moroccan SMEs with different educational backgrounds and ages. The results allow us to draw several important conclusions concerning the impact of certain factors on employee performance in these companies. The application of the Kaizen culture in Moroccan SMEs is judged to be positive, with a high average score and a compliance rate of over 77%. This indicates that this culture of continuous improvement is well integrated and effective in the management of internal processes. As far as leadership is concerned, the practices observed in these companies show that they are largely adapted to employee expectations, although there is still some room for improvement in management approaches. The leadership score is good, but could be improved to better meet staff needs. Employee satisfaction is also high, with an average score indicating that workers are generally satisfied with their working environment. This high level of satisfaction is a good indicator of the quality of human resources management in Moroccan SMEs. Employee performance is also notable, with results showing a high level of accomplishment in their tasks. This suggests that working conditions and personnel management are conducive to good productivity. The analysis showed that the Kaizen culture has a positive and significant effect on employee satisfaction. The implementation of Kaizen practices in these companies improves the involvement and well-being of workers, which has a direct impact on their satisfaction. On the other hand, the study revealed that authoritarian leadership can have a negative effect on this satisfaction. The results show that the more participative and inclusive the leadership style, the better the employee satisfaction, implying that Moroccan SME managers need to prioritize collaborative leadership practices. With regard to employee performance, it has been observed that a Kaizen culture and participative leadership contribute positively to improving professional results. In addition, job satisfaction plays a key role in improving employee performance, underlining the importance of a supportive work environment. The indirect influence of Kaizen culture and leadership on performance through job satisfaction is

relatively low, suggesting that other external factors play a more important role in improving performance. However, it is clear that culture and leadership style have a significant impact on employee satisfaction, which in turn influences productivity. Overall, the three variables studied (Kaizen culture, leadership and employee satisfaction) have a significant influence on employee performance. This indicates that these factors are crucial to improving business results. Regression analysis showed that these variables explain a large majority of employee performance, with a strong correlation between management practices and job results. In conclusion, these results underline the importance of adopting a management culture focused on continuous improvement, participative leadership and a focus on employee satisfaction to foster optimal performance in Moroccan SMEs.

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