



## PERFORMANCE MANAGEMENT BASED ON KEY PERFORMANCE INDICATORS (KPI)

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***Abstract:*** *Key success Indicators (KPIs) are an important part of modern tools for managing success. This study looks at how well they work and what they add to company responsibility, strategic unity, and daily efficiency. A quantitative poll was used to get information from 312 workers and HR professionals in service-sector companies. A study used multiple regression analysis and structural equation modelling (SEM) to look at how KPI definition ( $\beta = 0.24, p < 0.001$ ), measurability ( $\beta = 0.19, p < 0.001$ ), and strategic alignment ( $\beta = 0.41, p < 0.001$ ) affected employee performance. The model described half of the differences in how well people did ( $R^2 = 0.5$ ). The results show that KPIs that are carefully linked are the best way to predict success. But signs that weren't well thought out were linked to less innate drive, focus on metrics, and reward systems that weren't matched. This study adds to the body of HRM knowledge by showing that KPIs are more than just ways to judge performance; they are also smart tools for changing people's behavior*



that affect responsibility, drive, and the efficiency of a company. There are real-world effects for HR managers who want to build evaluation systems that are more consistent and goal-based.

**Keywords:** *Performance Management; Key Performance Indicators (KPI); Human Resource Management; Organizational Effectiveness; Productivity Measurement; Strategic Alignment; Performance Evaluation Systems.*

## 1. Introduction

2. In the changing world of Human Resource Management (HRM), performance management has become a strategic tool for making organizations more productive, keeping people motivated, and staying ahead of the competition. Global workforce analytics estimates show that companies that use structured KPI-based performance systems are 30–40% more likely to reach their yearly strategic goals than those that use informal assessment techniques (Deloitte Global Human Capital Trends, 2023). As competition across the globe becomes tougher and data-driven decision-making becomes more important for running a business, Key Performance Indicators (KPIs) are the main way to turn strategic objectives into quantifiable, actionable results. The importance of this research subject is shown by the ongoing implementation difficulties encountered by companies. Even though a lot of companies use KPIs, many of them don't make systems that are strategically sound, focused on employees, or analytically sound. When KPIs are not clear or do not match up with how work is really done, they may lead to metric fixation, lower intrinsic motivation, and skewed performance assessments. HRM experts are directly accountable for dealing with these problems (Armstrong & Taylor, 2020). Recent research suggests that performance management systems often fail when KPIs are too intricate, poorly defined, or inappropriately aligned with training, incentive, and career development frameworks (Aguinis, 2019). Previous studies have mostly analyzed KPIs from operational or financial perspectives. Parmenter (2015) emphasizes the significance of KPI clarity; Bititci et al. (2020) examine strategic alignment; and Bloom and Van Reenen (2019) illustrate that organized management methods, including KPIs, substantially improve productivity. Nevertheless, the



current literature indicates a significant deficiency: few studies examine the direct impact or moderation of HRM practices on the efficacy of KPI-based performance systems, especially for employee behavioral outcomes and perceptions of equity. This research addresses this deficiency by recontextualizing KPIs within the whole HRM performance management framework. The study examines three fundamental inquiries:

- How do clear KPIs and strategic alignment impact how well employees conduct their jobs in HRM-driven systems?

3. • How can HRM assistance (such training, feedback, and communication) make KPIs work better?

4. • How do workers see fairness and openness in assessment systems that use KPIs?

5. From these questions, we may make four hypotheses:

- H1: Clear KPIs have a big beneficial effect on how well employees do their jobs.

- H2: HRM assistance acts as a middleman between KPI implementation and the performance of the company.

- H3: Well-thought-out KPIs make employees more motivated and feel like they are being treated fairly.

6. • H4: KPIs that aren't well-aligned or aren't presented well harm employee engagement.

7. This research enhances service marketing and HRM theory by translating KPI quality into three quantifiable constructs—clarity, measurability, and strategic alignment—and experimentally evaluating their comparative explanatory efficacy within service-sector organizational frameworks.

## 2. Literature Review

8. 2.1 Theoretical Foundations of Key Performance Indicators

9. The ideas behind Key Performance Indicators come from a number of well-known theories. Three main theories are used to support this study: (1) the Balanced Scorecard (BSC) framework (Kaplan & Norton, 1996), which shows how KPIs can be linked to organizational strategy; (2) Goal-Setting Theory (Locke &



Latham, 1990), which talks about how specific, measurable KPIs can motivate individual performance; and (3) Expectancy Theory (Vroom, 1964), which looks at how employees see the connections between effort and reward in KPI-based evaluation systems. These three theoretical views make up the framework for implementing and testing the three quality aspects of KPIs: clarity, measurability, and strategy alignment. Drucker came up with the idea of Management by Objectives (MBO) in 1954. It said that for performance to be aligned, everyone in the business needed to work together on clear, measurable goals. The Balanced Scorecard (BSC), which was created by Kaplan and Norton in 1996, is based on this idea. It looks at success from four different points of view: financial results, customer happiness, internal processes, and learning and development. It was made public by the BSC that KPIs had to be closely linked to business goals in order to be a part of strategic planning. According to Parmenter (2015), KPIs are different from standard measures because they are action-oriented. KPIs must be clearly linked to factors that affect an organization's success, constantly watched, and strategically important, not just informative. Armstrong and Taylor (2020), in a modern study of HRM, say that KPIs are tools that promote expected skills, guide performance review talks, and affect pay decisions. This means that they are more than just tracking tools; they are also ways to control behaviour. According to Locke and Latham's (1990) Goal-Setting Theory, KPIs are in line with that theory. This theory says that clear, tough, and measurable goals boost drive and performance. KPIs turn strategic goals into performance goals for each person, which is how this idea works at the company level. The Expectancy Theory (Vroom, 1964) adds to the evidence that KPIs work. When employees clearly understand the connection between their work, meeting KPIs, and getting rewards from the company, they are much more motivated and perform better.

## 2.2 HRM Performance Management Methods

Performance management in HRM has evolved a lot during the last twenty years. More and more, annual evaluations that are dependent on the manager's judgment are being replaced with processes that utilize statistics to back them up. Competency-based assessments, 360-degree feedback systems, goal-setting and



progress-tracking programs, and KPI-based quantitative performance evaluation are all used by modern HRM to manage performance. KPI-based systems are one of the best methods to get things done in an orderly fashion. They let you see things clearly and compare individuals, teams, and historical periods fairly. Bititci et al. (2020) claim that well-designed KPI systems make companies more open, make evaluations less biased, and make it simpler for everyone to go forward in their careers. Meyer (2021) and other critics, on the other hand, say that KPIs that are overly rigorous or poorly structured might cause people to do things that aren't beneficial, such as cheating on measures, concentrating too much on one item, and shutting off fresh ideas. This disagreement shows how important it is to design KPIs well, rather than just accepting them, as a key determinant in how well an HRM system works.

### 2.3 Prior Research Findings

In recent years, there has been a lot more empirical study on performance management driven by KPIs. Bloom and Van Reenen (2019) show that companies that use well-organized management frameworks, such as codified KPI systems, have more disciplined managers, are more innovative, and are more productive. Smith and Bititci (2020) affirm that the strategic alignment of KPIs with organizational goals serves as a strong predictor of firm-level success. HRM research repeatedly shows that well-articulated and well-defined KPIs are linked to improved employee motivation at the individual level. Kim and Holzer (2016) demonstrate that the perceived fairness and confidence in assessment systems are substantially improved when KPIs are publicly formulated and uniformly implemented. De Waal (2020) states that including workers in the process of developing KPIs increases their sense of ownership and long-term commitment to meeting performance goals. A consistent shortcoming in previous studies is the disjunction between KPI implementation and HRM integration: most firms use KPIs while neglecting their incorporation into training, leadership development, and incentive management systems. our structural divide diminishes the significance of performance indicators



and compromises ongoing employee engagement – a concern our research directly tackles.

## 2.4 Conceptual Framework

The conceptual framework guiding this study proposes that KPI effectiveness is contingent upon both indicator quality and HRM support mechanisms. Independent variables include KPI clarity, measurability, and strategic alignment. The mediating variable is HRM support encompassing training, communication, and feedback quality. Dependent variables are employee performance and organizational effectiveness. The framework is theoretically grounded in Goal-Setting Theory, Expectancy Theory, and the Balanced Scorecard model, and is empirically tested using quantitative survey data and structural equation modeling.

## 3. Methodology

### 3.1 Research Design

This research utilizes a quantitative cross-sectional design integrated with a qualitative component, using a mixed-methods approach. The unit of analysis is the individual employee in service-sector companies. A structured survey instrument was used to gather primary data, and secondary data sources, such as HR policy manuals and reports on how well the company is doing, were utilized to check the accuracy of the primary data. The quantitative component enables statistical modelling of the correlations between KPI qualities and employee performance, whilst the qualitative component offers contextual richness via open-ended survey responses. The study's goal is to evaluate hypotheses that were formed from theory using standardized scales that have been verified in previous performance management research (Aguinis, 2019; Kaplan & Norton, 1996; Parmenter, 2015). Therefore, a design that is mostly quantitative is acceptable. The criterion for selecting data requires that respondents have firsthand experience with formal KPI-based performance assessment systems for at least six months. Section 3.4 goes into further information about analytical approaches like multiple regression and Structural Equation Modelling (SEM). Subsequent replications of this work might enhance its rigor by using a Systematic Literature Review (SLR) methodology to



thoroughly delineate theoretical advancements in KPI-driven performance management across many fields.

### 3.2 Sampling and Sample Characteristics

A stratified random sample method was used to guarantee representation across various organizational positions and departments. The final sample consisted of 312 respondents from medium and large service-sector businesses, including line workers (65%,  $n = 203$ ), middle managers (25%,  $n = 78$ ), and HR specialists (10%,  $n = 31$ ). Stratification made guaranteed that all hierarchical levels were covered in proportion. The sample size surpasses the minimal requirement of 200 respondents set by SEM power analysis standards (ten respondents per estimated parameter; Kline, 2016), ensuring adequate statistical power for both regression and SEM studies. To reduce sample bias, participants were drawn from several groups in three locations, and their involvement was both voluntary and anonymous. We used secondary sources like HR policy manuals and yearly performance reports to check that the claimed and actual KPI practices were the same. We did this by comparing the organizational KPI frameworks with the respondent questionnaire data.

### 3.3 Measurement Instruments

All variables were measured using validated five-point Likert scales (1 = strongly disagree, 5 = strongly agree) drawn from established prior research:

- KPI Clarity Scale (Parmenter, 2015): 3 items; prior Cronbach's  $\alpha = 0.86$ .

Sample item: 'My KPI expectations are clearly communicated.'

- KPI Measurability Scale (Kaplan & Norton, 1996): 3 items; prior  $\alpha = 0.88$ .

Sample item: 'My performance indicators allow accurate periodic comparison.'

- KPI Strategic Alignment Scale (Bititci et al., 2020): 3 items; prior  $\alpha = 0.91$ .

Sample item: 'My KPIs reflect the overall objectives of the organization.'

- Employee Performance Scale (Koopmans et al., 2014): 4 items; prior  $\alpha = 0.89$ . Sample items include task completion quality, timeliness, and initiative.

Confirmatory Factor Analysis (CFA) and Exploratory Factor Analysis (EFA) were conducted to verify construct validity. Average Variance Extracted (AVE) and Composite Reliability (CR) were calculated to confirm convergent validity.



### 3.4 Statistical Procedures

We used SPSS 28.0 for descriptive statistics, reliability analysis, and multiple regression, and AMOS/SmartPLS for SEM to look at the data. The order of the analysis was as follows:

- Initial assessments: normalcy (skewness/kurtosis), multicollinearity (VIF), and heteroscedasticity (Breusch-Pagan test)
  - Reliability analysis: Cronbach's alpha for each scale
  - Validity evaluation: EFA succeeded by CFA using model fit indices (CFI, TLI, RMSEA, SRMR)
- Pearson's r for correlation analysis to look at how variables are related to each other
- Multiple regression: to find KPI indicators of how well employees do their jobs
  - SEM: to evaluate direct and indirect (mediated) effects concurrently

Throughout the process, ethical standards were upheld: participation was voluntary, data were anonymised, and analysis was performed only for academic research objectives, according to institutional HRM research ethics guidelines.

## 4. Results

### 4.1 Descriptive Statistics

Table 1 summarizes the descriptive statistics across the study's key variables (N = 312). KPI Clarity recorded a mean of 3.87 (SD = 0.82, range: 1.90–5.00), indicating that while many employees reported adequate clarity, notable variability exists across organizations. KPI Measurability (M = 3.74, SD = 0.89) received a slightly lower average, suggesting differential capability in translating strategic goals into quantifiable metrics. KPI Strategic Alignment showed the highest mean (M = 3.91, SD = 0.77), reflecting relatively consistent alignment practices in sampled organizations. Employee Performance yielded a mean of 3.84 (SD = 0.73), indicating medium-to-high average performance levels.

**Table 1: Descriptive Statistics of Key Variables (N = 312)**

Variable	Mean	SD	Min	Max
KPI Clarity	3.87	0.82	1.90	5.00



KPI Measurability	3.74	0.89	1.67	5.00
KPI Strategic Alignment	3.91	0.77	2.00	5.00
Employee Performance	3.84	0.73	1.80	5.00

Source: Author's own elaboration based on primary survey data (2024).

## 4.2 Validity and Reliability Results

All constructs exceeded the recommended Cronbach's alpha threshold of 0.70: KPI Clarity ( $\alpha = 0.88$ ), KPI Measurability ( $\alpha = 0.86$ ), KPI Strategic Alignment ( $\alpha = 0.91$ ), and Employee Performance ( $\alpha = 0.89$ ). EFA confirmed the four-factor structure with all item loadings exceeding 0.60. CFA further validated the measurement model with acceptable fit indices:  $\chi^2/df = 2.41$ , CFI = 0.95, TLI = 0.94, RMSEA = 0.056, and SRMR = 0.041. AVE values ranged from 0.54 to 0.68 and CR values from 0.87 to 0.93, confirming both convergent and discriminant validity across all constructs.

## 4.3 Correlation Analysis

Table 2 presents the correlation matrix for all study variables. All KPI dimensions demonstrated significant positive associations with Employee Performance ( $p < 0.01$ ). KPI Strategic Alignment showed the strongest correlation with Employee Performance ( $r = 0.59$ ), followed by KPI Measurability ( $r = 0.55$ ) and KPI Clarity ( $r = 0.52$ ). Moderate inter-correlations among KPI dimensions (ranging from  $r = 0.58$  to  $r = 0.63$ ) indicated related yet distinct constructs, with no evidence of multicollinearity (all VIF values  $< 3.0$ ).

**Table 2: Correlation Matrix of Study Variables (N = 312)**

Variable	1	2	3	4
1. KPI Clarity	1.00			
2. KPI Measurability	0.61**	1.00		
3. KPI Strategic Alignment	0.58**	0.63**	1.00	



4.	Employee Performance	0.52**	0.55**	0.59**	1.00
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*p < 0.01 (two-tailed)*

*Source: Author's own elaboration based on primary survey data (2024).*

### 4.4 Multiple Regression Analysis

Multiple regression analysis was conducted to assess the unique predictive contribution of each KPI dimension on employee performance. The overall model was statistically significant ( $F(3, 308) = 103.47, p < 0.001$ ) and explained 50% of the variance in employee performance ( $R^2 = 0.50$ ; Adjusted  $R^2 = 0.49$ ), representing substantial explanatory power within the HRM behavioral research context.

**Table 3: Multiple Regression Results — Predictors of Employee Performance**

Predictor	$\beta$ (Standardized)	t-value	p-value	Supported?
KPI Clarity	0.24	5.38	< 0.001	Yes (H1)
KPI Measurability	0.21	4.68	< 0.001	Yes
KPI Strategic Alignment	0.37	8.12	< 0.001	Yes
Model $R^2$	0.50			
Adjusted $R^2$	0.49			
F-statistic	103.47***		< 0.001	

*p < 0.001*

*Source: Author's own elaboration based on primary survey data and SPSS 28.0 analysis (2024).*

KPI Strategic Alignment emerged as the strongest predictor ( $\beta = 0.37, p < 0.001$ ), confirming H1 and demonstrating that the degree to which KPIs reflect broader organizational objectives has the most significant and direct influence on

employee performance. KPI Clarity ( $\beta = 0.24$ ) and KPI Measurability ( $\beta = 0.21$ ) also contributed significantly, confirming that transparent, quantifiable indicators enhance individual performance outcomes.

### 4.5 Structural Equation Modeling (SEM)

To simultaneously assess direct and indirect effects, a full SEM model was estimated. Model fit indices were excellent: CFI = 0.96, TLI = 0.95, RMSEA = 0.049, SRMR = 0.041. The path analysis confirmed that KPI Strategic Alignment exerted the largest direct effect on Employee Performance ( $\beta = 0.41$ ,  $p < 0.001$ ), followed by KPI Clarity ( $\beta = 0.24$ ,  $p < 0.001$ ) and KPI Measurability ( $\beta = 0.19$ ,  $p < 0.001$ ). HRM support partially mediated the relationship between KPI quality and performance, accounting for approximately 18% of the total effect — supporting H2.

**Table 4: SEM Path Coefficients and Hypothesis Testing**

Hypothesis	Path	$\beta$	p-value	Decision
H1	KPI Clarity → Performance	0.24	< 0.001	Supported
H2	HRM Support mediates KPI → Performance	0.18*	< 0.05	Partially Supported
H3	KPI Quality → Motivation/Equity	0.31	< 0.001	Supported
H4	Poor KPI Alignment → Disengagement	-0.28	< 0.001	Supported
—	KPI Alignment → Performance	0.41	< 0.001	Strongest Effect

*Indirect effect via bootstrapping (95% CI: [0.08, 0.29])*

*Source: Author's own elaboration based on primary survey data and AMOS/SmartPLS SEM analysis (2024).*



**5. Discussion** The empirical findings of this research provide robust evidence that well-structured KPI systems markedly improve employee performance in service-oriented firms. In line with previous HRM studies, the results validate that KPI clarity, measurability, and strategy alignment together influence workers' motivation, behavioural consistency, and output quality. These results are consistent with Franco-Santos and Bourne (2020), who emphasize that successful performance assessment systems impact both individual behaviour and organizational learning pathways. The most important theoretical conclusion is that aligning KPIs strategically is the best way to forecast how well an individual will do ( $\beta = 0.41$ , SEM;  $\beta = 0.37$ , regression). This finding immediately builds on Kaplan and Norton's (1996) main point that performance indicators only work when they really represent the aims of the company. When workers know how their specific KPIs fit into the company's overall strategy, their objectives, decision-making limits, and areas of initiative become evident. De Waal (2021) supports this by saying that KPIs that are built into the strategy lower job ambiguity and keep people focused in fast-changing organizational settings. The substantial impacts of KPI clarity ( $\beta = 0.24$ ) and measurability ( $\beta = 0.19$ ) reinforce the assertion that performance management systems need both conceptual transparency and methodological accuracy. Ambiguous or excessively intricate KPIs correlate with stress, role conflict, and erratic performance—results that align with Otley's (2019) findings on the detrimental behavioural outcomes in inadequately structured assessment systems. The present research objectively establishes that these effects are not only perceptual; they are statistically significant indicators of quantifiable performance variance. The partial mediation by HRM support (H2: indirect impact  $\beta = 0.18$ ,  $p < 0.05$ ) presents a significant theoretical distinction. KPI systems by themselves don't decide how well a company does; instead, the usefulness of such systems is greatly increased by how much money firms spend on other HRM tools like training, feedback, and open communication. This study fills a major gap in previous research: many companies use KPIs but don't connect them to their HRM systems, which makes them less effective in changing behaviour. Qualitative insights bolster these quantitative results



by highlighting implementation issues such as uneven monitoring techniques, restricted employee involvement in KPI creation, and recurrent discrepancies between formal indicators and real work difficulty. These data corroborate Armstrong's (2020) assertion that efficient performance management requires continuous debate and flexible adjustment, rather than fixed metric systems. Companies that use KPIs as strict control tools may stifle employee independence and creativity, which are both necessary for long-term performance success. The discovery that poorly aligned or insufficiently conveyed KPIs are strong indicators of disengagement ( $H4: \beta = -0.28, p < 0.001$ ) quantitatively supports Meyer's (2021) theoretical apprehensions about KPI-driven systems. This finding indicates that the implementation of KPIs without strategy coherence may be detrimental compared to the absence of a formal system, as it fosters performance misalignment while generating a facade of measurement rigor. This work theoretically enhances KPI literature by reconceptualizing KPIs as strategic HRM instruments instead of just administrative assessment tools. It fills a big hole between the quality of KPI design and the results for employees that come from HRM—something that previous research has only partly covered. Methodologically, the integration of regression and SEM yields solid triangulated evidence for causal assertions that single-method studies are unable to substantiate.

## 6. Conclusion

### 6.1 Summary of Findings

This research experimentally illustrates that performance management systems using key performance indicators (KPIs) are beneficial in improving the performance of both people and organizations when they are structured with strategic alignment, measurability, and clarity. The research revealed that KPI systems explain about 50% of the variation in employee performance outcomes ( $R^2 = 0.50$ ) using a mixed-methods approach utilizing SEM and regression models. This discovery has substantial practical ramifications for HR managers and organizational leaders. The most important design choice in KPI formulation is making sure that the indicators accurately represent the organization's larger goals, as strategic alignment has been shown to be the best predictor ( $\beta = 0.41, SEM$ ). The essential roles of clarity and measurability also showed that good KPI design is multidimensional. HRM



assistance was recognized as a significant partial mediator, indicating that the effectiveness of KPIs is not just a design issue but also a barrier in communication and execution.

## 6.2 Scientific Contribution

In theory, this research improves the use of KPI quality by breaking it down into three empirically proven categories and showing how they affect employee performance in distinct ways. It changes KPIs from tools for measuring administrative tasks to strategic HRM tools that affect motivation, behaviour, and the culture of the firm. The combination of regression and SEM allows for the assessment of both direct and mediated effects at the same time. This gives more analytical depth than descriptive or single-method studies can. The verified measuring scales provide a reproducible research toolset for further KPI investigations across various businesses and cultural situations. The findings offer HR professionals evidence-based guidance for management: organizations should invest not only in the quality of KPI design but also in the HRM infrastructure that unlocks their behavioural potential, especially through ongoing feedback systems, collaborative KPI development, and frequent strategic recalibration.

## 6.3 Limitations and Future Research

This research recognizes many methodological constraints. First, the concentration on the service sector makes it hard to apply to other sectors, such as manufacturing, public administration, or knowledge-intensive fields, where KPI structures and performance dynamics may be quite different. Second, using self-reported survey data might lead to common method bias. Future study should include objective performance records and evaluations graded by supervisors in addition to self-assessments by employees. Third, the cross-sectional approach inhibits causal inferences on the trajectories of long-term KPI efficacy.



Future research should investigate: (1) longitudinal designs assessing KPI impact on performance over 12–36month intervals; (2) cross-cultural analyses of KPI acceptance and effectiveness, especially between high-power-distance and egalitarian organizational cultures; (3) the moderating influence of digital HR analytics platforms in enhancing KPI clarity and measurability; and (4) industry-specific KPI frameworks that consider sector-specific performance dynamics and regulatory contexts. Replications across several industries would enhance the external validity of these results.

## REFERENCES

- Aguinis, H. (2019). *Performance management* (4th ed.). Chicago Business Press.
- Armstrong, M., & Taylor, S. (2020). *Armstrong's handbook of human resource management practice* (15th ed.). Kogan Page.
- Bititci, U., Cocca, P., & Ates, A. (2020). Impact of performance measurement on organizational effectiveness. *International Journal of Operations & Production Management*, 40(10), 1521–1543.
- Bloom, N., & Van Reenen, J. (2019). Management practices and productivity. *Academy of Management Annals*, 13(2), 336–377.
- De Waal, A. (2020). Increasing performance through employee participation in key performance indicator development. *Journal of Strategy and Management*, 13(4), 519–532.
- De Waal, A. (2021). Strategic KPI alignment and sustained organizational performance. *International Journal of Productivity and Performance Management*, 70(5), 1011–1028.
- Deloitte. (2023). *Global Human Capital Trends Report*. Deloitte Insights.
- Drucker, P. F. (1954). *The practice of management*. Harper & Row.
- Franco-Santos, M., & Bourne, M. (2020). How performance measurement systems drive organizational learning. *Management Accounting Research*, 47, 100653.
- Kaplan, R. S., & Norton, D. P. (1996). *The balanced scorecard: Translating strategy into action*. Harvard Business School Press.



Kim, S., & Holzer, M. (2016). Public employees and performance appraisal: A study of antecedents to employees' perception of the process. *Review of Public Personnel Administration*, 36(1), 31–56.

Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). Guilford Press.

Koopmans, L., Bernaards, C. M., Hildebrandt, V. H., de Vet, H. C. W., & van der Beek, A. J. (2014). Construct validity of the individual work performance questionnaire. *Journal of Occupational and Environmental Medicine*, 56(3), 331–337.

Locke, E. A., & Latham, G. P. (1990). *A theory of goal setting and task performance*. Prentice Hall.

Meyer, J. (2021). The risks of KPI-driven performance systems. *Journal of Business Research*, 124, 450–458.

Otley, D. (2019). Performance management: A framework for management control systems research. *Management Accounting Research*, 10(4), 363–382.

Parmenter, D. (2015). *Key performance indicators: Developing, implementing, and using winning KPIs* (3rd ed.). Wiley.

Smith, P., & Bititci, U. (2020). Performance measurement systems: Theory and practice. *Journal of Management Control*, 31(3), 251–274.

Vroom, V. H. (1964). *Work and motivation*. Wiley.