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HMLR analysis on the predictions of work-force management best practices on corporate performance measures: A case study of a millennial workforce in a large-scale it company

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ABSTRACT

The objective of the present article is to investigate the impact of Workforce Management (WFM) best practices on the overall effectiveness of Corporate Performance Measures (CPM) using a case study of a large-scale IT company employing predominantly a millennial workforce. This analysis effectively establishes the correlation between these two variables by presenting substantiated evidence regarding the impact of these practices on overall corporate performance. The facets of WFM were grouped into Business Planning and Control; Talent Acquisition and Competency; and Employee Performance and Attitude, whereas CPM facets were classified into Organizational Culture and Efficiency; and Employee Satisfaction and Motivation. A closed-ended questionnaire survey with 115 questions was designed to investigate the complex interaction between the above variables. Statistical analyses, including bivariate, normality tests (skewness and kurtosis), correlation, and Hierarchical Multiple Linear Regression (HMLR) analyses, were conducted to examine the relationships and test the hypotheses. The findings reveal that bundles focused on business planning and talent acquisition were significant predictors of organizational culture and efficiency. In contrast, talent acquisition and employee performance were found to be strong determinants of satisfaction and motivation. The research provides empirical evidence that strategic WFM implementation positively affects overall corporate outcomes by fostering a collaborative and innovative work environment. These results also offer practical guidance for HR professionals seeking to design workforce strategies that align with the expectations of millennial, digitally savvy employees.

Contribution/ Originality: The research offers original insights by identifying and validating key workforce management (WFM) best practices that influence organizational culture and employee motivation, particularly within millennial-dominated IT environments. It provides a comprehensive empirical framework for HR leaders to optimize workforce management systems, resulting in improved overall corporate performance.

1. INTRODUCTION

Work-Force Management (WFM) system encompasses a dynamic array of processes crafted to maximize employee productivity by anticipating resource needs and orchestrating staff schedules with finesse. This practice goes beyond mere number-crunching; it involves intricately tracking daily performance metrics to unearth opportunities for enhancement, ensuring that each task is performed by the most suitable individual equipped with

the right skills, precisely when their expertise is needed [1]. The overarching ambition of WFM is to elevate organizational performance and competency, guaranteeing that a robust team with the requisite skills is readily available to meet the ever-evolving demands of the customers [2]. The challenge for corporate HR personnel is amplified by the emerging dominance of the millennial workforce, which is ushering in a new era of expectations. With projections suggesting that millennials will comprise a staggering 75% of the workforce by 2030, organizations must pivot to meet these demands by crafting a digitally savvy work environment that resonates with their values [3].

In this transformative landscape, the HR personnel find themselves in pivotal roles, charged with the responsibility of devising effective WFM strategies, especially in the recruitment and onboarding of millennial talent. Their expertise will be instrumental in shaping workplaces that not only attract the best talent but also retain the brightest minds of the new generation. A CHRO of a reputable consulting firm said at a recent global workforce meeting: "Employees are the most crucial asset for any organization, and holding onto the key talent is like trying to keep frogs in a wheelbarrow" [4]. The current body of literature uncovers a notable void in research that examines how best practices in workforce management influence organizational performance, especially in the context of the millennial workforce in an IT work environment [5-9].

The present research identifies best practices that can help design a robust WFM system, alongside insights into employee perceptions regarding CPM measures. The anticipated findings are poised to provide invaluable guidance for crafting an effective WFM strategy within any IT organization. The focal point of the study is the millennial demographic—individuals born in or after the 1990s—who fall within the age range of 20 to 35 years, typically possessing around 10 to 15 years of professional experience. The study endeavors to delve into the intricate relationship between WFM activities and various dimensions of corporate success, with a particular focus on the workforce employed in the IT industry born primarily in the current millennium. At the heart of this inquiry lies the concept of WFM, especially as it pertains to the recruitment of millennials and the subsequent impacts on overall corporate performance.

The characteristics of WFM (Independent Variable) were categorized into three distinct bundles: Business Planning and Control (BPC); Talent Acquisition and Competency (TAC); and Employee Performance and Attitude (EPA). Additionally, the framework of CPM (Dependent Variable) was divided into two broad categories, bundled as Organizational Culture and Efficiency (OCE) and Employee Satisfaction and Motivation (ESM). Data collection for this survey was conducted using a meticulously crafted, comprehensive closed-ended questionnaire comprising 115 questions, developed through collaboration with industry experts and thorough literature reviews. Bivariate analysis was performed to explore relationships between the above variables, with normality assessed through skewness and kurtosis tests, followed by correlation tests. These tests revealed complex interactions among the variables, indicating weak, moderate, or strong correlations based on the coefficients. Six hypotheses were evaluated utilizing Hierarchical Multiple Linear Regression (HMLR) to assess the impact of WFM best practices on CPM measures. All the statistical analyses were performed using MS Excel and SPSS tools. Figure 1 illustrates the HMLR model construct.

It is expected that the study provides valuable empirical insights and offers guidance on effective corrective measures that organizations can implement to cultivate and establish a truly 'World Class' WFM system. By examining WFM best practices, it identifies key attributes that contribute to excellence, including leadership strategies, employee engagement techniques, and innovative operational processes. The research outlines actionable steps that management can take to enhance productivity, foster a culture of continuous improvement, and ultimately achieve a benchmark of excellence that stands on par with the world's leading organizations.

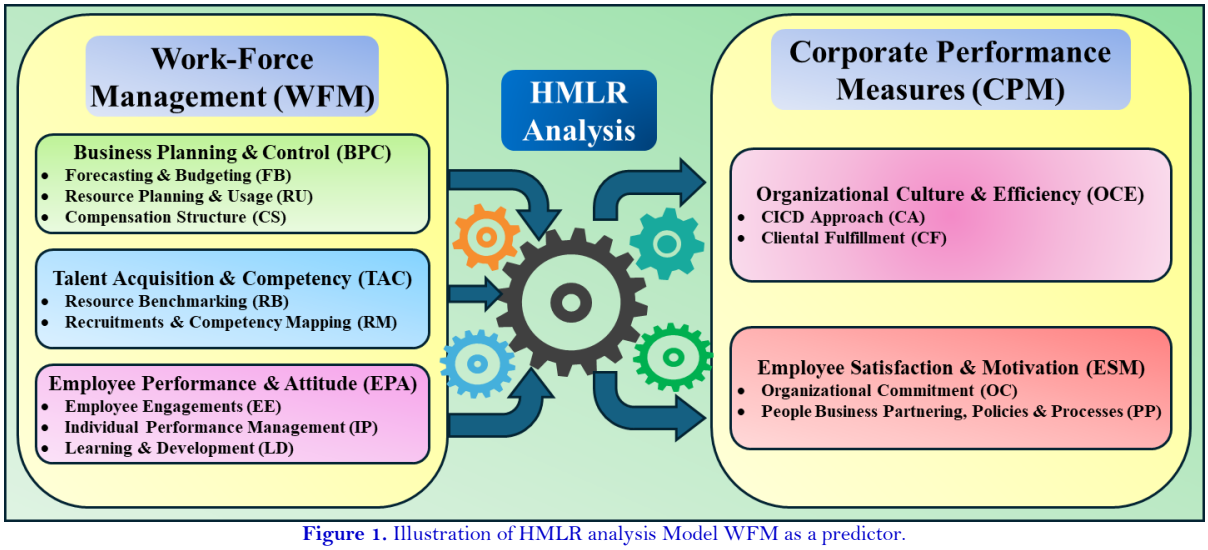

Figure 1. Illustration of HMLR analysis Model WFM as a predictor.

2. LITERATURE REVIEW

In the current environment, decisions regarding the workforce should be guided by an effective WFM system that relies primarily on data and analytics rather than solely on intuition and gut feelings. Companies often have only a limited understanding of the requirements of their existing and future workforce, lacking the insights needed to pinpoint and retain top talent. Therefore, organizations that implement workforce analytics tend to have the most engaged employees and flourish even under challenging circumstances.

According to Kumari [3], WFM has been acknowledged as vital for the success of organizations, with early studies emphasizing the enhancement of operational efficiency via planning, resource distribution, and routine oversight. Dhal et al. [4] propose that effective workforce planning allows for the ideal distribution of human resources, minimizes absenteeism, and aligns employee performance with the objectives of the organization across various sectors, including IT. Evidence from Indian organizations, as discussed by Anand et al. [10], indicates that strategic WFM not only boosts productivity but also has a beneficial effect on employee morale, promoting a culture of ongoing improvement and flexibility.

Recent studies show that the effectiveness of WFM policies relies on regular reviews and adaptations to environmental changes. Emphasized the importance of updating HR manuals to keep WFM strategies relevant and aligned with business challenges. Organizations that involve employees and leadership in developing WFM policies tend to experience greater employee satisfaction and improved performance. Calabrese et al. [11] depicted WFM as a multi-faceted concept, connecting business planning, talent management, and employee engagement to various organizational results.

Arora and Dhole [12] stated that millennials represent a growing share of the Indian workforce, particularly in IT and knowledge-driven sectors. Their unique expectations, such as meaningful work, rapid skill development, digital connectivity, and work-life balance, are reshaping WFM approaches in organizations. Research by Myers and Sadaghiani [13] indicated that millennial employees value transparent communication, personalized engagement, and opportunities for career progression, distinguishing their preferences from earlier generations. Ashford et al. [14] reported that organizations responsive to millennial values experience enhanced retention, job satisfaction, and overall effectiveness. Flexible scheduling, digital HR tools, and collaborative environments are found to be particularly attractive to millennials, positively influencing their engagement and performance.

The extant literature is characterized by a blend of conceptual and empirical approaches. Conceptual frameworks generally view WFM policies as independent factors that affect employee outcomes such as satisfaction, motivation, and loyalty. Furthermore, these models in the research, like those proposed by quantitative studies, especially those utilizing structured questionnaires and Likert-scale measurements, are prevalent, and data are frequently analyzed

through regression analysis, as outlined by Battini et al. [15]. Studies on generational differences in workplace attitudes, such as those by Kinger and Kumar [16], highlighted the need for context-specific research in fast-paced sectors like IT.

Research by Dutta and Mishra [17] indicated a strong link between HR policies and employee performance, but much of this work is outside the Indian context or unrelated to IT, revealing significant gaps. There is still a need to clarify how WFM strategies impact performance among millennials [18, 19]. Studies are mostly cross-sectional and rely on self-reported data or lack sector-specific depth. The dynamic nature of millennial preferences and the unique challenges of the Indian IT context are not always fully addressed. Additionally, the application of Hierarchical Multiple Linear Regression (HMLR) and mixed-methods approaches is rarely used to explore these relationships in Indian IT companies. Thus, there remains a significant research gap in applying advanced analytical techniques such as HMLR to isolate the unique and combined effects of WFM strategies on different facets of corporate performance among millennials [20-23]. The present research work addresses the same.

3. METHODOLOGY

Millennial hiring for a select Indian corporation in the IT sector was considered a case. The quantitative survey model employed features a structured set of closed-ended questions, meticulously crafted to capture the intricate dynamics between the variables under consideration. A no-objection certificate was obtained before the survey to guarantee that it was intended exclusively for educational and research purposes. The survey questions were prepared based on the literature study, inputs from the experts, and existing research gaps (refer to Annexure 1). In total, 115 questions were designed, comprising 75 questions on WFM and the remaining 40 questions on CPM bundles. Six research hypotheses were formulated using various combinations of the bundles, with the assumption that WFM Best Practices will help improve the overall CPM measures. Table 1 presents the standard construct of the variables under examination, along with the associated research hypotheses.

The survey instrument was subjected to a rigorous validation process to ensure content validity and clarity before the final survey. The draft questionnaire was reviewed by a panel of five SMEs from HRM and organizational behavior areas drawn from academia and industry. Their feedback led to the refinement of ambiguous items and the addition of relevant constructs as identified during the literature review. To further validate the instrument, a pilot test was conducted with a small sample (n = 25) targeting millennial employees not included in the main study. Based on the pilot responses, minor modifications were made to improve the items' clarity and response reliability. Finally, Cronbach's alpha was computed to evaluate the internal consistency of each construct. Facets under all the bundles exceeded the recommended 0.8 threshold, indicating satisfactory reliability before the main study.

Table 1. Variables, details, and hypotheses design.

Variable type	Variable name (Code)	Bundle name (Code)
Independent	Work-force management (WFM)	Business planning and control (BPC)
		Talent acquisition and competency (TAC)
		Employee performance and attitude (EPA)
Dependent	Corporate performance measures (CPM)	Organizational culture and efficiency (OCE)
		Employee satisfaction and motivation (ESM)

Hypothesis I	**There are positive effects of WFM Best Practices on the OCE.**
I-1	There are positive effects of the BPC on OCE
I-2	There are positive effects of the TAC on OCE
I-3	There are positive effects of the EPA on OCE
Hypothesis II	**There are positive effects of WFM best practices on the ESM.**
II-1	There are positive effects of the BPC on ESM
II-2	There are positive effects of the TAC on ESM
II-3	There are positive effects of the EPA on ESM

Informed written consent was obtained from all participants before the final survey and data collection. Participants were assured that their responses would remain anonymous, with no personally identifiable information collected or disclosed, thereby ensuring complete confidentiality. Participation was entirely voluntary at all stages of the study. All items were measured on a five-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree), enabling quantitative assessment of respondents' perceptions and experiences.

During the final survey, the demographic questionnaire was distributed among a diverse target group, initially consisting of 358 individuals, each contributing unique perspectives. The study employed a purposive (judgmental) sampling approach. The focus was narrowed to millennials (born in or after the 1990s, aged 20–35 years) who had approximately a decade of professional experience. Respondents who did not meet these criteria, including incomplete or uninterested responses, were excluded from further analysis. The final sample comprised 304 millennial employees who fit the specified criteria. Several reminders were sent to the target respondents, and a time frame of six weeks was allocated after the final reminder to submit responses using an online platform. However, the non-random selection may limit the generalizability of the findings to a broader or different population, but the final target size was within the recommended range for further quantitative analysis.

After the final data was acquired, Cronbach's alpha was recomputed to confirm the reliability of the collected responses. In the present research, WFM was assessed across three primary constructs, *i.e.*, BPC, TAC, and EPA. BPC facets included Forecasting & Budgeting (14 items; Cronbach's $\alpha = 0.85$), Resource Planning and Usage (11 items; Cronbach's $\alpha = 0.94$), and Compensation Structure (10 items; Cronbach's $\alpha = 0.89$). The TAC bundle comprised Resource Benchmarking (7 items; Cronbach's $\alpha = 0.87$) and Recruitments and Competency Mapping (13 items; Cronbach's $\alpha = 0.93$). EPA consisted of Employee Engagement (6 items; Cronbach's $\alpha = 0.92$), Individual Performance Management (8 items; Cronbach's $\alpha = 0.83$), and Learning and Development (6 items; Cronbach's $\alpha = 0.81$).

The dependent variable, CPM, encompassed two key dimensions. OCE was assessed via CICD Approach (8 items; Cronbach's $\alpha = 0.84$) and Cliental Fulfillment (8 items; Cronbach's $\alpha = 0.91$), while ESM facets were measured through Organizational Commitment (7 items; Cronbach's $\alpha = 0.86$) and People Business Partnering, Policies, and Processes (17 items; Cronbach's $\alpha = 0.90$). All above subscales demonstrated satisfactory to high internal consistency, indicating strong reliability and confirming the robustness of the measurement model.

Finally, bivariate analysis was conducted to explore the relationships between the variables as per the construct mentioned above. Skewness and kurtosis tests were performed to assess the normality of the data. Both Spearman and Pearson tests were conducted to explore the interrelationships between the various facets under consideration. Six hypotheses were verified using the HMLR technique, and all statistical analyses were performed using MS Excel and SPSS tools.

4. HMLR ANALYSIS

The bivariate analysis was conducted to investigate the relationship between the variables under consideration. The goal was to assess the strength and direction of these associations and to determine the significance of any observed differences.

To begin with, skewness and kurtosis tests were carried out on the survey data to evaluate the data's normality and to explore the non-parametric alternatives. As per Bulmer's principle, all five bundles, i.e., BPC, TAC, EPA, OCE, and ESM, fall within the normal range of 0 to 0.50 (Refer to Table 2). However, the authors decided to conduct both the Spearman and Pearson association tests to examine the interrelationships between the variables, and the summarized correlation results are presented in the table below.

Table 2. Summary of skewness, kurtosis, and correlation coefficient values.

Construct	Bundles	Skewness	Kurtosis	
WFM	BPC	0.325	-0.153	
	TAC	0.015	-0.259	
	EPA	0.198	-0.056	
CPM	OCE	-0.155	-0.378	
	ESM	-0.07	-0.006	
Dependent Variable	**Bundles**	**Spearman (r_s)**	**Pearson (C_p)**	**Levels**
OCE	BPC	0.619	0.785	Strong
	TAC	0.385	0.517	Moderate
	EPA	0.235	0.179	Weak
ESM	BPC	0.249	0.233	Weak
	TAC	0.411	0.589	Moderate
	EPA	0.659	0.771	Strong

The research findings demonstrate that WFM frameworks play a significant role in improving and unifying employee behaviors, particularly concerning CPM. They indicate that independent variables consistently enhance, converge, and demonstrate complete correlations with dependent variables. These frameworks consistently lead to synergistic effects that can enhance overall organizational effectiveness. However, these correlation results do not substantiate that one factor caused a change in another, *i.e.*, caution should be exercised regarding causality. The relationships were found to be in anticipated directions, *i.e.*, associations between BPC, TAC, and EPA bundles with the dependent variable. The correlation analysis, as mentioned before, solely demonstrates the relationship between two variables, encompassing both intensity and direction. The table shows a strong association between bundles *OCE* and BPC, and bundles *ESM* and EPA, with r_s = 0.619 and 0.659, respectively. Additionally, there is a moderate association between bundles *OCE* and TAC with r_s = 0.385, whereas bundles *TAC* and ESM have a mild association with r_s = 0.411. The low association is between bundles *OCE* and EPA and ESM and BPC, with r_s = 0.235 and 0.249, respectively. It may be noted that all these results were significant at $\rho < 0.01$.

Table 3. HMLR analysis of predictors*.

Dependent variable	Predictor	β	SEE	95% confidence interval	p-value	R^2	Hypothesis	Remark
OCE	BPC	0.692	0.213	0.584, 0.800	<0.001	0.748	I-1	Accepted
	TAC	0.459		0.340, 0.578			I-2	Accepted
	EPA	0.080		-0.034, 0.194	0.167		I-3	Rejected
ESM	BPC	0.031	0.189	-0.073, 0.135	0.597	0.633	II-1	Rejected
	TAC	0.715		0.595, 0.835	<0.001		II-2	Accepted
	EPA	0.562		0.446, 0.678			II-3	Accepted

Note: *Significant at the 0.01 level (1-tailed) & N = 304.

To investigate the evidence of synergistic effects and convergence of WFM and CPM bundles, Hierarchical Multiple Linear Regression (HMLR) analysis of the proposed hypotheses was further conducted. The objective was to examine and demonstrate whether the WFM bundles account for any variations in the bundles under the dependent variable (CPM) and whether these are statistically significant while controlling for other bundles. The primary goal was to assess if the newly introduced variables indicate any noteworthy enhancement in R^2 (Coefficient of Determination). Each regression model follows the standard linear specification with an additive stochastic error term (ε_i) to account for unexplained variation, assumed to be normally distributed with a mean of zero and constant variance. The stochastic error term (ε_i) captures the random influences and unobserved factors affecting the dependent variables and is reported in Table 3 as the Standard Error of the Estimate (SEE), which corresponds to the estimated standard deviation of ε_i in each equation and quantifies the average unexplained variation in the dependent variable after accounting for the predictors. The net effects of each WFM bundle on the CPM bundles

were estimated, and the variations in CPM bundles in correspondence with the variations in WFM bundles were examined. The results are presented in Table 3. In other words, it assesses which combination of the WFM bundles serves as an important predictor of CPM bundles.

The overall expression for the HMLR is mentioned below (Refer - Equation 1). Where Y_i is a dependent variable; X_{1i} is a BPC bundle; X_2 is a TAC bundle; X_3 is an EPA bundle; β_0 is the intercept and β_i are coefficients for X_i: i = {0-3}. For each CPM bundle, two distinct models were utilized following the above research hypothesis under consideration. The first regression model considers the variable 'Y_1' represented as the OCE bundle, substituted by 'Y_2' representing the ESM bundle in the second study.

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2\,i} + \beta_3 X_{3\,i} + \varepsilon_i \quad (1)$$

4.1. HMLR Analysis of WFM as a Predictor of OCE

The HMLR analysis demonstrated that targeted investments in specific bundles of WFM yield significant improvements in OCE within a millennial-driven IT organization, as indicated by the above table. BPC bundles showed a strong, positive impact ($\beta = 0.692$, $p < 0.001$) on OCE activities. This meant that for every one-unit increase in BPC, which includes subscales such as Forecasting and Budgeting; Resource Planning and Usage; and Compensation Structure organizations can expect a substantial 0.69-unit improvement in workplace culture and efficiency. Practically, this highlights that refining forecasting accuracy, ensuring transparent and competitive compensation systems, and optimizing resource allocation and usage will create a more agile, efficient, and positive organizational culture. The robustness of this relationship is confirmed by a narrow confidence interval ([0.584, 0.800]) and a low standard error (0.213), and the overall model explains 74.8% of the variance in OCE activities ($R^2 = 0.748$). In line with standard econometric practice, the subsequent empirical model incorporates a stochastic error term (ε_i) to capture random influences and unobserved factors affecting the dependent variables. Including this term ensures that the statistical analysis realistically reflects variations in outcomes beyond what can be explained by the identified WFM predictor bundles. In Table 3, for the OCE model, SEE values are 0.213 units, which quantify the average magnitude of unexplained variation remaining after accounting for the WFM predictors, with the lower value in the OCE model suggesting a better model fit. These results provide managers with clear evidence that strengthening planning, budgeting, and compensation processes is a highly effective strategy for cultivating a strong workplace culture.

TAC also significantly predicted OCE bundles ($\beta = 0.459$, $p < 0.001$). Enhancing TAC activities comprising Resource Benchmarking, Recruitment, and Competency Mapping leads to a 0.46-unit increase in organizational cultural and efficiency activities for each unit of improvement.

This demonstrates that focusing on systematic benchmarking, adopting robust recruitment strategies, and rigorously mapping competencies will directly contribute to a more efficient, innovative, and cohesive work environment. The model's narrow confidence interval ([0.340, 0.578]) and stable standard error further reinforce the practical value of these talent management best practices. For managers, this underscores the importance of continuous improvement in recruitment processes and competency frameworks as enabling levers for elevating organizational culture.

Conversely, EPA bundles which include Employee Engagement, Individual Performance Management, and Learning and Development do not show a statistically significant effect on OCE activities ($\beta = 0.080$, 95% CI [−0.034, 0.194], $p = 0.167$), as the confidence interval includes zero. This finding suggests that, while fostering engagement, performance management, and learning remain important, these alone are unlikely to yield major gains in organizational culture and efficiency without the foundational support of strong planning and talent acquisition systems.

4.2. HMLR Analysis of WFM as a Predictor of ESM

The concurrent regression model highlights different priorities for enhancing ESM activities. Here, the TAC bundle emerges as the most influential predictor ($\beta = 0.715$, 95% CI [0.595, 0.835], $p < 0.001$). For every unit increase in TAC driven by improvements in resource benchmarking, recruitment, and competency mapping employee satisfaction and motivation are expected to rise by 0.72 units. This indicates that investing in evidence-based recruitment, accurately mapping competencies, and setting transparent standards will drive motivation, satisfaction, and retention, especially within a millennial workforce.

EPA bundle also plays a critical role ($\beta = 0.562$, 95% CI [0.446, 0.678], $p < 0.001$) in enhancing ESM activities. Concrete improvements in engagement initiatives, individualized performance management, and targeted learning and development programs can lead to a 0.56-unit boost in employee satisfaction and motivation. Managers are thus encouraged to deploy ongoing engagement efforts and professional development opportunities, as these actions have direct, measurable benefits for workforce morale.

BPC bundle, however, does not significantly affect ESM activities ($\beta = 0.031$, 95% CI [−0.073, 0.135], $p = 0.597$), as its confidence interval crosses zero. This suggests that while business planning and control activities are essential for organizational culture and operational effectiveness, they do not independently drive employee motivation and satisfaction. Consistent with the regression modeling framework adopted in this study, the specification of each empirical model includes a stochastic error term (ε_i). This term accounts for inherent randomness and the effect of omitted variables, thereby improving the robustness of the model and aligning the analysis with standard econometric conventions. In Table 3, the SEE values for the ESM model are 0.189 units, which quantify the average magnitude of unexplained variation remaining after accounting for the WFM predictors, with the lower value in the ESM model suggesting a better model fit. This regression model explains 63.3% of the variance in ESM ($R^2 = 0.633$), offering strong empirical support for prioritizing TAC and EPA strategies when the goal is to build a more satisfied and motivated workforce.

5. CONCLUSIONS AND RECOMMENDATIONS

This study rigorously examined how WFM Best Practices predict CPM variables in a large-scale IT organization with a predominantly millennial workforce. WFM variables were operationalized through three distinct bundles - BPC, TAC, and EPA - while CPM was measured via OCE and ESM bundles. Using validated quantitative methods, including bivariate correlations, normality tests (skewness and kurtosis), and Hierarchical Multiple Linear Regression (HMLR), the research tested six hypotheses connecting these bundles and constructs. The effects of WFM Best Practices on CPM Measures are summarized in Table 4.

Table 4. Summary of predictor analysis of dependent variable.

CPM measures	WFMs best practices			R^2 proportion of variance explained
	BPC	TAC	EPA	
OCE	●	●	○	0.748
ESM	○	●	●	0.633

Note: ● Significant Predictor.
○ Non-Significant Predictor.

5.1. Key Empirical Findings Revealed

- The BPC bundle (comprising Forecasting and Budgeting; Resource Planning; and Compensation Structure) and the TAC bundle (Resource Benchmarking, Recruitment, and Competency Mapping) emerged as statistically significant positive predictors of OCE activities. For each unit increase in BPC and TAC, OCE increased by $\beta = 0.692$ and $\beta = 0.459$, respectively, both with narrow confidence intervals and low standard errors, demonstrating high reliability ($R^2 = 0.748$).

- TAC and EPA bundles (Employee Engagement; Performance Management; and Learning and Development) were significant predictors of ESM activities, with $\beta = 0.715$ and $\beta = 0.562$, respectively ($R^2 = 0.633$). These findings highlight the strong impact of talent acquisition, competency mapping, and employee-centric initiatives on workforce motivation and satisfaction.
- Conversely, the EPA bundle was not a significant predictor of OCE activities ($\beta = 0.080$, 95% CI includes zero), nor was the BPC bundle a significant predictor of ESM activities ($\beta = 0.031$, 95% CI includes zero), indicating that their influence is more targeted rather than broad-based.
- The regression models explained a substantial proportion of variance in the dependent constructs (74.8% for OCE and 63.3% for ESM bundles), underscoring the practical significance and robustness of these relationships.

5.2. Interpretation of Statistical Significance and Practical Outcomes

The strong and statistically significant β values, narrow confidence intervals, and low standard errors confirm that workforce planning, resource management, and compensation (under BPC bundle), together with strategic recruitment and competency mapping (under TAC bundle), are foundational to cultivating an agile, efficient, and collaborative organizational culture. Simultaneously, ongoing talent acquisition, rigorous competency development, employee engagement, and learning initiatives (TAC and EPA bundles) are vital for enhancing satisfaction, motivation, and retention among millennial employees. These results reinforce the need for data-driven and evidence-based HR strategies. In essence, the findings from both models provide actionable guidance: managers should prioritize strategic planning, resource management, and compensation systems to strengthen organizational culture, and focus on robust talent acquisition, competency mapping, employee engagement, performance management, and learning and development to drive employee satisfaction and motivation. The high explanatory power (R^2), significant β coefficients, and robust confidence intervals together establish a solid foundation for these evidence-based recommendations.

5.3. Practical Organizational Implications Include

- The company excels in aligning workforce planning with business strategy, deploying accurate forecasting and budgeting, optimizing resource allocation, and supporting project continuity.
- Staffing and revenue estimation processes, adoption of gig workforce models, digitalization, and compliance with hiring regulations all strengthen the organization's operational backbone.
- Robust performance management via KPIs, regular upskilling, and a focus on diversity, inclusion, and employee well-being further distinguish the organization as an employer of choice for millennials.
- Notably, no significant association was found between organizational commitment, people-business partnering, and the core WFM subscales of forecasting, budgeting, resource planning, or compensation, nor between CICD/client fulfillment and employee engagement or learning, indicating that these factors operate independently within the current organizational context.

5.4. Policy Implications

This study's findings offer several clear, actionable implications for both policymakers and HR leaders who are striving to improve organizational performance through effective workforce management.

- Strategic workforce planning should be a top priority. Organizations are encouraged to implement data-driven forecasting and resource allocation practices to better align workforce capabilities with shifting business requirements. A structured approach to planning and budgeting is vital for fostering a culture of operational excellence.

- Talent acquisition and competency development play a crucial role in building a strong organizational culture and enhancing employee satisfaction. Targeted recruitment, comprehensive onboarding, and ongoing skill development programs particularly for millennials and Gen Z employees should be integrated into HR policies and practices.
- Employee engagement and motivation can be substantially increased by promoting open communication, inclusive workplace practices, and meaningful recognition. HR leaders should ensure that regular feedback mechanisms, opportunities for career advancement, and transparent performance management systems are in place.
- WFM strategies must be tailored to the unique needs of different sectors and generational groups. For example, digital-native employees often prioritize flexibility, meaningful work, and access to technology factors that should shape organizational policy and the overall employee experience.

By bringing together these key policy insights, the study provides a practical roadmap for organizations seeking to cultivate adaptive, high-performing workplaces in an increasingly digital and dynamic environment.

5.5. Limitations and Future Research Directions

While this study sheds important light on the relationship between Workforce Management (WFM) Best Practices and Corporate Performance Measures (CPM) in a large-scale IT company with a predominantly millennial workforce, several limitations should be acknowledged. Firstly, the research sample was specific to millennials working within the Indian IT sector, which may limit the extent to which these findings can be generalized to other industries, countries, or age groups. Secondly, as the data were collected through self-administered questionnaires, there is the potential for self-reporting bias, including social desirability effects and common method variance. Lastly, the cross-sectional design of this study captures associations at a single point in time and therefore cannot establish causality or track changes in workforce dynamics over time. To address these limitations and build on the current findings, future research could adopt a longitudinal approach to observe how WFM Best Practices and corporate outcomes evolve. Comparative studies across different industries, organizational contexts, or generational cohorts would also help to strengthen the generalizability and relevance of the results. Additionally, supplementing quantitative surveys with qualitative methods such as interviews or focus groups could provide deeper insights into employee perspectives and organizational factors. Future studies may also explore the role of organizational culture, leadership styles, or technological adoption as moderating factors, offering a richer understanding of how WFM Best Practices contribute to overall organizational success. In conclusion, this study empirically validates the centrality of strategic workforce planning, talent acquisition, and employee engagement for achieving superior corporate performance in millennial-centric organizations. These actionable insights support HR leaders in designing evidence-based policies to build resilient, high-performing workplaces.

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Institutional Review Board Statement: This study was approved by the Institutional Review Board of KIIT University, India, under protocol number (KIIT/IRB/2024/018), dated (15 January 2024). Informed written consent was obtained from all participants, and all data were anonymized to protect participant confidentiality.
Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.
Competing Interests: The authors declare that they have no competing interests.
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Annexure 1 - Survey Questionnaire

Responses to be marked by providing ratings (on a scale of 1 – 5) that best describe the item:

1 - Strongly Disagree; 2 - Less Agree; 3 - Somewhat Agree; 4 - Highly Agree; 5 - Strongly Agree

B.Code	Questions/ Items
Part A - WFM Questionnaire	
(1). Business Planning and Control (BPC)	
BPC-1	The organization has adequate resources available to handle forecasting and budgeting activities.
BPC-2	The forecasting and budgeting activities are properly followed within the organization.
BPC-3	Adequate initiatives are implemented to keep the project budget on track.
BPC-4	Dynamic budgeting is practiced for resource allocation activities.
BPC-5	Information is gathered around unique requirements that need attention and improvement.
BPC-6	Short, medium, and long-term staffing requirements are precisely analyzed and predicted.
BPC-7	Project revenues, including Cost-to-Company (CTC), are correctly estimated for a specific period.
BPC-8	There is an appreciable use of the 'Gig Workforce' model employing Gen-Z and Millennial workforce.
BPC-9	Sufficient buffers are created based on future business needs and requirements.
BPC-10	Requisite resources are determined and acquired suitably based on the requirements and skills.
BPC-11	Accurate forecast planning is made to achieve and meet the precise scheduled deadlines.
BPC-12	Business cases for CSR are prepared and implemented.
BPC-13	The company has balanced corporate and societal cultures while promoting diversity.
BPC-14	There is a colossal use of appropriate digital tools, and there is nil guesswork culture.
BPC-15	Resource planning, allocation, and deployment are adequately executed within the organization.
BPC-16	The company maintains a comprehensive understanding of regulations on the 'Hiring Laws'.
BPC-17	Resource usage, capacity, and progress are properly managed and controlled.
BPC-18	Project analysis and job rotation activities are properly followed.
BPC-19	Tasks are allocated to team members based on their capacity, skill sets, and best fit for the job.
BPC-20	Total headcount, including yet-to-join, attrition, open positions, etc., is accurately analyzed.
BPC-21	The procedure to evaluate skill matrix, experience levels, resignations, etc., is followed dutifully.
BPC-22	The company pursues "Analogue Capacity Planning (ACP)" through a proper CMS.
BPC-23	The governance model enables WFM personnel to focus on and prioritize important tasks.
BPC-24	The accepted changes are implemented according to the plan to bring the promised results.
BPC-25	Skills @ local level, as well as global business leaders for future needs, are simultaneously groomed.
BPC-26	The company follows a well-laid policy on employment, compensation, and termination.
BPC-27	The company has a consummate compensation package and structure as per market standards.
BPC-28	The information on pay and benefits isn't locked up within the organization.

BPC-29	Value additions are a continuous process with an attempt to explore room for improvement
BPC-30	The 'Compa-Ratio' and 'Job-Stage' strategies are correctly implemented within the company.
BPC-31	The budgetary goals and objectives are conveyed to all levels of employees.
BPC-32	The payroll and attendance system are fully automated.
BPC-33	Reports are developed in 'Audit-Ready' formats for fast and efficient payment execution.
BPC-34	The employee benefits, including liability protection, are adequately designed and implemented.
BPC-35	There is a formal reward system to recognize employee behavior and outcomes.
(2). Talent Acquisition and Competency (TAC)	
TAC-1	The organization has adopted resource benchmarking as a 'best practice'.
TAC-2	The employees are trained to handle the complexities of hiring, managing, and integrating resources.
TAC-3	There is a defined criterion - what makes an employee excellent, average, or poor in a position.
TAC-4	The company follows the policy on the 'Hire-the-Best' strategy.
TAC-5	The process to assess and determine what to look for in future employees is well-established.
TAC-6	TAM is properly implemented, which includes time-to-fill, cost per hire, acceptance rate, etc.
TAC-7	Employees understand the job requirements (i.e., job description) against the skill matrix.
TAC-8	The company has a clear matrix on 'Recruitment and Competency Mapping (RCM)'.
TAC-9	HRM policies are properly incorporated into the corporate strategic decision-making.
TAC-10	The project delivery deadlines are accurately created to meet the legal and contractual requirements.
TAC-11	Employee work time preferences are considered while executing the resource allocation activity.
TAC-12	Workforce KPIs (Key Performance Indicators) are properly established within the company.
TAC-13	Employee skills (i.e., abilities, knowledge, and behaviors) are appropriately identified and mapped.
TAC-14	Different types of competency mapping are followed as per suitability and requirement.
TAC-15	The Occupational Analysis Chart (OAC) is used effectively.
TAC-16	Competency mapping uses training test scores, performance appraisals, and managerial ratings.
TAC-17	There is an effective use of behavioral and soft skills assessments, including personality tests.
TAC-18	The personal interviews are designed to highlight the areas that require additional probing.
TAC-19	The benchmark for core competency standards is designed at an acceptable level.
TAC-20	The performance standards for skills are created and mapped using a competency-based rating scale.
(3). Employee Performance and Attitude (EPA)	
EPA-1	The employees are highly enthusiastic and dedicated to their jobs.
EPA-2	The employees are engaged, and they care about their work and organizational performance.
EPA-3	There is a deliberate act to make the employee feel that their efforts make a difference.
EPA-4	The company has a policy to look into employees' basic needs and treat them equally.
EPA-5	There is a strategic approach to creating and sustaining a HPWS culture.
EPA-6	There is an effective communications system within all levels of the organization.
EPA-7	The organization has properly implemented the Individual Performance Management (IPM).
EPA-8	The actual performance of employees is compared with the established standards.
EPA-9	Different type of performance review methods is established within the organization.
EPA-10	The employees have a high level of communication, articulation, and interpersonal skills.
EPA-11	The employees have a high level of cognitive and leadership skills.
EPA-12	The employees have a high level of honesty, integrity, and a strong sense of duty.
EPA-13	Leaders act as role models and share their success stories.
EPA-14	The present system enables employees to track their progress in a gradual, phase-wise manner.
EPA-15	The organization has a conducive culture of learning and competence-building.
EPA-16	The work culture is rightly aligned with the organizational vision, mission, goals, and objectives.
EPA-17	The continuous process of planning, coaching, and reviewing employee performance is executed.
EPA-18	Employee fulfill and meet the organizational targets/ goals by bringing out their best.
EPA-19	The company advocates employee engagement and teamwork.
EPA-20	The creation of a conceptual and socially skilled workforce is the main strategy of the organization.
Part B - CPM Questionnaire	
(1). Organizational Culture and Efficiency (OCE)	
OCE-1	The organization follows a CICD strategy for customer satisfaction and delight.
OCE-2	All the stages of CICD are implemented properly during the software development lifecycle.
OCE-3	The company follows project delivery deadlines to meet expected levels of profits and productivity.
OCE-4	The historical forecasting and optimized scheduling activities are proactively planned.
OCE-5	There is a complete alignment of 'Resource-to-Demand' based on competency mapping.
OCE-6	Jobs are assigned to the right resources with proper delegation.
OCE-7	The staffing forecasts are engendered, resulting in informed business decision-making.
OCE-8	The organization follows risk mitigation plans for possible future scenarios.
OCE-9	The company follows a strict rule of a 'Customer-First' approach.
OCE-10	There is a high level of customer satisfaction and experience across the channels.

OCE-11	The resource costs are appropriately optimized using the 'Job Stage' mapping.
OCE-12	Organizational decisions are data-driven based on reliable information/ data.
OCE-13	Employees rely on and use technology to gain insight into overtime and absenteeism.
OCE-14	The client/ Partner contracts are properly negotiated and approved through the sourcing team.
OCE-15	The customer service delivery model is designed primarily to decrease the customer turnover rate.
OCE-16	Ample research on market competition is conducted to make proper decision-making.
(2). Employee Satisfaction and Motivation (ESM)	
ESM-1	The employees are loyal, satisfied, committed, and highly motivated.
ESM-2	The workforce community is inclusive, welcoming, and connected.
ESM-3	The employees accept and follow the organizational core values.
ESM-4	The organizational core culture fosters a 'Drive-to-Results' policy.
ESM-5	There is adequate resource accessibility to execute work properly.
ESM-6	The communication channels within the organization are effective and seamlessly interconnected.
ESM-7	The impact of unforeseen changes is reduced by the usage of "Technology@Work."
ESM-8	The leaders are caring, reliable, and supportive.
ESM-9	Employee perceive their work as meaningful, fulfilling, and sustainable.
ESM-10	Employees perceive an organization as a "Happier Workplace/ Great Place to Work (GPTW)".
ESM-11	The work environment is focused on job satisfaction and employee motivation.
ESM-12	There is an adequate opportunity for career development, advancement, and promotions.
ESM-13	The company has a proper "Rewards and recognition (R&R)" policy.
ESM-14	The employee perceives that their work is satisfying.
ESM-15	There is a high level of job security, and the employee attrition rate is low.
ESM-16	The total compensation packages are competitive and as per market standards.
ESM-17	Working conditions/ Hours are flexible, and work-life balance is encouraged.
ESM-18	The company encourages gender diversity and PWD issues.
ESM-19	People-at-Work perceive a high level of personal safety @ workplace.
ESM-20	There is ample support for employee health, well-being, and welfare.
ESM-21	The geographic ties are proper, and travel demands are reasonable.
ESM-22	Organizations provide ample opportunities for interpersonal collaborations.
ESM-23	The employee training is adequate, effective, and enriching.
ESM-24	Employees have good work-life balance, i.e., good mental health and no stress/ burn-out issues.