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Unraveling The Inter-Dynamics Of Strategic HR Drivers In The Indian Power Sector: A Multi-Utility Case Study From West Bengal

Ms. Jayita Datta (Basu)[1], Dr. Ranajit Chakrabarty[2]
[1]PhD. Scholar, Department of Business Management, University of Calcutta
[2]Retired Professor, Department of Business Management, University of Calcutta
Corresponding Author: jayita.dutt@rpsg.in

Abstract:
This study aims to explore the impact of the internal dynamics of certain pertinent HR Drivers/ Enablers / Outcome Indicators (viz., Organizational Culture, Employee Empowerment, Job Satisfaction, Employee Engagement, Organizational Climate, Motivation, Organizational Stress, OCB, Performance Management System, Team & Leadership) in the context of the employee segments of the Indian Power Sector, a case study of the State of West Bengal covering different employee segments of three Power Utilities (CESC, DVC and WBSEDCL). Different studies done in the space so far mostly focused on a single or a few HR variables. In this study we have aimed to focus on inter-dynamics of 11 different HR variables in the space of Power Sector which may be considered to be a novel effort in this direction exploring new dimensions of managing human capital at par with the prevalent dynamic technologically advancing scenario of Indian Power Sector in this era of Strategic Human Resource Management.
Keywords: *Organizational Culture, Employee Empowerment, Job Satisfaction, Employee Engagement, Organizational Climate, Motivation, Organizational Stress, Organizational Citizenship Behavior (OCB), Performance Management System, Team, Leadership, SPSS (Statistical Package for the Social Sciences), CESC (Calcutta Electricity Supply Corporation Limited), WBSEDCL (West Bengal State Electricity Distribution Company Limited), DVC (Damodar Valley Corporation)*

INTRODUCTION:

In today's evolving Indian power sector, effective human capital management is key to organizational success. As the industry undergoes reforms and digital transformation, HR has shifted from an administrative role to a strategic one. Aligning HR practices such as leadership development, stress management and employee engagement etc with organizational goals enhances productivity and well-being. The sector includes both public and private entities like, CESC, WBSEDCL and DVC, all operating in complex regulatory environments with diverse workforces.

This study examines the inter-dynamics of 11 HR performance drivers using validated psychometric tools to understand their impact on organizational success and aims at valuable insights to both academic research and HR strategy in a critical industry.

Statement of Problem:

Despite major investments in HR and workforce development, Indian power sector organizations face performance issues due to employee disengagement, stress, poor recognition, and weak leadership. A key problem is the lack of integrated approach on how multiple HR practices collectively affect performance across different levels. This study aims to fill that gap by analyzing the combined impact of various HR drivers on organizational outcomes in the sector.

Significance of Study:

This study is expected to be significant to multiple arenas as under:

- Aiding Strategic HR Planning for HR practitioners.
- Highlighting Areas of Leadership Intervention towards driving measurable improvements in employee performance.
- Offering a comprehensive model integrating 11 HR Drivers thereby bridging the theoretical and empirical gaps for Researchers.
- It underscores the importance of people-centric practices in critical infrastructure sectors and reform talent management policies in public enterprises.

LITERATURE REVIEW:

The study is grounded in established theoretical frameworks that explain how organizational systems,

leadership styles, and human resource practices shape employee behavior and performance outcomes. Salient features of the exploration of recent researches (2024 and 2025) on key dimensions may be elucidated as under.

Recent studies reaffirm the influence of organizational culture on employee outcomes. A 2024 study in the tourism sector of Jakarta established that a strong, supportive culture positively affects OCB and performance (Putra & Hartono, 2024). Similarly, in the education sector, a culture of inclusion enhances OCB via perceived work inclusion (Shafqat et al., 2024). Empowerment through autonomy and decision-making authority has been associated with higher job satisfaction and performance. WorkL's 2025 report identified empowerment as one of the top six drivers of employee engagement across Australian firms (WorkL, 2025). Organizations that granted employees control over their work environments saw increased innovation and loyalty. Quantitative research by Arifin et al. (2024) demonstrated that organizational culture and transformational leadership directly impact job satisfaction, which mediates the effect on OCB. Additionally, flexible work policies and recognition systems have been identified as key to enhancing satisfaction (The Australian, 2024).

Gallup's 2025 report showed a decline in managerial engagement to 27%, but also highlighted how training and regular feedback increased engagement scores significantly (Gallup, 2025). Similarly, WorkL found that reward, recognition, and information sharing were core engagement drivers (WorkL, 2025). An inclusive organizational climate was shown to significantly foster OCB and engagement. A 2024 study by Yu et al. emphasized that inclusive climates increase employees' sense of belonging and willingness to go beyond their formal roles (Yu et al., 2024). Employee motivation continues to be influenced by intrinsic factors such as autonomy and recognition, and extrinsic factors like compensation. Kundu & Gahlawat (2024) noted that transformational leadership enhances motivation through alignment with organizational goals.

Psychosocial Safety Climate (PSC) has become a significant predictor of stress-related outcomes. Research in 2025 highlighted the importance of PSC in mitigating workplace stress and promoting well-being (Dollard et al., 2025). Ethical AI and ESG practices have also been linked with reduced organizational stress (Akbar et al., 2025). Recent empirical studies show that trust, gratitude, and organizational identification are mediators between responsible leadership and OCB (Li et al., 2025). Inclusive leadership and transformational leadership remain significant predictors of OCB in diverse contexts (Kamal et al., 2025).

While less explored explicitly, PMS was discussed in connection with employee engagement and feedback systems. Effective PMS that includes frequent developmental conversations were linked to higher engagement and retention (Gallup, 2025). Transformational, responsible, and e-leadership styles were consistently associated with positive team outcomes. Shafqat et al. (2024) highlighted that e-leadership supports OCB by leveraging ICT, while Kamal et al. (2025) emphasized that trust in leadership builds team cohesion and performance.

Research Gap:

Despite rich literature on individual HR constructs, most empirical studies focus on single-factor effects. There is a notable absence of integrated models evaluating multiple HR performance drivers within a single organizational ecosystem. Moreover, the context of the Indian power sector — with its blend of public-private dynamics and unique socio-cultural challenges — remains underexplored in academic research.

Conceptual Framework:

The conceptual model underpinning this study integrates eleven critical HR performance drivers and enablers, categorized into three clusters:

- **Organizational Enablers**: Organizational Culture (OCTAPACE), Organizational Climate (MAO-C), Leadership (MLQ), Performance Management System (Keeping & Levy).
- **Employee-Centric Drivers**: Motivation (MAO-B), Psychological Empowerment (PE), Work Engagement (UWES-17), Job Satisfaction (MSQ).
- **Outcome Indicators**: Organizational Citizenship Behaviour (OCB), Team Effectiveness, Organizational Role Stress (ORS).

The above constructs are conceptualized as interdependent variables. Organizational enablers form the foundation, influencing employee experiences and perceptions. These, in turn, drive behavioral outcomes that collectively contribute to organizational success. The framework assumes that synergy across these

dimensions leads to superior workforce performance and resilience.

RESEARCH METHODOLOGY:

Research Design

This study adopts a **quantitative, cross-sectional research design** which aims at empirically examining the relationship between HR performance drivers/enablers and organizational success. The study is exploratory in its approach to identify which HR practices most significantly influence behavioral and performance-related outcomes in the Indian power sector.

The research is **applied** in nature, intended to solve practical HR challenges in power sector enterprises, and employs a **deductive approach** supported by established theoretical constructs.

Sampling Framework

Sample Distribution Summary:

- **Organizations under Study**: CESC Limited (private power utility), WBSEDCL & DVC (public sector utilities)
- **The Respondent** Groups have been divided into three parts as under based on their designations and roles:
  - Operational Staff**:** Clerical or Technical staff
  - Executives: Sr. Executive, Executive, Jr. Executive, Officer. Personal Manager, Asst. Manager, Deputy Manager, Engineer, Additional Dy. Manager
  - Senior Management: Deputy General Manager, Manager
- **Sampling Method**: Convenience sampling
- **Regions Covered**: Kolkata Metropolitan Area and Greater Kolkata
- **Sample Size**: 600

The distribution of the 600 respondents across the three organizations was as follows: CESC (n=272, 45.3%), WBSEDCL (n=256, 42.7%), and DVC (n=72, 12.0%). This distribution suggests a significant representation from CESC and WBSEDCL, likely reflecting their substantial operational scale in the Greater Kolkata area. DVC's smaller representation still contributes to the overall understanding of the power supply infrastructure in the region.

Sample Size Distribution across Organizations

	SR. MANAGEMENT	EXECUTIVE	OPERATIONAL STAFF	TOTAL	SR. MANAGEMENT	EXECUTIVE	OPERATIONAL STAFF	TOTAL
	No.	No.	No.	No.	%	%	%	%
CESC	70	86	116	**272**	46.7	43.0	46.4	**45.3**
WBSEDCL	62	90	104	**256**	41.3	45.0	41.6	**42.7**
DVC	18	24	30	**72**	12.0	12.0	12.0	**12.0**
TOTAL	**150**	**200**	**250**	**600**	**100**	**100**	**100**	**100**

Gender:
The study sample was predominantly male (71.0%, n=426) compared to female (29.0%, n=174). This trend was consistent across most employee segments and power sector organizations. Notably, the 'Executive' segment showed a relatively higher proportion of female employees (33.0%) compared to 'Operational Staff' (26.8%) and 'Senior Management' (27.3%). WBSEDCL had a higher percentage of female respondents (35.9%) compared to CESC (25.4%) and DVC (18.1%).

Gender x Employee Category

GENDER	OPERATIONAL STAFF	EXECUTIVE	SR. MANAGEMENT	TOTAL	OPERATIONAL STAFF	EXECUTIVE	SR. MANAGEMENT	TOTAL
	No.	No.	No.	No.	%	%	%	%
MALE	183	134	109	**426**	73.2	67.0	72.7	**71.0**
FEMALE	67	66	41	**174**	26.8	33.0	27.3	**29.0**
TOTAL	250	200	150	600	100.0	100.0	100.0	**100.0**

Gender x Organizational Affiliation

GENDER	CESC	WBSEDCL	DVC	TOTAL	CESC	WBSEDCL	DVC	TOTAL
	No.	No.	No.	**No.**	%	%	%	%
MALE	203	164	59	**426**	74.6	64.1	81.9	**71.0**
FEMALE	69	92	13	**174**	25.4	35.9	18.1	**29.0**
TOTAL	272	256	72	**600**	100.0	100.0	100.0	**100.0**

Age Groups:
- 20–34 years (Young Professionals)
- 35–44 years (Established Professionals)
- 45 years and above (Senior Professionals)

The largest proportion of respondents fell within the 35-44 years age group (48.3%, n=290), indicating a large workforce composed of mid-career professionals. The age distribution varied across employee segments, with the 'Executive' segment having the highest percentage of respondents in the 35-44 years category (62.5%), while the 'Senior Management' segment had the highest representation in the 45+ years category (64.0%). Across organizations, CESC had a higher proportion of older employees (45+ years: 46.7%), while WBSEDCL had a larger representation of younger employees (20-34 years: 14.1%

AGE	OPERATIONAL STAFF	EXECUTIVE	SR. MANAGEMENT	TOTAL	OPERATIONAL STAFF	EXECUTIVE	SR. MANAGEMENT	TOTAL
	No.	No.	No.	No.	%	%	%	%
20-34 YRS.	44	18	6	**68**	17.6	9.0	4.0	11.3
35-44 YRS.	117	125	48	**290**	46.8	62.5	32.0	48.3
45+ YRS.	89	57	96	**242**	35.6	28.5	64.0	40.3

TOTAL	250	200	150	600	100.0	100.0	100.0	100.0

Age Group x Employee Segment

Age Group x Organizational Affiliation

AGE	**CESC**	**WBSEDCL**	**DVC**	**TOTAL**	**CESC**	**WBSEDCL**	**DVC**	**TOTAL**
	No.	No.	No.	No.	%	%	%	%
20-34 YRS.	22	36	10	**68**	8.1	14.1	13.9	**11.3**
35-44 YRS.	123	132	35	**290**	45.2	51.6	48.6	**48.3**
45+ YRS.	127	88	27	**242**	46.7	34.4	37.5	**40.3**
TOTAL	272	256	72	**600**	100.0	100.0	100.0	**100.0**

Research Instruments Used:

The study utilized **eleven standard scales/instruments**, each measuring distinct HR drivers or outcomes:

Instrument	Construct Measured
OCTAPACE (Pareek)	Organizational Culture
MAO-C (Pareek)	Organizational Climate
MLQ (Bass & Avolio)	Leadership Effectiveness
Keeping & Levy PMS Scale	Performance Management
MAO-B (Pareek)	Work Motivation
Spreitzer PE Scale	Psychological Empowerment
UWES-17 (Schaufeli et al.)	Employee Engagement
MSQ (Weiss et al.)	Job Satisfaction
OCB Scale (Podsakoff et al.)	Organizational Citizenship Behavior
Pareek's Team Effectiveness Scale	Team Effectiveness
ORS Scale (Pareek)	Organizational Role Stress

Data Analysis

The data gathered using the above instruments was analyzed and the respective mean scores were arrived at for employee categories of each of the organizations towards each parameter of study. The statistical analysis was executed using SPSS (Statistical Package for the Social Sciences). A comparative analysis of the multivariate regression models developed across all three respondent groups— **Operational Staff** (N = 250), **Executives** (N = 200), and **Senior Management** (N = 150) has been executed. The objective was to identify which HR drivers function as key predictors across multiple organizational levels and which variables serve as strong dependent indicators of organizational dynamics and employee experience.

HR Predictors of Job Satisfaction

(Operational Staff Group, N = 250)

Regression Analysis was carried out to assess whether **Psychological Empowerment**, **Organizational Culture**, and **Employee Engagement** significantly predict **Job Satisfaction** among employees in the power sector. The goal was to statistically verify the conceptual model suggesting that employee perceptions of autonomy, workplace culture, and engagement influence their satisfaction levels. Here the Dependent Variable was Job Satisfaction (MSQ_Mean) and Independent Variables were construed to be Psychological

Empowerment Mean, Octapace Mean (Organizational Mean) and Employee Engagement (UWES) Mean. The method used was Standard Multiple Linear Regression. The overall Model (Vide Model 1 in the Annexure) was found to be statistically significant and the three predictors collectively explain **24.6**% of the variance in Job Satisfaction among employees. **Psychological Empowerment (β = .393)** emerged as the **strongest predictor** of Job Satisfaction, confirming that employees who experience higher autonomy, meaning, and influence in their roles report **higher workplace satisfaction**. **Organizational Culture (OCTAPACE)** also showed a significant positive influence (**β = .325**), indicating that openness, collaboration, and authenticity contribute meaningfully to satisfaction. **Employee Engagement (UWES)**, though slightly lower in magnitude (**β = .304**), still significantly contributes to Job Satisfaction, validating that **dedication and energy at work** correlate with higher morale.

HR Predictors of Organizational Culture

(Operational Staff Group, N = 250)

This regression model investigates whether **Job Satisfaction (MSQ)**, **Psychological Empowerment (PE)**, and **Employee Engagement (UWES)** significantly predict perceptions of **Organizational Culture (OCTAPACE)** among employees in the Indian power sector. The analysis was carried out to validate whether the emotional, cognitive, and motivational states of employees influence how they perceive and evaluate cultural dimensions such as openness, authenticity, trust, and collaboration. The model is statistically significant. Together, Job Satisfaction, Empowerment, and Engagement explain **14.6**% **of the variance in perceived Organizational Culture**. Psychological Empowerment was not found to be a significant predictor in this model. **Job Satisfaction** emerged as the strongest predictor of Organizational Culture. Employees who are more satisfied are also more likely to **positively perceive cultural values and practices** such as openness, confrontation, and authenticity. **Employee Engagement** also significantly contributes to cultural perception, validating that energized and involved employees are more attuned to **cultural cues and group norms**. **Psychological Empowerment**, though conceptually related, did not significantly predict culture perception when controlling for satisfaction and engagement—suggesting empowerment may act more as a parallel outcome than a cultural driver in this setting. (Vide Model 2 in the Annexure).

HR Predictors of Psychological Empowerment (PE)

(Operational Staff Group, N = 250)

This model examines whether **Job Satisfaction (MSQ)**, **Organizational Culture (OCTAPACE)**, and **Employee Engagement (UWES)** significantly predict **Psychological Empowerment (PE)** among employees in the power sector. The aim was to understand how affective (satisfaction), cultural (OCTAPACE), and motivational (engagement) states contribute to employees' perceived sense of meaning, competence, self-determination, and impact at work. Culture (OCTAPACE) is **not a significant predictor** of Empowerment in this model. **Job Satisfaction** is the **strongest predictor** of empowerment, confirming that emotionally fulfilled employees are more likely to feel competent, autonomous, and impactful. **Employee Engagement** also significantly contributes to empowerment, validating that **energized, dedicated, and absorbed employees** tend to feel more in control and purposeful. **Organizational Culture**, though relevant in theory, does not significantly predict empowerment here—possibly indicating that empowerment is shaped more by personal job experiences than broad cultural perceptions. (Vide Model 3 in the Annexure).

HR Predictors of Employee Engagement

(Operational Staff Group, N = 250)

This regression model explores whether **Job Satisfaction (MSQ)**, **Psychological Empowerment (PE)**, and **Organizational Culture (OCTAPACE)** significantly predict **Employee Engagement (UWES)**. The objective is to understand whether employees' affective satisfaction, psychological state, and cultural context contribute to their **vigour, dedication, and absorption at work**. The regression model is statistically significant. The predictors explain **19.8**% **of the variance in Employee Engagement**. **Psychological Empowerment (β = .217)** is the **strongest predictor** of Employee Engagement, reinforcing the idea that when employees feel autonomous, competent, and impactful, they engage more deeply with their work. **Organizational Culture (β = .202)** also significantly predicts engagement, suggesting that an

open, collaborative, and value-driven work environment fosters emotional and cognitive connection to work. **Job Satisfaction**, though statistically marginal (p = 0.050), contributes positively to engagement, reflecting that **satisfied employees are more likely to show energy, enthusiasm, and commitment**. (vide Model 4 of Annexure).

HR Predictors of Motivational Behaviour (MAO-B)

(Executives Group, N = 200)

This regression model examines whether **Organizational Citizenship Behaviour (OCB)**, **Performance Management System (PMS)**, and **Organizational Role Stress (ORS)** significantly predict **Motivational Behaviour (MAO-B)** among executive-level employees across CESC, WBSEDCL, and DVC. The analysis explores how supportive behaviors, formal performance structures, and stress conditions influence intrinsic and extrinsic motivational patterns within the workplace. The model is statistically significant. The predictors explain **12.5% of the variance in motivational behaviour** among executives. PMS was not a significant predictor of motivation in this model. **Organizational Role Stress** is the **strongest predictor** of Motivation (β = .355), suggesting that executives who experience greater role demands may also exhibit higher motivational drive—possibly as a **coping or compensatory response**. **OCB** significantly predicts motivation (β = .291), indicating that those who go above and beyond in their duties are also internally driven and invested in their roles. **PMS** was not statistically significant, implying that formal performance mechanisms may not meaningfully affect motivational orientations at the executive level. (vide Model 5 of Annexure).

HR Predictors of Organizational Citizenship Behaviour (OCB)

(Executives Group, N = 200)

This regression model investigates whether **Motivational Behaviour (MAO-B)**, **Performance Management System (PMS)**, and **Organizational Role Stress (ORS)** predict **Organizational Citizenship Behaviour (OCB)**—the discretionary, non-mandatory behaviours that support organizational functioning. The analysis helps assess whether internal motives, structural supports, and role stress dynamics encourage or inhibit citizenship behaviours among executives. The regression model is statistically significant, with the predictors jointly explaining **11.7% of the variance in OCB** among executives. **Motivational Behaviour** positively predicts OCB (β = .319), indicating that more intrinsically driven executives are likely to demonstrate **proactive, altruistic, and loyal behaviours** beyond formal job roles. **Performance Management System (PMS)** also has a **small but significant positive effect** (β = .146), implying that fair and structured evaluations may foster a culture of going above and beyond. **Organizational Role Stress** is negatively associated with OCB (β = –.261), suggesting that **high stress inhibits the willingness or capacity** of executives to exhibit discretionary contributions. (vide Model 6 of Annexure).

HR Predictors of Performance Management System (PMS)

(Executives Group, N = 200)

This model evaluates whether **Motivational Behaviour (MAO-B)**, **Organizational Citizenship Behaviour (OCB)**, and **Organizational Role Stress (ORS)** predict employee perceptions of the **Performance Management System (PMS)**. The analysis aims to understand if intrinsic motivation, discretionary work behaviour, and stress levels influence how performance appraisal systems are perceived at the executive level. The regression model is statistically significant. The predictors jointly explain **8.8% of the variance in PMS perceptions** among executive respondents. **Organizational Citizenship Behaviour** is the **strongest predictor** of PMS perception (β = .314), indicating that executives who engage in discretionary, collaborative behaviours also tend to perceive performance management more positively—likely due to their higher involvement and visibility. **Organizational Role Stress** has a significant **positive association** (β = .276), which may suggest that executives under pressure perceive PMS as a tool to structure and clarify roles and accountability—**not necessarily as a negative force**. **Motivational Behaviour** was not a significant predictor, suggesting that intrinsic drive alone doesn't strongly shape how executives view formal performance systems. (vide Model 7 of Annexure).

HR Predictors of Organizational Role Stress (ORS)

(Executives Group, N = 200)

This regression model assesses whether **Motivational Behaviour (MAO-B)**, **Organizational Citizenship Behaviour (OCB)**, and **Performance Management System (PMS)** significantly predict **Organizational**

Role Stress (ORS) among executive-level employees. The goal is to understand how internal motivation, discretionary behaviours, and formal appraisal mechanisms influence the perception of role-related stress. The model is statistically significant. The predictors explain **18.8% of the variance in Organizational Role Stress** among executives. **Motivational Behaviour** is the **strongest positive predictor** of Role Stress (β = .317). Highly driven executives may internalize goals and self-impose pressure, contributing to stress. **Organizational Citizenship Behaviour** negatively predicts ORS (β = –.264), indicating that individuals who voluntarily help others, avoid complaints, and take initiative **report lower role stress**, possibly due to greater role clarity and peer support. **Performance Management System** also significantly contributes to higher stress (β = .238), which may reflect **perceived rigidity, high expectations, or evaluative pressure**. (Model 8 of Annexure).

HR Predictors of Leadership Effectiveness

(Senior Management Group, N=150)

This regression analysis assesses whether **Team Effectiveness** significantly predicts **Leadership Effectiveness (MLQ)**. It explores how the quality of team dynamics, collaboration, and cohesion may shape perceptions of leadership within strategic and operational contexts. The model is significant, with team effectiveness explaining **22.3% of the variance in perceived leadership effectiveness**. Leaders who **foster effective teams**—characterized by shared goals, trust, and cooperation—are **rated more highly**. The **direct linear relationship** supports that team success is a reflection of leadership quality. (vide Model 9 of Annexure).

HR Predictors of Team Effectiveness

(Senior Management Group, N=150)

This analysis reciprocally evaluates whether **Leadership Effectiveness (MLQ)** significantly predicts **Team Effectiveness**. It investigates how transformational leadership competencies contribute to functional, aligned, and high-performing teams. Leadership effectiveness explains **22.3% of the variation in team effectiveness**, indicating a strong predictive relationship. **Leadership competencies directly drive team alignment and cohesion**. High scores on MLQ components like **inspirational motivation** and **individualized consideration** lead to **measurably stronger team outcomes**. (vide Model 10 of Annexure).

Summary of Key Predictive HR Drivers Across All Models

Findings from twelve regression models run across three organizational levels (Operational Staff, Executives, Senior Management), is elucidated as under. It provides strategic insights into **which variables most strongly influence critical HR outcomes**, helping organizations prioritize interventions for maximum impact.

Summary of Significant Predictors by Model

MODEL	DEPENDENT VARIABLE	SIGNIFICANT PREDICTORS	STRONGEST PREDICTOR (B)	R^2
1	Job Satisfaction (MSQ)	PE, OCTAPACE, UWES	**PE (.393)**	0.246
2	Organizational Culture (OCTAPACE)	MSQ, UWES	**MSQ (.264)**	0.146
3	Psychological Empowerment (PE)	MSQ, UWES	**MSQ (.315)**	0.220
4	Employee Engagement (UWES)	PE, OCTAPACE, MSQ	**PE (.217)**	0.198
5	Motivation (MAO-B)	OCB, ORS	**ORS (.355)**	0.125
6	Organizational Citizenship (OCB)	MAO-B, PMS, ORS	**MAO-B (.319)**	0.117
7	Performance Management System	OCB, ORS	**OCB (.314)**	0.088
8	Organizational Role Stress (ORS)	MAO-B, OCB (–), PMS	**MAO-B (.317)**	0.188
9	Leadership Effectiveness (MLQ)	Team Effectiveness	**TEAM (.472)**	0.223
10	Team Effectiveness (TEAM)	Leadership (MLQ)	**MLQ (.472)**	0.223

➢ The Strategic interpretation implies Empowerment, Satisfaction, Engagement, and Culture form a tight interdependent core (interconnected drivers) thus, improvement in one reinforces others. **PE → MSQ (β = .393)** and **MSQ → PE (β = .315)**: Reinforcing psychological empowerment– satisfaction link.

➢ Organizational Stress has been inferred as a Central Node, reducing which enhances performance, motivation and Organizational Citizenship Behaviour. MAO-B → ORS (β = .317): Motivation significantly predicts stress, highlighting high internal pressure in executives.

➢ Motivation fuels OCB and PMS positively and at the same time increases stress highlighting the need for balanced motivational environments.

➢ Leadership–Team Symbiosis shows effective leadership fosters better teams, and strong teams in turn validate perceptions of leadership—a reinforcing HR loop. **Team → Leadership (β = .472)** and **Leadership → Team (β = .472)**: Symmetric and strong in Sr. Management.

➢ One of the unexpected findings from the segment was the formal Performance Management Systems have limited the motivational impact at the executive level of the power sector.

➢ The weak effect of organizational culture on Psychological Empowerment shows that cultural support may not automatically result in empowerment unless paired with role-level engagement.

➢ OCB's impact on Organizational Stress is negative which indicates that discretionary behaviors reduce stress—perhaps through collaborative support and informal buffers.

Comparison of HR Driver Mean Scores by Power Utilities

A comprehensive descriptive analysis comparing the **mean scores of eleven Human Resource (HR) performance drivers and enablers and indicators**—namely Leadership Effectiveness (MLQ), Team Effectiveness (TEAM), Psychological Empowerment (PE), Employee Engagement (UWES-17), Job Satisfaction (MSQ), Organizational Culture (OCTAPACE), Organizational Climate (MAO-C), Motivational Behaviour (MAO-B), Performance Management System (PMS), Organizational Citizenship Behaviour (OCB), and Organizational Role Stress (ORS)—across the three major power sector entities in India: **CESC**, **WBSEDCL**, and **DVC** has been conducted.
The purpose of this comparison was to identify **relative strengths and weaknesses in HR performance** across organizations and to understand **patterns of organizational effectiveness** through aggregated employee perceptions.

Tabular Comparison of HR Driver Mean Scores by Organization

HR DRIVER	CESC	WBSEDCL	DVC
LEADERSHIP (MLQ)	82.64	82.37	81.22
TEAM EFFECTIVENESS (TEAM)	76.80	74.16	58.11
PSYCHOLOGICAL EMPOWERMENT (PE)	64.61	64.18	67.90
EMPLOYEE ENGAGEMENT (UWES-17)	64.96	62.52	62.10

JOB SATISFACTION (MSQ)	75.66	74.63	79.10
ORGANIZATIONAL CULTURE (OCTAPACE)	120.54	115.48	117.33
ORGANIZATIONAL CLIMATE (MAO-C)	252.00	252.00	252.00
MOTIVATIONAL BEHAVIOUR (MAO-B)	200.17	201.87	201.08
PERFORMANCE MANAGEMENT SYSTEM (PMS)	118.21	114.04	126.50
ORGANIZATIONAL CITIZENSHIP BEHAVIOUR (OCB)	147.27	148.19	145.00
ORGANIZATIONAL ROLE STRESS (ORS)	80.24	66.60	87.08

Comparative Insights and HR Strength and Weaknesses of the power utilities under study may be elucidated as under:

CESC

- **Strengths**:

o Highest scores in **Engagement (64.96)**, **Organizational Culture (120.54)**, and **Leadership Effectiveness (82.64)**.

o Maintains relatively high scores in **Team Effectiveness**, **PMS**, and **OCB**, reflecting a culture of cohesion and accountability.

- **Weakness**:

o Moderate score in **Role Stress (80.24)**, which although lower than DVC, remains higher than WBSEDCL.

WBSEDCL

- **Strengths**:

o Consistently high in **Motivational Behaviour (201.87)** and **OCB (148.19)**.

o Lowest mean score in **Organizational Role Stress (66.60)**, suggesting efficient role clarity and lower workplace stress.

- **Weakness**:

o Lowest scores in **Organizational Culture**, **Team Effectiveness**, and **Engagement**, indicating possible disengagement and cultural misalignment.

DVC

- **Strengths**:

o Leading in **Psychological Empowerment (67.90)** and **Job Satisfaction (79.10)—** suggesting strong individual morale.

o High score in **Performance Management System (126.50)**, indicating robust appraisal mechanisms.

- **Weakness**:

o Lowest in **Team Effectiveness (58.11)**, **Engagement**, and **Leadership Effectiveness**.

o **Highest Organizational Role Stress (87.08)** across the three entities—flagging concern regarding work pressure, conflicting demands, or poor role structuring.

Each organization shows a **distinct HR profile**, based on its **relative strengths and vulnerabilities** across the 11 drivers:

- **CESC**: Well-rounded HR performance with strong **leadership, engagement, and cultural strength**.
- **WBSEDCL**: Displays strong **motivation and citizenship behaviors**, but may need to strengthen **cultural cohesion and team collaboration**.
- **DVC**: Reflects **high employee empowerment and satisfaction**, but suffers from poor **team dynamics and elevated role stress—**a signal for structural interventions.

Strategic Implications of the Study:

This descriptive analysis can inform **customized HR strategy** and **intervention design** for each organization:

- **CESC Limited** can continue leveraging its leadership and engagement assets to drive innovation and change readiness.
- **WBSEDCL** may benefit from targeted team-building and culture-strengthening initiatives to match its strong motivation and OCB levels.
- **DVC** urgently needs attention on **team development, leadership capacity-building**, and **stress mitigation** to fully capitalize on its empowered and satisfied workforce.

CONCLUSION:

We may conclude the HR Driver/ Enabler-wise interpretive analysis in case of Indian Power Sector, as inferred from the study, as under:

A. Psychological Empowerment

Psychological Empowerment emerged as one of the most pivotal HR enablers. It demonstrated strong positive correlations with both **Job Satisfaction (r = .393)** and **Employee Engagement (r = .362)**, reinforcing **Spreitzer's (1995)** framework that states, empowerment enhances intrinsic motivation. Regression analysis confirmed that empowerment significantly predicted **Engagement** and was itself influenced by **Job Satisfaction**, forming a mutually reinforcing loop.

Empowered employees feel more capable, autonomous, and impactful—driving discretionary effort and satisfaction.

B. Job Satisfaction

Job Satisfaction served as both an outcome and a predictor. It was significantly influenced by **Psychological Empowerment**, **Organizational Culture (OCTAPACE)**, and **Engagement** (R^2 = 0.246), highlighting the multidimensional foundation of satisfaction. It also significantly predicted **Empowerment and Organizational Culture**, aligning with **Herzberg's Two-Factor Theory**, where intrinsic factors (e.g., meaning, responsibility) play a central role.

Job Satisfaction was one of the strongest drivers of culture and empowerment, implying its foundational importance.

C. Employee Engagement

Employee Engagement was found to be a **mediating construct**—predicted by empowerment and culture and predictive of job satisfaction. Correlationally, it was **positively linked** with PE (r = .362), MSQ (r = .304), and OCTAPACE (r = .291), aligning with **Schaufeli and Bakker's (2004)** Job Demands–Resources model.

Engagement acts as a "performance engine"—both driven by and driving positive outcomes.

D. Organizational Culture

Organizational Culture though moderately correlated with other drivers, served as a structural enhancer. Regression results indicated that satisfaction and engagement significantly predict OCTAPACE scores (R^2 = 0.146). However, its influence on **empowerment** was weak, suggesting that **culture alone is insufficient unless personalized through job design or leadership**.

Culture shapes climate and values but must be operationalized to empower individuals.

E. Motivtional Behaviour

MAO-B was a significant **predictor of Role Stress and OCB**, but also **increased with stress**—revealing a complex, possibly compensatory mechanism. Motivation in executives may be **pressure-driven**, and while it drives outcomes, it also contributes to elevated stress levels.

High motivation without structural or emotional support may backfire, leading to fatigue or burnout.

F. Organizational Role Stress

ORS emerged as both a dependent and independent variable. It was positively predicted by **Motivation (β = .317)** and **Performance System (β = .238)**, and negatively by OCB. This suggests that performance pressure and motivational intensity elevate stress unless buffered by voluntary, collegial behavior.

ORS is a **stress-performance paradox**: pressure may drive productivity but at a cost to well-being.

G. Organizational Citizenship Behaviour

OCB was positively influenced by **Motivation (β = .319)** and **Performance Management System**, but negatively linked to stress. This implies that **OCB thrives when employees are motivated and recognized** but deteriorates under persistent pressure.

OCB is a health indicator—its presence shows strong culture, trust, and motivation; its decline may signal burnout.

H. Performance Management System

PMS was positively predicted by OCB and ORS but had no significant direct effect on motivation—highlighting that **formal systems alone may not inspire intrinsic effort**. It appears more as an accountability structure than a motivator.

PMS works best when tied to recognition, development, and discretionary contributions—not just compliance.

I. Team Effectiveness

Team effectiveness and leadership had a **reciprocal predictive relationship (β = .472)**, indicating mutual reinforcement. Teams perform better under transformational leadership, and team performance reinforces leadership credibility—supporting **Kozlowski & Ilgen (2006)**. Strong leaders build strong teams; strong teams validate and sustain effective leadership.

J. Leadership Effectiveness

MLQ was driven by team effectiveness and also predicted it—closing the **strategic leadership loop**. Leaders who inspire, develop, and align teams receive high effectiveness ratings, and such environments nurture more cohesive, high-performing teams. Leadership is not just a role but an emergent property of team dynamics.

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ANNEXURE

Model 1

- **Dependent Variable**: Job Satisfaction (MSQ_Mean)
- **Independent Variables**:
  - PE_Mean (Psychological Empowerment)
  - OCTAPACE_Mean (Organizational Culture)
  - UWES_Mean (Employee Engagement)
- **Method Used**: Standard Multiple Linear Regression

Model Summary

STATISTIC	VALUE

R	0.496
R^2	0.246
ADJUSTED R^2	0.236
F-STATISTIC	25.917
SIGNIFICANCE (P-VALUE)	< 0.001**

Regression Coefficients

PREDICTOR	STANDARDIZED BETA (**B**)	T-VALUE	SIG. (P)
PSYCHOLOGICAL EMPOWERMENT	**0.393**	Significant	p < .001
ORGANIZATIONAL CULTURE	0.325	Significant	p < .001
EMPLOYEE ENGAGEMENT	0.304	Significant	p < .001

Model 2

- **Dependent Variable**: OCTAPACE_Mean (Organizational Culture)
- **Independent Variables**:
  - MSQ_Mean (Job Satisfaction)
  - PE_Mean (Psychological Empowerment)
  - UWES_Mean (Employee Engagement)
- **Method**: Standard Multiple Regression (Enter method)

Model Summary

STATISTIC	VALUE
R	0.383
R^2	0.146
ADJUSTED R^2	0.136
F-STATISTIC	14.058
SIGNIFICANCE (P-VALUE)	< 0.001**

Regression Coefficients

PREDICTOR	STANDARDIZED BETA (**B**)	T-VALUE	SIG. (P)
JOB SATISFACTION (MSQ)	**0.264**	4.149	< 0.001
PSYCHOLOGICAL EMPOWERMENT	–0.013	0.186	0.853 (ns)
EMPLOYEE ENGAGEMENT (UWES)	**0.216**	3.349	0.001

Model 3

- **Dependent Variable**: PE_Mean (Psychological Empowerment)
- **Predictors**:
  - MSQ_Mean (Job Satisfaction)
  - OCTAPACE_Mean (Organizational Culture)
  - UWES_Mean (Employee Engagement)
- **Method**: Multiple Linear Regression (Enter)

STATISTIC	VALUE
R	0.469
R^2	0.220
ADJUSTED R^2	0.210
F-STATISTIC	23.062
SIGNIFICANCE (P-VALUE)	< 0.001**

Regression Coefficients

PREDICTOR	STANDARDIZED BETA (**B**)	T-VALUE	SIG. (P)

JOB SATISFACTION (MSQ)	**0.315**	5.152	< 0.001
OCTAPACE_MEAN (CULTURE)	–0.028	0.422	0.674 (ns)
UWES_MEAN (ENGAGEMENT)	**0.279**	4.449	< 0.001

Model 4

- **Dependent Variable**: UWES_Mean (Employee Engagement)
- **Predictors**:
  - MSQ_Mean (Job Satisfaction)
  - PE_Mean (Psychological Empowerment)
  - OCTAPACE_Mean (Organizational Culture)
- **Method**: Standard Multiple Regression (Enter Method)

Model Summary

STATISTIC	VALUE
R	0.445
R^2	0.198
ADJUSTED R^2	0.189
F-STATISTIC	20.385
SIGNIFICANCE (P-VALUE)	< 0.001**

Regression Coefficients

PREDICTOR	STANDARDIZED BETA (B)	T-VALUE	SIG. (P)
JOB SATISFACTION (MSQ)	0.130	1.963	0.050
OCTAPACE_MEAN (CULTURE)	**0.202**	3.319	0.001
PE_MEAN (EMPOWERMENT)	**0.217**	4.449	< 0.001

Model 5

- **Dependent Variable**: MAO_B_Mean (Motivational Behaviour)
- **Independent Variables**:
  - OCB_Mean (Organizational Citizenship Behaviour)
  - PMS_Mean (Performance Management System)
  - ORS_Mean (Organizational Role Stress)
- **Method**: Standard Multiple Regression (Enter)

Model Summary

STATISTIC	VALUE
R	0.353
R^2	0.125
ADJUSTED R^2	0.112
F-STATISTIC	15.793
SIGNIFICANCE (P-VALUE)	< 0.001**

Regression Coefficients

PREDICTOR	STANDARDIZED BETA (B)	T-VALUE	SIG. (P)
OCB_MEAN	**0.291**	4.483	< 0.001
PMS_MEAN	0.046	0.679	0.498 (ns)
ORS_MEAN	**0.355**	5.243	< 0.001

Model 6

- **Dependent Variable**: OCB_Mean (Organizational Citizenship Behaviour)
- **Independent Variables**:
  - MAO_B_Mean (Motivational Behaviour)

- PMS_Mean (Performance Management System)
- ORS_Mean (Organizational Role Stress)

- **Method**: Multiple Linear Regression (Enter)

Model Summary

STATISTIC	VALUE
R	0.343
R^2	0.117
ADJUSTED R^2	0.104
F-STATISTIC	8.642
SIGNIFICANCE (P-VALUE)	< 0.001**

Regression Coefficients

PREDICTOR	STANDARDIZED BETA (B)	T-VALUE	SIG. (P)
MAO_B_MEAN	**0.319**	4.483	< 0.001
PMS_MEAN	0.146	2.012	0.045*
ORS_MEAN	**–0.261**	–3.558	< 0.001

Model 7

- **Dependent Variable**: PMS_Mean (Performance Management System)
- **Predictors**:
- MAO_B_Mean (Motivational Behaviour)
- OCB_Mean (Organizational Citizenship Behaviour)
- ORS_Mean (Organizational Role Stress)
- **Method**: Multiple Linear Regression (Enter Method)

Model Summary

STATISTIC	VALUE
R	0.296
R^2	0.088
ADJUSTED R^2	0.074
F-STATISTIC	6.399
SIGNIFICANCE (P-VALUE)	< 0.001**

Regression Coefficients

PREDICTOR	STANDARDIZED BETA (B)	T-VALUE	SIG. (P)
MAO_B_MEAN (MOTIVATION)	0.052	0.679	0.498 (ns)
OCB_MEAN	**0.314**	4.034	< 0.001**
ORS_MEAN	**0.276**	3.711	< 0.001**

Model 8

- **Dependent Variable**: ORS_Mean (Organizational Role Stress)
- **Independent Variables**:
- MAO_B_Mean (Motivational Behaviour)
- OCB_Mean (Organizational Citizenship Behaviour)
- PMS_Mean (Performance Management System)
- **Method**: Standard Multiple Regression (Enter Method)

Model Summary

STATISTIC	VALUE
R	0.433
R^2	0.188

ADJUSTED R^2	0.176
F-STATISTIC	17.676
SIGNIFICANCE (P-VALUE)	< 0.001**

Regression Coefficients

PREDICTOR	STANDARDIZED BETA (B)	T-VALUE	SIG. (P)
MAO_B_MEAN (MOTIVATION)	**0.317**	5.243	< 0.001**
OCB_MEAN	**–0.264**	–3.548	< 0.001**
PMS_MEAN	**0.238**	3.711	< 0.001**

Model 9

- **Dependent Variable**: MLQ_Mean (Leadership Effectiveness)
- **Predictor Variable**: TEAM_Mean (Team Effectiveness)
- **Method**: Simple Linear Regression

Model Summary

STATISTIC	VALUE
R	0.472
R^2	0.223
ADJUSTED R^2	0.217
F-STATISTIC	42.355
SIG. (P-VALUE)	< 0.001**

Coefficients

PREDICTOR	BETA (B)	T-VALUE	SIG.
TEAM_MEAN	**0.472**	6.508	< .001

Model 10

- **Dependent Variable**: TEAM_Mean
- **Predictor**: MLQ_Mean
- **Method**: Simple Linear Regression

Model Summary

STATISTIC	VALUE
R	0.472
R^2	0.223
ADJUSTED R^2	0.217
F-STATISTIC	42.355
SIG. (P-VALUE)	< 0.001**

Coefficients

PREDICTOR	BETA (B)	T-VALUE	SIG.
MLQ_MEAN	**0.472**	6.508	< .001