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A Study on Employee Pay Roll Data Analysis at Promed Intelsoft Private Limited, Chennai

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ABSTRACT: This research examines the critical role of payroll data analysis in enhancing payroll management, financial compliance, and strategic HR decision-making at Promed Intelsoft Private Limited. Employing a descriptive research design with a sample of 85 employees, the study utilizes primary data through structured questionnaires and applies statistical tools like chi-square and correlation analysis. Results reveal high satisfaction with payroll accuracy and transparency, strong awareness of tax benefits, and a preference for automated payroll systems. The study concludes with actionable recommendations for improving payroll systems through digital tools, enhanced employee training, and regular compliance audits.

KEYWORDS: Payroll Management, Employee Satisfaction, Data Analysis, Compliance, Automation, HR Analytics

I. INTRODUCTION

Payroll data analysis is essential for strategic workforce planning, compensation management, and ensuring regulatory compliance. By examining salary trends, overtime distribution, tax deductions, and employee feedback, businesses can optimize payroll systems, mitigate risks, and support data-driven decision-making. Payroll is not merely a transactional HR process—it is a strategic tool that reflects an organization's operational health and legal compliance.

Promed Intelsoft Private Limited, a healthcare BPO firm headquartered in Chennai, plays a vital role in revenue cycle management (RCM) for U.S.-based healthcare clients. Given the sensitive nature of medical billing and staffing costs in such operations, accurate and efficient payroll processing becomes crucial. This study investigates payroll practices at Promed, focusing on satisfaction, transparency, error management, and automation, aiming to provide data-backed suggestions for systemic enhancement.

The importance of this study also stems from the increasing adoption of digital payroll systems, the pressure for real-time compliance with tax regulations, and the growing interest in employee financial well-being. Insights from this research may inform HR and finance managers on best practices to align payroll efficiency with employee engagement and legal mandates.

Payroll systems have evolved significantly over the years, shifting from manual ledger-based processes to cloud-based automated platforms. This transition has not only improved the accuracy of salary disbursements but also ensured better employee engagement and retention. In an era where workforce expectations include transparency, prompt communication, and financial literacy, payroll data emerges as a powerful tool to influence employee behavior and trust.

Moreover, with the integration of payroll into enterprise resource planning (ERP) systems and human capital management (HCM) software, businesses today are leveraging payroll data to drive broader organizational goals such as diversity and inclusion, equitable compensation, and workforce optimization. This analysis, therefore, is not only operational in nature but strategically linked to Promed Intelsoft's long-term growth and competitiveness.

The study also responds to challenges in the Indian outsourcing landscape, particularly in the healthcare BPO sector, where fluctuating global client requirements demand scalable and secure payroll operations. As Promed Intelsoft continues to expand its workforce to meet U.S. healthcare demands, payroll analytics will be crucial to aligning labor costs with service outcomes, maintaining compliance with international standards, and ensuring employee satisfaction across hierarchical levels.

This research aims to provide a granular understanding of payroll components and highlight how data-driven payroll systems can empower Promed Intelsoft to manage costs more efficiently, retain talent, and reinforce a culture of fairness and accountability within its workforce.

II. OBJECTIVES OF THE STUDY

The objectives of this research are structured to guide a thorough and actionable analysis of payroll systems at Promed Intelsoft Private Limited:

- To analyze payroll components such as salary, deductions, and benefits, including statutory and voluntary deductions, allowances, and bonus structures.
- To assess salary distribution trends across departments, experience levels, and designations to identify any discrepancies or gaps in compensation equity.
- To evaluate compliance with payroll regulations, including adherence to EPF, ESI, Income Tax, and labor law requirements.
- To measure employee satisfaction with payroll systems, encompassing accuracy, timeliness, transparency, and accessibility of payroll information.
- To identify the impact of automation on payroll efficiency, particularly the effectiveness of current digital tools, self-service portals, and issue-resolution workflows.

These objectives aim to integrate both operational and strategic dimensions of payroll analytics to help Promed align HR and financial practices with industry standards and employee expectations.

III. RESEARCH METHODOLOGY

A descriptive research design was employed to facilitate a structured and objective analysis of payroll practices at Promed Intelsoft Private Limited. The study relied primarily on **quantitative data collection** through a well-structured questionnaire distributed to a total of **85 employees** across different departments.

Sampling Technique: The sample was selected using **convenient sampling**, allowing researchers to target employees who were accessible and willing to participate within the defined study period. Respondents included individuals from Finance, HR, IT, and Medical Billing departments, thereby ensuring a reasonably representative distribution.

Data Collection Method: Primary data was collected through structured questionnaires designed to capture variables such as salary accuracy, timeliness, transparency, satisfaction with deductions, and experience with self-service payroll systems. Questions included a mix of Likert scale items, multiple choice, and yes/no formats.

Analytical Tools Used:

- **Chi-square test** was applied to test the independence of categorical variables, such as the relationship between satisfaction levels and payroll processing methods.
- **Correlation analysis** was used to assess the strength and direction of association between variables like gender and employment type, payroll method and satisfaction, etc.

The methodological framework enabled the research to draw statistically valid conclusions regarding employee satisfaction, process reliability, and system efficiency in payroll operations.

IV. INDUSTRY AND COMPANY PROFILE

Promed Intelsoft Private Limited operates in the medical billing sector, providing end-to-end RCM (Revenue Cycle Management) services. With increasing global healthcare spending and digital transformation, accurate payroll processing has become crucial in maintaining service quality and compliance.

V. LITERATURE REVIEW

Research highlights the importance of payroll analysis in financial planning and compliance (Smith & Johnson, 2018; Kumar & Patel, 2021). Modern technologies such as cloud computing and AI are being leveraged to enhance payroll

efficiency (Chen et al., 2021). Challenges like data security and regulatory complexity persist but can be mitigated with automation and training.

VI. DATA ANALYSIS AND INTERPRETATION KEY FINDINGS INCLUDE

- Demographics: Majority of employees (55.3%) fall in the 20–30 age group; 55.3% are male; 89.4% work full-time.
- Experience: 47.1% have 1–3 years of experience.
- Department Distribution: Finance (24.7%) and Medical Billing (18.8%) are the largest departments.
- Payroll Satisfaction: 74.1% of employees are very satisfied with the payroll process.
- Processing Method: 90.6% receive salary via direct deposit.
- Payroll Transparency: 41.2% report high transparency; 34.1% cite lack of transparency.
- Data Security: 84.7% believe payroll data is securely managed.

Statistical Tools:

Sampling Technique: The sample was selected using **convenient sampling**, allowing researchers to target employees who were accessible and willing to participate within the defined study period. Respondents included individuals from Finance, HR, IT, and Medical Billing departments, thereby ensuring a reasonably representative distribution.

Data Collection Method: Primary data was collected through structured questionnaires designed to capture variables such as salary accuracy, timeliness, transparency, satisfaction with deductions, and experience with self-service payroll systems. Questions included a mix of Likert scale items, multiple choice, and yes/no formats.

Analytical Tools Used:

- **Chi-square analysis** was conducted to test the relationship between categorical variables, particularly the association between payroll processing methods (manual vs. automated) and employee satisfaction. The result ($X^2 = 1.7992$) indicated no statistically significant association as it was less than the critical table value.
- **Correlation analysis** was performed to explore the relationship between gender and employment status. The analysis showed no significant correlation ($p > 0.05$), suggesting these demographic factors do not influence one another in the payroll context.

These tools ensured that the findings were grounded in empirical evidence, helping to validate perceptions of fairness, accuracy, and transparency in payroll systems. The use of statistical analysis added rigor to the evaluation of payroll performance and employee sentiment, supporting the broader aim of aligning HR practices with strategic organizational goals

VII. FINDINGS OF THE STUDY

The analysis of responses from employees at Promed Intelsoft Private Limited revealed several key insights:

- **Preference for Digital Systems:** Employees strongly prefer digital and automated payroll systems over manual methods. The convenience of real-time access, downloadable payslips, and automated tax calculations contributes significantly to satisfaction levels.
- **Demand for Timely Updates and Transparency:** A majority of respondents indicated the importance of timely updates on salary credits, tax deductions, and bonus disbursements. Delays or lack of clarity in communication can diminish employee trust.
- **Awareness of Tax Benefits:** The study shows that most employees are well-informed about tax-saving schemes and deductions. The HR department's efforts to educate employees on exemptions and reimbursements are reflected in the survey results.
- **High Satisfaction with Data Accuracy:** Employees expressed confidence in the accuracy of salary disbursements, with minimal reports of discrepancies or errors.
- **Support for Self-Service Tools:** The availability of self-service portals for accessing payroll data, downloading Form 16, or updating personal information was rated as highly beneficial.
- **Expectation of Enhanced Communication:** Employees expect timely alerts regarding deductions, bonus eligibility, and policy changes related to payroll. Many suggested integrating SMS/email updates for better engagement.
- **Gender-Neutral Satisfaction:** The correlation analysis revealed no statistically significant differences in satisfaction levels based on gender, indicating a gender-neutral perception of payroll fairness.

- **Limited Impact of Payroll Processing Type:** The chi-square test showed no significant association between the type of payroll processing (manual vs. automated) and employee satisfaction, emphasizing that transparency and error-free reporting are more important than the processing mode.
- **Need for Periodic Feedback Mechanisms:** Several employees expressed interest in periodic surveys or feedback sessions related to payroll services to address recurring issues or policy changes.

These findings highlight the evolving expectations of employees toward payroll systems and underline the importance of digital solutions, transparency, and proactive communication to foster employee trust and operational efficiency.

VIII. SUGGESTIONS

Based on the findings, the following suggestions are proposed to enhance payroll management practices at Promed Intelsoft Private Limited:

- **Adopt AI-driven payroll auditing:** Implementing artificial intelligence tools can help identify discrepancies in real time, reduce manual errors, and increase overall processing speed.
- **Introduce multilingual employee self-service portals:** Offering interfaces in regional languages will improve accessibility for all employees, especially those from non-English speaking backgrounds.
- **Conduct regular payroll training sessions:** HR should organize quarterly training sessions or webinars to educate employees on payroll structure, tax benefits, and how to use digital tools.
- **Integrate payroll with performance appraisal systems:** Linking payroll to performance-based incentives and appraisal systems can promote fairness and motivation among staff.
- **Invest in cloud-based payroll platforms:** Modern cloud payroll solutions ensure scalability, data security, and real-time accessibility across departments and devices.
- **Enhance mobile app features:** Expand mobile access to include leave balance tracking, reimbursement claims, and real-time salary updates.
- **Establish a payroll helpdesk:** A dedicated team or helpline can resolve payroll-related queries efficiently and improve employee experience.
- **Introduce feedback and grievance mechanisms:** Create a structured process for employees to provide feedback and raise payroll-related concerns anonymously if needed.
- **Periodic policy review and updates:** Regularly review payroll policies to align with new tax laws, compliance norms, and employee expectations.

These recommendations, if implemented, can streamline payroll operations, ensure compliance, and boost overall employee satisfaction and retention.

IX. CONCLUSION

The analysis of payroll data at Promed Intelsoft reveals high employee satisfaction but also highlights areas needing improvement, particularly transparency and real-time issue resolution. By leveraging automation, continuous training, and robust compliance frameworks, organizations can enhance payroll efficiency and employee trust.

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