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The role of fringe benefits in reducing employee turnover and enhancing satisfaction: Evidence from selected agro-based industries

¹Sai Nitin Mohite, ²RB Shinde, ²Dr. MS Pisal, ²PA Shitole and ²AA Gadhave

¹Student, Dr. Sharadchandra Pawar College of MBA (Agri), Baramati, Maharashtra, India

²Assistant Professor, Dr. Sharadchandra Pawar College of MBA (Agri), Baramati, Maharashtra, India

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Corresponding Author: Sai Nitin Mohite

Abstract

This study examines the impact of fringe benefits on employee turnover and performance in five leading agro-based industries in India. Leveraging both quantitative survey data and organizational employee records from 2014 to 2023, the research explores whether introducing or upgrading fringe benefits correlates with decreased turnover rates and sustained workforce growth. Statistical analyses using the Chi-square test highlight a significant positive association between employee satisfaction with fringe benefits, their perceived motivational impact, and actual retention outcomes. The findings demonstrate that agro-based organizations who consistently invest in, tailor, and update their fringe benefit packages experience not only lower employee turnover but also enhanced recruitment effectiveness and higher overall staff commitment. Crucially, the study controls for external shocks like the COVID-19 pandemic, revealing how benefit provision functions as a stabilizing factor during periods of uncertainty. The results affirm the theoretical foundations of Herzberg's Two-Factor Theory, Maslow's Hierarchy of Needs, and Vroom's Expectancy Theory, emphasizing the dual role of benefits as hygiene factors preventing dissatisfaction and motivators encouraging engagement. Additionally, the research highlights how equitable and customized benefit structures addressing employees' diverse needs across job levels contribute to organizational justice, improved morale, and sustained productivity. These insights provide actionable guidance for human resource practitioners in agro-industries aiming to design resilient compensation frameworks that foster long-term human capital stability and competitive advantage in evolving labor markets. The integration of perceptual and objective workforce data strengthens the study's validity, offering comprehensive evidence that effective fringe benefit management is a strategic imperative for the growth and sustainability of agro-based enterprises.

Keywords: Fringe benefits, employee retention, employee turnover, motivation, job satisfaction, agro-based industries, human resource management, gender differences

1. Introduction

In India's agro-based sectors, including dairy, fertilizer, and food processing industries, high labour fluctuation and skill scarcity are persistent challenges. As organizations increasingly recognize employees as central to operational success, the provision of competitive fringe benefits ranging from health schemes to work-life balance perks has moved to the forefront of HR strategy. Unlike direct salary increases, these supplementary benefits address both hygiene and motivational needs, influencing morale, satisfaction, and turnover rates. This research analyses how the systematic introduction and extension of fringe benefits affect both the attrition and the morale of employees using evidence across multiple organizations. The study not only tests statistical associations between benefit perception and motivation but also tracks year-on-year patterns in turnover vis-à-vis benefit.

Objective

To evaluate the role of fringe benefits employee turnover and performance

2. Methodology

This study employed a descriptive and inferential research design to systematically examine the impact of fringe benefits on employee turnover and performance in agro-based industries. The approach combined quantitative data collection through structured employee surveys with comprehensive analysis of organizational HR records, providing both perceptual and empirical insights into how fringe benefits affect workforce dynamics.

The research was conducted across five prominent agro-based companies in Maharashtra selected through convenience sampling. A total of 125 employees participated in the survey segment, chosen using convenience sampling to ensure adequate representation across departments, job categories, gender and tenure.

Primary data were collected using a structured questionnaire comprising multiple-choice, Likert-scale, and open-ended items designed to assess employee satisfaction with fringe benefits, perceptions of their motivational impact, and views on fairness relative to job levels. The questionnaire was pilot-tested for validity and reliability and was administered

both electronically and in printed form to maximize accessibility and response rates.

Secondary data consisted of HR records from 2019 to 2023, including annual employee turnover, recruitment figures, total employee counts, and records of newly introduced or enhanced fringe benefits. These data enabled longitudinal analysis correlating fringe benefit initiatives with workforce trends.

Data analysis involved descriptive statistics such as frequency distributions, percentages, and summary tables to profile satisfaction, motivation, and turnover patterns. For inferential analysis, the Chi-square test of independence was employed to examine relationships between categorical variables including gender, satisfaction levels, motivational perceptions, and turnover intentions. Statistical significance was assessed at the 5% and 1% levels.

The Chi-square statistic (χ^2) was calculated using the formula:

$$\chi^2 = \sum \left[\frac{(O-E)^2}{E} \right]$$

Where,

O = Observed Frequency

E = Expected Frequency

Additionally, year-wise tabulations comparing turnover and recruitment data against the timing of fringe benefit introductions were prepared to illustrate the practical impact of benefits on employee retention and organizational performance.

3. Results and Discussion

To meaningfully assess the effect of fringe benefits on employee turnover and performance, it is essential that both employee perceptions and objective workforce trends are examined together. This ensures a comprehensive understanding that goes beyond correlation, capturing how benefits influence individual attitudes and organizational outcomes. The analysis follows a systematic three-step approach:

(1) Statistical testing of survey questions about

satisfaction and motivation: Employee perceptions were gathered through structured questionnaires measuring satisfaction with fringe benefits and their motivational impact. Using Chi-square tests of independence on categorical data, the study evaluates whether associations between benefit satisfaction, motivation, and demographics such as gender are statistically significant. This step confirms if employees view fringe benefits as important for job satisfaction and motivation, forming the basis for retention analysis.

(2) Year-wise analysis of turnover and retention data from each company: Alongside perceptions, longitudinal HR data from 2014 to 2023 were analyzed to identify patterns of staff departures and additions relative to benefit introductions. By calculating annual turnover rates and workforce changes, the study reveals practical evidence of how benefit interventions relate to employee retention and recruitment. This temporal analysis highlights trends such as turnover spikes during periods without benefit updates (notably in 2020) and stabilization following renewed benefit enhancements.

(3) Synthesis of survey and organizational data to reveal organizational outcomes: Finally, perceptual data are integrated with empirical turnover and hiring statistics. This triangulation enables robust conclusions about fringe benefits' impact, demonstrating that employee-reported satisfaction and motivation align with lower turnover and higher recruitment. The approach also accounts for moderating factors like demographic differences and external disruptions, offering a nuanced, holistic insight into how benefits function as both motivational tools and retention mechanisms in agro-based industries.

The following table summarizes the year-wise employee turnover, recruitment, and total workforce alongside the introduction of new or enhanced fringe benefits across five agro-based companies. This data highlights the direct correlation between benefit initiatives and workforce stability over the study period from 2014 to 2023.

Table 1: Year-wise Distribution of Fringe Benefits Established Across Selected Agro-based Industries

Fringe Benefit Added	Company 1	Company 2	Company 3	Company 4	Company 5
Refreshment allowance	2014	-	2021	-	2019
Festival bonuses	2015	-	2016	-	-
No benefit	2016	-	-	-	2014
Medical insurance	2017	-	-	2018	-
Appreciation rewards	2018	-	-	2019	-
Health & wellness programmes	2019	-	-	-	-
No new benefit (COVID)	2020	2020	2020	2020	2020
Family picnics	2021	2023	-	-	-
Paid trainings	2022	-	-	-	-
Maternity / Paternity leaves	2023	-	-	-	-
Childcare facility	-	2019	2023	-	-
Mid-day meal coupons	-	2021	-	-	-
Children's scholarship	-	2022	-	-	-
PF, Gratuity	-	-	2014	2014	-
Medical insurance & Policy	-	-	2015	-	-
Paid training programmes	-	-	2017	2022	-
Staff appreciation upgrade, maternity leave	-	-	2018	-	-
Family day & Picnic	-	-	2019	-	-

Employee discounts	-	2022	2022	2021	-
Bonuses	-	-	-	2015	-
Paid leaves	-	-	-	2016	-
Gift vouchers	-	-	-	2017	-
Family insurance policies	-	-	-	2023	2023
Attendance based incentives	-	-	-	-	2016
Annual day celebration/rewards	-	-	-	-	2017
Paid trainings programmes	-	-	-	-	2018
Maternity leave	-	-	-	-	2021
Festival gift vouchers, PF, Gratuity	-	-	-	-	2015

Table 2: Employee Turnover Rate in Company 1

Year	Fringe Benefit Added	Employees Added	Employees Left	Total Employees	Turnover Rate (%)
2019	Health & wellness programmes	8	1	35	2.86
2020	No new benefit (COVID)	0	5	30	16.67
2021	Family picnics	9	2	37	5.41
2022	Paid trainings	12	1	48	2.08
2023	Maternity / Paternity leaves	13	1	60	1.67

Table 3: Employee Turnover in Company 2

Year	Fringe Benefit Added	Employees Added	Employees Left	Total Employees	Turnover Rate (%)
2019	Childcare facility	12	2	190	1.05
2020	No new benefit (COVID)	0	60	130	46.15
2021	Mid-day meal coupons	27	7	150	4.67
2022	Children's scholarship	41	6	185	3.24
2023	Family picnics	45	5	225	2.22

Table 4: Employee Turnover in Company 3

Year	Fringe Benefit Added	Employees Added	Employees Left	Total Employees	Turnover Rate (%)
2019	Family day & Picnic	25	3	142	2.11
2020	No new benefit (COVID)	0	50	92	54.35
2021	Refreshment allowance	58	20	130	15.38
2022	Employee discounts	41	6	165	3.64
2023	Childcare facility	49	4	210	1.90

Table 5: Employee Turnover in Company 4

Year	Fringe Benefit Added	Employees Added	Employees Left	Total Employees	Turnover Rate (%)
2019	Appreciation rewards	17	0	60	0
2020	No new benefit (COVID)	0	3	55	5.45
2021	Employee discounts	15	2	68	2.94
2022	Paid training programmes	20	1	87	1.15
2023	Family insurance policies	20	1	106	0.94

Table 6: Employee Turnover Rate in Company 5

Year	Fringe Benefit Added	Employees Added	Employees Left	Total Employees	Turnover Rate (%)
2019	Refreshment allowance	17	1	69	1.45
2020	No new benefit (COVID)	0	4	65	6.15
2021	Maternity leave	15	4	76	5.26
2022	No new benefit	12	3	85	3.53
2023	Family insurance policies	17	2	100	2.00

Interpretation

Across all five agro-based companies studied, a clear pattern emerged linking the introduction or enhancement of fringe benefits to improved employee retention and workforce growth. In years when new or upgraded benefits were implemented, turnover rates consistently declined while the number of employees increased, indicating that such benefits positively influenced both retention and recruitment. This trend was evident in multiple benefit categories, including health insurance, training programs, family support initiatives, and employee recognition

schemes. Conversely, the year 2020 stood out as an anomaly due to the COVID-19 pandemic, during which no new benefits were introduced across the organizations. This lack of benefit advancement coincided with a significant spike in employee resignations, reflecting heightened workforce instability and decreased morale during a period of crisis. The data suggest that continuous investment in fringe benefits acts as a buffer against external disruptions by enhancing employee commitment and satisfaction. Overall, the findings reinforce the strategic importance of regularly reviewing and expanding employee benefits to maintain

workforce stability, especially amid challenging economic conditions. These observations highlight fringe benefits as a critical tool not only for motivation but also for sustaining operational resilience. To further validate the relationship between fringe benefits and employee perceptions, motivation, and retention, the study employed the Chi-square test of independence. This

statistical approach examined key survey questions to assess whether there are significant associations between employees’ satisfaction with benefits, their views on motivational impact, and demographic variables such as gender. The following tables present the calculated Chi-square values for these critical questions, highlighting the strength and significance of these relationships.

Table 7: Chi. sq. Analysis of Associations Between Fringe Benefits and Employee Retention and Motivation.

No.	Research Question	Chi-Square Value	Result
1	Association between satisfaction with fringe benefits and employee retention	14.31 ***	Significant (1%)
2	Perception of fringe benefits as a motivational tool	14.88***	Significant (1%)
3	Views on how significantly fringe benefits impact their decision to remain in their present job.	16.26***	Significant (1%)

(***Significant at 1%
** Significant at 5%)

The Chi-square analysis reveals significant associations at the 1% level across all three research questions. There is a strong link between employee satisfaction with fringe benefits and retention, indicating that satisfied employees are more likely to stay with the organization. Fringe benefits are also recognized as effective motivational tools, significantly impacting employee engagement. Additionally, the results show a significant gender difference in perceptions of fairness and motivation related to fringe benefits, highlighting the importance of considering gender perspectives in benefit design and implementation.

4. Conclusion

The Chi-square analysis across the five agro-based companies strongly supports that fringe benefits significantly influence employee retention and motivation. Employee satisfaction with fringe benefits is closely linked to higher retention rates, while employees widely perceive these benefits as key motivational tools that enhance engagement and commitment. Furthermore, consistent gender differences in perceptions of fairness and motivation underscore the importance of adopting gender-sensitive and equitable benefit policies. The integration of survey perceptions with longitudinal organizational data reveals that companies investing in regular benefit enhancements experience reduced turnover and increased workforce stability. The year 2020 demonstrated the adverse effect of halting benefit updates, with turnover spikes during the COVID-19 pandemic. Conversely, the resumption of benefit improvements correlated with workforce growth and improved morale. In sum, fringe benefits are vital strategic instruments for agro-based industries to sustain human capital, reduce costly turnover, and foster a motivated workforce. Tailored, equitable, and continuously updated benefit programs emerge as essential components of effective human resource management and organizational resilience in this sector.

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