
Employee Attrition In It Industry – An Experiential Study

Dr.S.Jebastine Suthan Raja¹, Mr.R.Jimmy Carter², Dr. K. Karthik Subramanian³

¹Assistant Professor Heber Institute of Management Studies
Bishop Heber College (Autonomous) Tiruchirappalli-620 017, Tamilnadu, India.
jebastinesuthanraja.ms@bhc.edu.in

²Assistant Professor
Heber Institute of Management Studies Bishop Heber College (Autonomous) Tiruchirappalli-620 017, Tamilnadu, India.
jimmycarter.ms@bhc.edu.in

³Assistant Professor Heber Institute of Management Studies Bishop Heber College (Autonomous)
Tiruchirappalli-620 017, Tamilnadu, India
karthiksubramanian.ms@bhc.edu.in

How to cite this article: S.Jebastine Suthan Raja, R.Jimmy Carter, K. Karthik Subramanian, (2024) Employee Attrition In It Industry – An Experiential Study. *Library Progress International*, 44(3), 4184-4193.

Abstract

Improving the level of happiness among female IT professionals is urgently required since IT firms represent the backbone of our economy, bringing much-needed foreign income into our nation. Therefore, the researcher endeavors to ascertain the organizational elements impacting the turnover of female employees at Technopark. Taken into account are the perspectives of scholars, companies, practical managers, and women themselves with regard to the topic of female employee turnover. The reasons for women leaving the Indian IT sector are investigated in this research. A number of Technopark IT enterprises have their data gathered and examined. Of India's total employed population of 3.1 million, NASSCOM reports that one million are women working in the information technology industry. On the other hand, women are only now making an impact in the IT industry, and they may have a tougher time accumulating tenure owing to family responsibilities. An employee's wage is strongly influenced by the amount of time they've spent with a firm. It's not easy for women to go back into the workforce, and when they do, they often get lower wages than males. Women have less leverage in wage negotiations when they have a longer employment history with fewer breaks. The research itself was based on data collected from 523 workers at Technopark, Thiruvananthapuram. In order to get information from the participants, the researcher used a suitable sampling technique. In order to gather these data, a structured questionnaire was used. The conclusions were reached based on their replies. This research examined the attrition rate of female employees at Technopark using a variety of statistical methods, including percentage analysis, average score analysis, correlation, cluster analysis, factor analysis, Friedman test, discriminant analysis, and Kruskal-Wallis test.

Keywords: Employee Attrition, IT Industry, Technopark, Thiruvananthapuram

Introduction

An important factor in India's economic development has been the country's information technology industry. Not only has the business changed India's reputation internationally, but it has also stimulated the country's economy by drawing students to fields like computer science and engineering. It has helped socially alter India by providing jobs for around 10 million people. From FY 1998 to FY 2015, the contribution of the Indian IT sector to GDP jumped from 1.2% to 9.5% (India Brand Equity Foundation, 2016). A large number of jobs have been created as a result of this industry. It has a technical workforce of almost 4 million people and an industry association. It is believed by NASSCOM that the average male-to-female ratio has reached 70:30. The \$60 billion Indian IT business employs women at a rate of one for two recruits (NASSCOM Report, 2009).

Thus, women in IT become the industry's singular force driving the upsurge in IT/ITES sector. In networking, engineering computer hardware, database and software designing, system administration, and management of data these

are the tasks governed by information technology experts. The need for people with expertise in information technology is on the rise as the field expands beyond traditional PC and network technologies and into the integration of other devices and systems, such as mobile phones, TVs, cars, and more.

The job of information technology specialists encompasses a wide spectrum, from the installation of apps to the construction of intricate computer networks and databases. When contrasted with the exhibition of other modern areas in India, the improvement of the product business in India has been outstanding, as per Athreya (2005). This is particularly true when looking at typical metrics like employment creation, sales growth, and exports. The Indian software sector stands out in terms of the number of jobs it has generated and the indigenous character of its development, according to the India Brand Equity foundation (2017). This stands in contrast to successful new software exporters like Israel and Ireland.

Technopark - Thiruvananthapuram

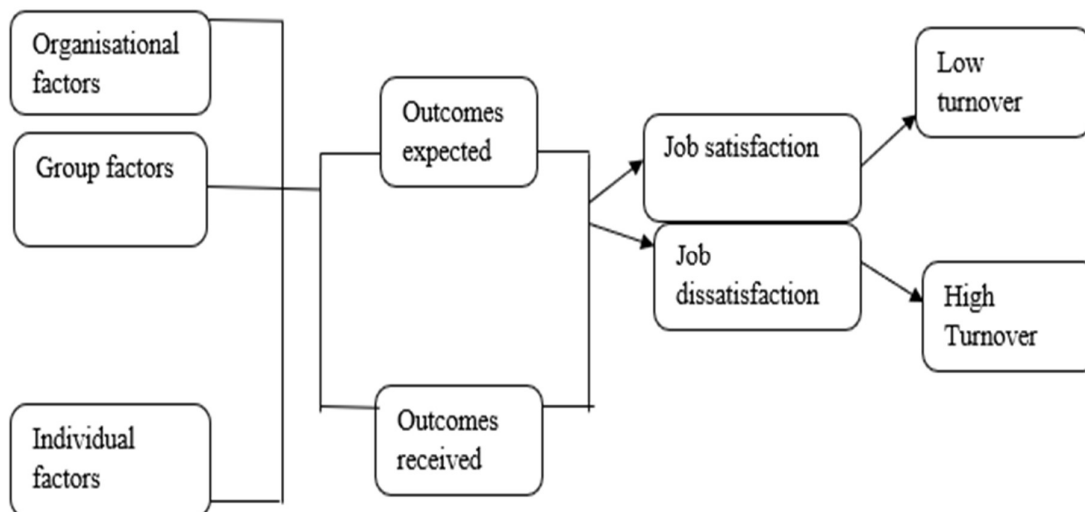
A technological park located in Thiruvananthapuram, Kerala, India, is known as Technopark. Given its total acreage, it far surpasses all other IT parks in India. According to technopark.org, the park is devoted to IT businesses. Technopark has been around since 1990 and as of 2012 has a built-up area of 4 million square feet. It is home to more than 285 firms and employs almost 45,000 individuals. Adding 37 more hectares as part of phase III growth and 450 acres as Technicity, an integrated IT township, puts Technopark in expansion gear. Both the worldwide software industry's meteoric rise in the '90s and the Indian government's 1991 strategy of economic liberalization played significant roles in the sector's meteoric rise.

About 60% of Kerala's IT exports are controlled by Technopark, according to Info galactic 2014. There is a tremendous participation of the local organizations, joint operations of foreign companies and subsidiaries coming from Technopark that do a great variety of operations. These include the inserted programming improvement, savvy card innovation, venture asset arranging otherwise called ERP, process control programming, plan, designing, advancement of PC helped plan programming and IT-empowered administrations, process re-designing, liveliness and e-business.

Employee Attrition

Research on employee turnover has been extensive over the last few decades. The turnover rate of female IT employees, however, has been the subject of very few such research. A competitive and capable workforce is the backbone of every successful firm. The most important HR tasks are attracting and retaining IT talent, and India is a great place to find it. Concerns about attrition persist for a number of reasons, but it is especially acute among young women working in information technology.

Conceptual Framework for Attrition



To establish the connection between the variables, the researcher relied on the aforementioned Locke's framework. The author utilizes the figure to try to break down the aspects that contribute to work satisfaction into three categories: organisational, group, and individual. Organizational factors such as pay, advancement opportunities, job description, policies, and working conditions are considered; group factors such as group size and supervision are crucial; and individual factors such as employees' personality, status, ego, and attitude are taken into account in order to determine the level of job satisfaction. High performance cycle describes the model that comes out of it. It all starts when people in the company are confronted with ambitious yet challenging objectives. When faced with a high-stakes task, people tend to perform better when they have faith in their abilities, get constructive criticism, dedicate themselves fully to the task, and believe in their potential to succeed. Heading of consideration and activity, exertion, persistence, and the definition of assignment procedures and plans are the four cycles that lead to elite execution. When employees are financially rewarded for their hard work, they feel more invested in the success of the company and its mission. Leadership, self-management, and the classroom are all areas that may benefit from this strategy.

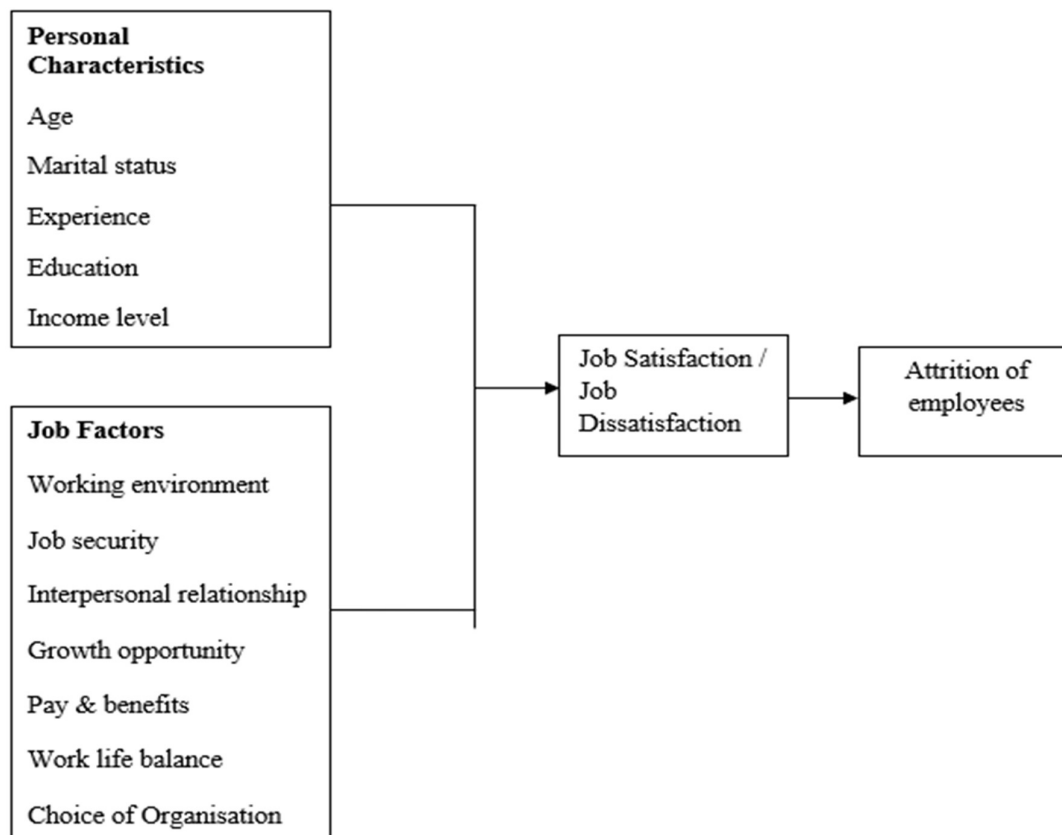


Fig: Attrition Determinants Model

Need for the Study

Several important areas of the Indian economy have had significant attrition rates, prompting debate about the most effective retention tactics to deal with this problem. Equal opportunity must be established for all workers, but notably for women, who play an important role in the information technology sector. Paying increasing wages to make up for high employee turnover risks undermining India's competitive edge in international trade and making it harder for Indian businesses to break into new markets at home and abroad. It is also recommended that Indian organizations take further steps to enhance the connection between internal social networks, boost job happiness, and foster organizational commitments. This would help with talent retention by providing opportunities for advancement and competency development.

Scope of the Study

From a conceptual standpoint, the study's coverage of female employee turnover in the IT industry gives it a broad breadth. From an empirical standpoint, nevertheless, the study's scope is somewhat limited. This research focuses

on the IT sector in Thiruvananthapuram, Kerala, specifically on staff attrition. Organizational productivity and long-term employee association are directly impacted by employee happiness, which in turn is increased when IT firms provide a healthier environment and higher quality of life to their workers. Improving the degree of satisfaction among female IT workers is urgently required since IT firms are the economic backbone that provide much-needed foreign money influx to our nation.

Statement of the Problem

Technopark, Thiruvananthapuram's female workers' high turnover rate is the focus of this investigation. Problems in women's personal and social lives are more prevalent than in men's, in my opinion. This is due to the fact that there is still a long way to go before we can fully embrace the changes occurring in women's lives. This study will examine the rates of female employee turnover and the factors that contribute to them in the context of Technopark, Thiruvananthapuram, with a particular emphasis on the areas of hiring, pay, growth opportunities, supervision, and motivation. The workers' responses will reveal the actual rate of attrition. In order to improve and enhance the present system, it is necessary to analyze the responses of the respondents in order to get insight into the issues from the perspective of the workers.

Review of Literature

- **Sonal Gupta and Sukhvir Singh (2021)** "Employee Attrition and Retention Strategies: A Comparative study of leading Indian IT Companies" aims to tackle the concerning problem of IT company attrition head-on and guarantee long-term retention. In order to examine the attrition trend and human resource plans and objectives, the research relied on the public annual reports of the top three IT companies—TCS, Infosys, and Wipro—based on market capitalization. The current research covered the years 2011–12 through 2015–16. Staff turnover has been on the rise for some time, and the three largest IT firms are all using the same approach to human resource management. Companies tried to address employee turnover by implementing new programs and offering incentives, such as large bonuses, to attract and retain employees. Even while they can keep attrition under control, lowering the rate remains a formidable obstacle despite their best efforts. Based on our analysis, it seems that TCS is somewhat successful at attracting, integrating, developing, and retaining top personnel, which in turn leads to growth for the company. In terms of retaining top personnel, TCS continues to set the bar high, according to the average attrition rate over the last five years. Strategic human resource management is becoming more important as the value of people as a competitive advantage is recognized. Businesses should be dedicated to providing a progressive work environment for their employees and should consider the employee's lifecycle as a whole to make sure interventions are done promptly. The organization will undoubtedly get the benefits of initiatives focused on skill development. Increased employee retention may be achieved via the use of employee engagement platforms, which enhance employees' overall well-being, foster bonds within the firm, and promote a work-life balance. The organization should be more consistent in its measures and activities if it wants to retain its employees. Keeping people around for the long haul calls for an inclusive and organized strategy.

- **Aditi Abhyankar (2021)** The IT sector in India has a high incidence of employee turnover; this article discusses solutions to this problem. One of India's most important and fast-growing businesses, the information technology (IT) sector generates a substantial amount of revenue for the country. The information technology sector has established strong reputations in international markets. There is the software sector, which includes IT-enabled services, and the BPO industry, which deals with business process outsourcing. Many people across the world choose to outsource their IT-enabled services to India because of the country's reputation as an early leader in software creation. Extremely high rates of employee turnover and attrition have been problems for IT firms in recent years. Talented young people seldom remain with the same company for more than a year. Workers often seek out new employment opportunities rapidly for a variety of reasons. Businesses are also implementing strict policies to reduce employee turnover.

Objectives of the Study

1. The primary objective is to identify the main causes of employee turnover.
2. The second objective is to determine how happy the female workers are with their jobs at Technopark in Thiruvananthapuram.

3. The, to find out how people's socioeconomic status affects their views on the several things that lead to employee turnover.
4. To discover different aspects of the work-life balance of Technopark's female workers
5. To investigate how respondents feel about the organizational elements that contribute to lower turnover rates in Technopark

Hypothesis of the Study

H₀ 1: There is no significant association between the socio-economic factors of respondents and the level of job satisfaction of woman employees.

H₀ 2: There is no significant relationship between the socio-economic background of respondents and their perception towards the factors that cause attrition.

H₀ 3: The socio-economic background of respondents does not influence the attitude of woman employees on retention strategies.

H₀ 4: The socio-economic background of respondents does not influence their pattern of ranking various factors that reduce attrition.

Research Design

A descriptive research approach was used for this investigation. The goals of this design are defined in detail by the research instruments that were developed..

Sampling Design

There are two primary types of sampling techniques: likelihood and non-likelihood. Likelihood inspecting involves randomly selecting units from a population, with each unit having a set probability of being chosen. A well-defined population and sample frame are necessary for probability sampling. When researchers use non-probability sampling methods, they rely on their own discretion to choose which units to include in the sample. Technopark, Thiruvananthapuram staff members were chosen using a non-probability sampling technique.

Sampling unit

The study's sample unit consisted of female workers working for IT businesses in Technopark, Thiruvananthapuram.

Sampling method

In order to get information from the participants, the researcher used a suitable sampling technique.

Sample size

The challenge of determining the sample size is not an easy one. The rule of thumb is that a larger sample is better when the needed information is more exact. Appropriate sample size may also be determined using statistical methods based on confidence intervals. The researcher surveyed 523 people for this study, and they came from all walks of life and all levels of management.

$$\begin{aligned}\text{Population size (N)} &= 313 \text{ companies} \\ \text{Expected sample size (n}_0\text{)} &= 63 \text{ (twenty percentage from population size)} \\ \text{Sample size n} &= \frac{\text{Expected Sample Size (n}_0\text{)}}{\left[1 + \left(\frac{\text{Expected Sample Size (n}_0\text{)} - 1}{\text{Population size (N)}}\right)\right]} \\ &= 52.31 \times 10 \text{ respondents} = 523 \text{ respondents}\end{aligned}$$

Statistical Tools used for the Study

This research examined the attrition rate of female employees at Technopark, Thiruvananthapuram using a variety of statistical methods, including percentage and average score analyses, correlation and factor analyses, Friedman test and discriminant analysis, and the Kruskal-Wallis test.

A total of all socioeconomic variables' effects on employment stability

Socio-economic factors		Overall scores – perception on job			Tot	Chi-square value	p value	Remarks
		High	Mediu	Low				
Age	Below 25	81	124	2	207	6.906	0.33	Not Significant
	26–30	62	95	8	165			
	31–35	53	72	2	127			
	36 & above	10	13	1	24			
Total		206	304	13	523			
Marital status	Married	98	156	8	262	1.386	0.500	Not Significant
	Unmarried	108	148	5	261			
Total		206	304	13	523			
Experience in present job	Less than 1 year	19	47	2	68	14.565	0.024	Significant
	1–5 years	164	199	11	374			
	6–10 years	21	52	0	73			
	11 & above	2	6	0	8			
Total		206	304	13	523			
Total years of experience	4 & below years	164	235	10	409	7.924	.094	Not Significant
	5–7 years	32	37	3	72			
	8 & above	10	32	0	42			
Total		206	304	13	523			
Educationa l qualificatio	UG	34	48	1	83	2.746	0.601	Not Significant
	PG	41	74	2	117			
	Professional	131	182	10	323			
Total		206	304	13	523			
Monthly income	Less than 15,000	37	71	3	111	11.389	0.077	Not Significant
	15,001–	88	129	7	224			
	30,001–	81	95	3	179			
	45,001&	0	9	0	9			
Total		206	304	13	523			

	15,001–	88	129	7	224			
	30,001–	81	95	3	179			
	45,001&	0	9	0	9			
Total		206	304	13	523			
Nature of organizatio	Domestic	179	257	12	448	1.033	0.596	Not Significant

Each socioeconomic component classification's ANOVA findings on the degree of perception on possibility for development and advancement variables are described in the table.

Variables	Cluster		Error		<i>F</i>	<i>P</i> value
	Mean value	Df	Mean value	Df		
Provide opportunity to use skills to the fullest possible extent	61.538	2	0.487	520	126.339	0.000
Job description is productive	46.740	2	0.275	520	169.837	0.000
Provides enough guidelines to perform the work	31.639	2	0.356	520	88.823	0.000
Training helps to improve the skills	17.078	2	0.470	520	36.352	0.000
Adequate information on promotion is provided	92.715	2	0.429	520	216.093	0.000
Targets are competitive	27.218	2	0.482	520	56.526	0.000
Performance-based appraisal	73.687	2	0.455	520	162.086	0.000
Allow the employees to apply constructive idea in the job	64.990	2	0.493	520	131.757	0.000

Based on the data in the table, we can say that every single one of the factors affects the groups within which the sense of opportunities for progress and growth is concentrated.

Findings of the Study

- The following ranking variables significantly impact the various factors that influence the choice of Technopark as an employer for female employees, with respect to age: list of home town priority, competitive remuneration/perks, standardized lifestyle, and static working time, quick improvements of IT sector, career growth and advancements, better education for children, attractive holiday entertainment, healthy and tasty food/healthcare, and weather conditions.
- The factors that influence Technopark as an employer for women, based on their marital status, are as follows: low cost of living; wedding ceremonials and other social events; higher level of education for your kids; standard livelihood; standard working hours; career growth perspectives; nice vacation places; environment.
- Regardless of years of experience, women's decision to work at Technopark is influenced by a number of factors, including: home town priority, standardized lifestyle, standard work life, career growth and advancement, societal obligations (such as marriage), children's education, holiday entertainment, and food and healthcare.
- A number of factors, including home town priority, attractive salary/perks, standard work life, faster IT industry development, career growth/advancement, better children's education, attractive holiday entertainment, food/healthcare reasons, climatic conditions, and social obligations all play a role in why women with varying levels of experience choose Technopark as their place of employment.
- Technopark's educational offerings are influenced by a number of ranking variables, including a woman's home town priority, the cost of living, the presence or absence of social obligations, the quality of her children's education, the availability of affordable healthcare, the attractiveness of holiday entertainment, and the weather.
- The following ranking variables significantly impact the various factors that influence the choice of Technopark as an employer for women in terms of monthly income: home pocket prioritize, affordable cost of living, quality of working life, standardized way of life, standard work time, fast development of the IT sector, career growth, better educational institutes for the children, good entertainment sources, and a number of social obligations.

- For the selection of the candidate, the factors like the home town priority, affordable cost of living, exciting salary and allowances, standardized lifestyle like normal jobs, standard work life, faster development of the IT industry, career growth and development, social and other obligations and kind of the organization are not the determinant of the choice. The climatic conditions, attractive holiday entertainment, food and healthcare reasons, and better education for children are some of the reasons why women select Technopark as their workplace.
- When considering the factors that influence the decision of female employees to work at Technopark, it is important to consider the following ranking variables: mother tongue, deprivation of homeland familiarities, homogeneity, the quicker development of the IT industry, career advancement, fulfilling social responsibilities (like marriage), quality education for children, wide-screen entertainment during holidays, and climate.
- All ranking elements, including attractive salary/perks, standard work life, faster IT industry development, career growth/advancement, and standardized lifestyle, The reasons for better children's education, appealing holiday entertainment, and food and healthcare Weather and other environmental elements impacting the decision of female workers to work at Technopark in relation to the makeup of their households

Suggestions of the Study

Part of the recommendations puts a lot of faith in what the researchers learn as they carry out the study. These suggestions are the final product of the labor that went into doing the study.

- Attrition rates among female employees are high across all industries, and this problem might have its roots in the actions of both employers and workers. The elements that greatly influence employee turnover include salary, business perks, employment security, work-life balance, job performance, motivating programs, and personal concerns.
- In order to hold on to the best staff, you should provide them raises and chances to advance in their careers. Employees are less likely to leave a company if they are comfortable and work in an ideal setting.
- Encouraging staff members to take advantage of many chances for professional growth and skill training boosts productivity. The percentage of employee turnover among women may be effectively decreased if the following conditions are met: female-friendly management; positive relationships with coworkers; and an efficient and effective internal communication system.
- Companies should make sure their workers are secure in their jobs by reducing the amount of pressure they feel to meet goals and by offering health insurance and other benefits.
- To help women succeed in their careers, it is crucial to provide them with detailed job descriptions, establish a performance-based compensation system, and provide them with opportunities to improve their skills.
- To boost employee performance, one of the most important things is to keep them motivated. Greater work satisfaction is a result of gender equality, precise job descriptions, and equitable distribution of job responsibilities.
- Create a work-life balance for female workers by granting them paid time off and weekend holidays, making nighttime travel safer, promoting gender equality, and offering flexible working hours.

The company may keep its female employees by doing the following:

- Aspiring individuals want the ability to control their professional pathways, know what criteria are necessary, and grasp the methods to attain their objectives more than anything else, even more than a paycheck.
- It should be an organizational necessity to develop the leadership capacities of female workers and promote collegiality so that they may progress from task supervisors to genuine leaders of people.
- Serious training for women in the workforce is expensive, which makes many big corporations shudder. Instead of seeing this as an expense, top companies see it as a way to recruit and retain top personnel while also maximizing employee potential.

- Giving people more control over their own schedules is a cheap and effective method to get them more involved. It has shown to be quite beneficial, although it may need some organizational reform. A difficult-to-replicate but very effective strategy to boost commitment and intention to remain is to give female workers considerable leeway in how they structure their job.
- A grievance redressal mechanism is used by female workers to resolve concerns, and staff are motivated to accomplish objectives via prizes and recognition.
- Women's engagement and retention are both boosted by performance-based evaluation and competitive objectives.

Contributions of the Study

This empirical research aims to add to the area of human resource management by offering ideas for recruiting and retaining talented people in the IT business, specifically focusing on Technopark, Thiruvananthapuram, and the frequency with which female employees leave the company. The results of this study are anticipated to be very beneficial for both companies and workers, since this subject has received relatively little attention from researchers, particularly in the IT industry. These are the study's management benefits:

- A conceptual model of employee satisfaction and turnover in the information technology industry is offered and tested in the research from a theoretical perspective. Academics and researchers may use it as a guide to investigate what variables affect employee retention.
- The study emphasizes the significance of specific demographic factors like age and gender, as well as employee profile factors like total experience, qualifications, and home composition. Organizational factors like clear job description, opportunity to use skills and knowledge, staff that is friendly, job security, regular salary review, the process that resolves employee complaints, recognition and reward, supervisors that are understanding and accessible, healthcare welfare, fair payments, motivation programs, weekend holidays, longer night travels, educational benefits for the children, gender equality, flexible working hours as well as work-life balance are all what is ideal.

Scope for further Research

The study's subjects were women who work in information technology. Some potential avenues for further investigation that can be suggested by the study are as follows:

- Most research have been done on male workers in industrialized nations. In a similar vein, investigations comparing various age groups and sexes might be undertaken.
- It is suggested that future research looking at many regions of India, not only the IT, BPO, and KPO capitals of Chennai, Bangalore, and Hyderabad, using the same factors, might provide similar results.
- Research on the variables that contribute to employee happiness on the job and those that cause them to leave the company might benefit from a longitudinal design in the future. This would include asking the same group of people the same questions at two separate points in time, maybe separated by a year. Such research could be useful for confirming the study's conclusions or uncovering previously unknown connections between the variables under investigation.
- Other industries may also benefit from retention studies. Research on certain topics may be undertaken to get a deeper understanding of the issue, such as Compensation as an attrition strategy, career development and planning as an attrition strategy, work-life balance as an attrition strategy, and so on.
- Future studies might look at the potential effects of cleanliness and motivational elements on workers' productivity on the workplace.

Conclusion

Because it has uncovered the problem of female employee turnover in the IT sector, the research has been fruitful. Female workers are more likely to leave their jobs for personal reasons than male employees. To keep talented women in the IT field, salaries should rise and opportunities for advancement should be expanded. Workers are able to do a good job when given ample chances for growth and skill training. Key elements that will work together to decrease the degree of attrition among female workers are supportive supervisors, strong relationships with colleagues, and an efficient communication

system in the firm. We hope that the management will find this sort of research and the ideas valuable in retaining the female staff working at Technopark. Assuming the study is of value to HR and upper management, the researcher will feel well compensated for her efforts.

References

- **Sonal Gupta and Sukhvir Singh (2021)** “Employee Attrition and Retention Strategies: A Comparative study of leading Indian IT Companies” January 2021, In book: “Emerging Issues in Commerce and Business Management” (pp.260-276), Publisher: All Clear Publishers
 - **Aditi Abhyankar (2021)** “Indian IT Industry: High Attrition Rates And Employee Retention Strategies. Webology (ISSN: 1735-188X) Volume 18, Number 1, 2021, pp-2023-2029.
 - **Adhikari A.** Factors affecting employee attrition: A multiple regression approach. Icfaiian Journal of Management Research. 2009; 4 0 VIII(5): 42–43.
 - **Ahuja MK, Harrison MD, Katherine CM, Joey GF, Charles KJ.** IT road warriors: Balancing work–family conflict, job autonomy, and work over load to mitigate turnover intentions. MIS Quarterly. December 2007; 31(4): 1–18.
 - **Anantharaja A.** Causes of attrition in Bpo companies: Study of a mid-size organization in India. The IUP Journal of Management Research. IJMR20911.
 - **Ann TD.** Attrition levels have risen. Wall Street Journal (Online). 12 March 2010.
 - **Anonymous.** India’s TCS reports attrition of 31,500 employees in 2010-11. Asia Pulse. 23 June 2011.
 - **Anonymous.** Indian information technology (IT) companies and BPOs are witnessing large-scale attrition of talented employees. Asia Pulse. 2011.
 - **Antony and Jiju.** Reducing employees' turnover in transactional services: a Lean Six Sigma case study. International Journal of Productivity and Performance Management. 2010; 59 (7):688–700.
 - **Athreya SS.** The Indian software industry and its evolving service capability, industrial and corporate change advance access. March 2005: 1–26.
 - **Avazalipour et al,** The role of women in economic participation & employment. International Journal of Contemporary Maths & Sciences. 2012; 7(34): 1665–1672.
 - **Basariya R.** Employee absenteeism in Indian industries. International Journal of Science and Research. 2013.
 - **Bhatia SK.** Human resource management: Competitive advantage. Deep & Deep Publications Pvt Ltd.
 - **Bhattacharya A.** Women in Indian information technology sector: A sociological analysis. IOSR Journal of Humanities and Social Sciences. November 2012; 3: 45–52.
 - **Budhwar PS and Varma A.** Insights into the Indian call centre industry: Can internal marketing help tackle high employee turnover? Journal of Services Marketing, 2009; 23(5): 351–362.
-