

Applying HR Analytics to Employee Turnover: Evidence from the IT Sector in Guadalajara, Mexico

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Abstract: This research examines the problem of employee turnover among the information technology (IT) sector of Guadalajara through IBM Human Resource Analytics Employee Attrition and Performance variables in a CRISP-DM model. The purpose is to determine the extent to which the 35 IBM variables can be applied to the Guadalajara city of Mexico and to come up with an empirical foundation for turnover prediction using AI in the future. The quantitative design was used on the sample of 1,154 employee records of two IT companies; these firms were selected because they operate in similar market segments which merged survey answers with the IBM-like fields of HR. The employees are fairly balanced with age (35.7% 25-35 years, 32.1% 35-45, 32.1% over 45) and well compensated, with a salary of 25 hours of overtime work monthly, 37.6 hours of annual training, and 3.2 years of service with the current manager. The 67.9% are not intending to change this year, 75% report job satisfaction, and 85.4% co-worker relations as very good or excellent. The correlation analysis reveals that there decrease in work-life balance with long working hours ($r = -0.55$), promotion delay is correlated to inferior performance ($r = -0.45$), and experience correlates with higher salary and tenure ($r = 0.55$ and $r = 0.79$). According to the findings, pay is important, with promotion opportunities, workload, and organisational climate being critical levers. The IBM variables and advises Guadalajara IT companies to include these measures in the data-driven retention and future AI-assisted attrition models.

Keywords: Employee turnover, HR analytics, IBM attrition model, Guadalajara IT sector, work-life balance

1. Introduction

The Mexican labor market has one of the highest employee turnover rates in Latin America for digital talent is workers employed in information and communication technologies, software development, data analytics and other technology intensive roles. Dubost (2022) reported a rate of 19.2%, which is the third economy where employers have the greatest difficulty retaining specialized talent, only behind Argentina (32.4%) and Brazil (19.5%). Posthuma et al. (2021) stated that the cost of labor typically represents 70% of operating expenses and that when employees leave, companies need to replace them through human resource management processes that include recruitment, selection, onboarding, and training. These costs represent a very significant expense for companies that could be avoided if turnover were lower. This research identified the cultural, economic, legal, and other factors that could influence employees leaving their jobs. Posthuma et al. (2021) mentioned that addressing skill shortages today and ensuring the future employability of the workforce requires implementing strategic planning that facilitates the effective transfer of talent from declining roles to emerging roles. This will prevent repetitive cycles of "churn and burn" in the face of changing skill demands. It is important to note that HR leaders predict an average turnover rate of 19% this year, with even higher figures in the healthcare and construction sectors. Additionally, workforce reductions impact an average of 20% of the workforce. Fallucchi et al. (2020) suggested that job expectations, poor person-job fit, limitation of training and feedback, lack of opportunities to develop, lack of recognition, work overload, and work-life imbalance, and deteriorated trust in leaders contribute to employee turnover in the context of contemporary knowledge-intensive organisational environments.



The leadership style, trust, and the expectation that the employees have related to their jobs are solid reasons for employee turnover, but that is something that needs to be addressed. Lu et al. (2023) mentioned that a low employee turnover rate is fundamental for solid organizational development as it helps resist environmental turbulence and improves environmental responsibilities in different corporate entities. In this same article, the authors also show an upward trend in the overall employee turnover rate between 2015 and 2019, increasing from 23.7% to 27.9% (Lu et al., 2023). Among all turnover populations, new-generation employees show the most distinctive characteristics, according to data obtained from the United States Bureau of Labor Statistics.

It determining through their performance the profitability of companies (Avom et al., 2024). They are the ones who tackle the professional challenges faced by companies on a daily basis to become increasingly competitive and sustain their presence in the market for as long as possible. Staff turnover is a significant problem in the IT industry of Mexico, with recurring issues of unskilled labor, initial replacement and onboarding expenses, less investment in research and development, and intense competition among outside technology corporations, all of which decrease productivity, innovation, and future development (Analysts and Software Developers and Multimedia, 2024).

Therefore, the main objective of this research is "To evaluate the applicability of the Human Resources Turnover and Analytical Performance variables developed by IBM in the IT labor market in Guadalajara, Mexico, and determine the specific adaptations necessary to adapt them to the Mexican labor context." This study aims to explore the feasibility of using the Employee Turnover and Human Resource Analytic Performance variables developed by IBM (Fallucchi et al., 2020). This set of variables has already been used in countries such as Saudi Arabia, Indonesia, and the United States, among others. The IT job market in Guadalajara, Mexico, was analyzed to determine which variables out of the 35 proposed by the IBM model specifically apply to the Mexican labor market. The theoretical issue the study is dealing with is the possibility of transferring a standardized IBM turnover model to other institutional and cultural environments without affecting its explanatory power. The analysis of the behavior of the key IBM variables in Guadalajara versus the evidence found in other countries helps to understand what constructs are strong and what are context-specific.

The research was lead to the creation of an AI-powered predictive model to anticipate employee turnover within the specific context of technology companies in Guadalajara, Jalisco, Mexico. The main objective was to answer the following question, "Is it possible to create a predictive model for employee attrition through the utilization of artificial intelligence algorithms by analyzing employee-related data in the IT industry of Guadalajara, Jalisco, Mexico?" This research investigates the applicability of IBM's Employee Turnover and Human Resource Analytic Performance variables within the IT job market in Guadalajara, Mexico.

2. Literature Review

Human resource management in knowledge-intensive industries, such as information technology, where specialised skills are rare, and mobility is high, has been made one of the major concerns due to staff turnover. Mohd Fuzi and Baki (2025) believed that the overall expense of losing an employee can be 90-200% of yearly income, and Jungryeol Park et al. (2024) revealed that a high turnover ratio loses financial efficiency and reduces the investment returns in human capital. Bello and Steil (2020) analysed knowledge-intensive organisations in Brazil and determined that an aggregate of demographic factors (age, gender, responsibility of kinship) and attitudinal variables (job satisfaction, affective commitment, career commitment) jointly affect intentions to stay or leave. This paper did not specifically concentrate on the IT sector; however, the study is applicable since the Brazilian knowledge-intensive labour market exhibits many of the characteristics of the Mexican IT industry, which include a high level of specialised skills required, as well as the intense competition for skilled employees.

Explaining the nature of employee turnover is pertinent in this kind of analysis. Bonaccio et al. (2020) described turnover as the loss of employees and their replacement by others, which includes voluntary resignations and involuntary separations initiated by organisations. Khawand et al. (2022) strengthened this difference and highlighted that both types are involved in the overall inflow and outflow of staff in the long-term perspective. Expanding on this, Jungryeol Park et al. (2024) defined turnover intention as a psychological activity where workers assess their intentions to leave, which is often followed by departure. Madigan and Kim (2021) showed that job satisfaction and burnout are the key predictors of intention to quit in professional workforces, whereas Sukainah Hasan Saleh Alhebshi et al. (2025) revealed that individual motivation and work satisfaction are key predictors of retention in higher education.

A body of literature underlines the role of leadership, ethics, and organisational climate in influencing turnover in the knowledge-based setting and can be easily extended to the IT teams. Suifan et al. (2020) found that ethical leadership decreases turnover intention through psychologically empowering and identifying with the organisation,

whereas Qing et al. (2020) found that psychological empowerment entirely mediates the impact of ethical leadership on affective commitment and partially mediates it on job satisfaction in the public-sector organisations. Nazarian et al. (2022) also found that ethical leadership positively relates to perceptions of procedural and distributive justice and is positively correlated with loyalty in the hotel business, but Albashiti et al. (2021) also mentioned that despotic leadership has a negative effect on job satisfaction and a positive effect on intentions to leave in the hotel industry.

This is further explained by human capital development and organisation commitment research, which states that retention, is especially important in IT organisations that rely on accrued expertise. Rathaba and Naong (2024) found that development programmes in human capital are predictive of staff retention through their indication of long-term investment in human skills and career. Gelencser et al. (2024) presented a retention modelling of small, medium, and large businesses and found that benefits, normative commitment, nature of work, and co-worker relationships are the key factors of commitment and intention to remain regardless of the firm size. As Jalil et al. (2021) discovered, training programmes in SMEs positively influence social capital of employees and organisational commitment, and Nguyen Ngoc et al. (2022) and Jaskeviciute et al. (2024) both showed that job satisfaction and well-being are causally related and simultaneously influence the quality of the working environment. The results can be directly applied to the IT companies in Guadalajara, where unceasing upskilling, appealing project material, and well-developed peer contacts are the primary levers in the retention of hard-to-find technical talent.

Job embeddedness, engagement, and stress are also prominent research variables in turnover, and they provide desirable comparisons to IT work conditions. Artiningsih et al. (2023) demonstrated that job embeddedness and work engagement are negatively correlated and strongly correlated with turnover intention among the employees of a higher education institution, which means that the more an employee is attached to their job and workplace, the less the chance of leaving the job. In another study on the banking sector, Gautam and Gautam (2024) revealed that workload, role ambiguity, and growth opportunity prospects were the key occupational stressors that were positively related to turnover intention. Ferreira and Potgieter (2021) found that job stress, promotion prospects, supervisor support, and the broader workplace climate were all significantly positively correlated with turnover intentions in the hospitality industry and made the argument that managers could mitigate turnover by promoting supportive, participative, and developmental climates. Schiffinger and Braun (2020) discovered that time pressure and scheduling satisfaction predict emotional exhaustion and turnover intention as strong predictors of emotional labour as well as organisational support among flight attendants.

Another mechanism that becomes significant in terms of the ability to impact turnover-related behaviours in the environment that requires high professional standards is leadership and trust. Partial least squares structural equation modelling guided Ahmad et al. (2020) in the discovery that responsible leadership is not directly related to helping to reduce workplace deviant behaviour but works primarily through trust, and the route of turnover intention has a weaker role. This finding suggests that indirectly, leaders who aim at developing trust and equitable relationships can reduce deviance and exit intentions. Applying them to the situation of IT organisations, the ability of managers to express their ideas concisely, acknowledging the autonomy of professionals, and engaging workers in workload and project-related decisions helps them to retain specialists.

3. Methodology

The study uses the Cross-Industry Standard Process of Data Mining (CRISP-DM) as the general analytical framework using the methodology proposed by Rollins (2015). The iterative process, displayed in Figure 1, is initiated by the business understanding, in which the turnover issue in the IT industry in Guadalajara is converted into the analytical goals, and the analytic strategy is namely a CRISP-DM-based HR analytics approach as the tool to help solve the analytical goals, relying on the use of HR analytics and IBM variables. Data requirements are then defined, IBM and survey variables relevant are specified, and data collection among firms is done. The data collected is then profiled at the data-understanding stage and cleaned, transformed, and coded at the data preparation stage. During the modeling phase, statistical and machine-learning models including descriptive statistics, correlation and one way ANOVA are created, optimized, and evaluated during the evaluation phase according to the criteria of accuracy and interpretability. Lastly, approved models are implemented to produce action and HR decision-making insights, and the CRISP-DM cycle is finished with continuous feedback.

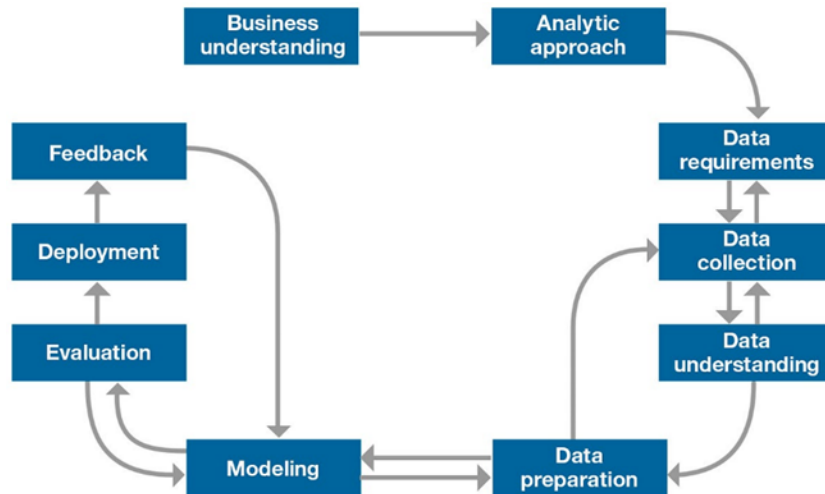


Figure 1: CRISP-DM process for employee turnover analytics, Source: (Rollins, 2015)

Figure 1 structures this research with a structure of CRISP-DM beginning with the initial clarification of the turnover problem in the IT sector in Guadalajara (business understanding), to the selection of an HR-analytics approach based on the IBM attrition variables (analytic approach), and specifying and collecting the necessary data of the two involved firms (data requirements and data collection). The raw HR and survey data are then explored and cleaned (data understanding and data preparation), and then data descriptive statistics, correlation analysis, and one-way ANOVA are applied during the modeling phase. During the evaluation stage, these models are evaluated based on statistical significance, explanatory power, and practical interpretability to HR decision-making. Lastly, the results are implemented in the form of evidence-based suggestions of data-driven retention methods, and the feedback phase determines other variables and modeling extensions to further AI-based predictive applications.

Analytic Approach

The business problem was understood in the previous stage. In this stage, a variable selection analysis must be carried out for use in later stages. Given the variables chosen in the Research Design, the need for a response on the binary relevance of the set of variables chosen in the instrument has been found. So far, algorithms have been identified that efficiently identify co-relationships. No definitive choice has been made, but clustering and categorization algorithms are considered, given the objective of finding relevance between the instrument's variables. These variables are the basis for the next stage, the data requirements.

Data Requirements

To work efficiently with clustering algorithms, variables that can be worked on concretely and have the capacity to be measured without subjective trends has been chosen as requirements. The data requirements are aligned with the variables described in the research design, which was then captured using an instrument used by each company to create the raw data source. The data collection work is explained in more detail below.

The design of the final instrument, based on the literature reviewed, the authors found that there have not been any other researchers who applied the IBM Human Resource Analytic Employee Attrition and Performance variables to the Mexican Labour market; this paper will help the researchers to have more clarity and a better understanding of which of the 35 variables applied directly to the Guadalajara IT Market.

Quantitative Research

Former employees of two IT companies in Mexico who have left their jobs in the last two years, and current employees of these companies. The quantitative sample consisted of 1,154 employee records from two IT companies in Guadalajara. Each record linked fields from the HR information system to the answers to a structured online questionnaire completed by current and former employees. The two companies offered insurance for prominent organisational positions, including directors, managers, and team leaders; software and support engineers; and administrative personnel, thus covering both technical and non-technical functions. The data gathered in this research were thus only based on a web survey; no further interviews or focus groups were conducted. The resulting data set was explored using descriptive statistics and inferential methods, namely, correlation analysis and one-way ANOVA,

to examine the relationships between IBM-style turnover and important outcomes, and the development of AI-based predictive algorithms was considered in a subsequent research stage.

4. Results

Figure 2 shows that the IT industry in Guadalajara is balanced regarding age diversity. While this still has a lot of work to do, the percentages obtained in terms of age ranges have a certain degree of equity. The respondents were aged as follows: 32.1% between 35 and 45 years, 35.7% between 25 and 35 years, and 32.1% above 45 years, as indicated in the graph. This distribution implied a non-uniform distribution of early-career, mid-career, and senior professionals in the Guadalajara IT labor force, which is particularly relevant for organizational succession planning and capability development, and indicates, at the sector level, a stable source of experienced specialists to sustain ongoing IT projects.

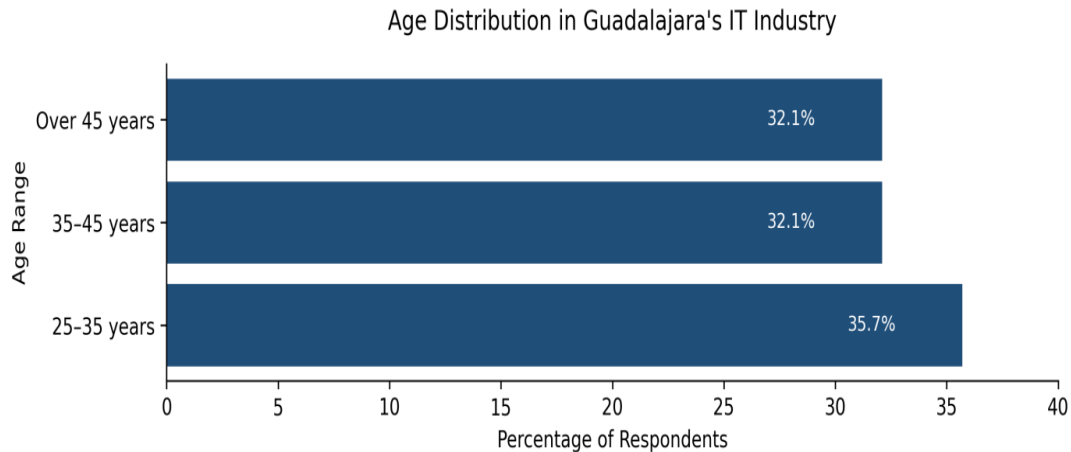


Figure 2: Age distribution

Figure 3 shows how most people currently working in the IT sector are looking for specific stability in their jobs, with 67.9% of respondents indicating that they are not looking to move for at least this year. This could also indicate that certain factors outside of companies and the industry affect workers' decisions to move jobs. The wider macroeconomic and political uncertainty can also contribute to employees' intentions to change jobs. However, the current study has not directly measured these effects and therefore cannot make a causal assertion about their contribution to turnover intentions in the Guadalajara IT sector.

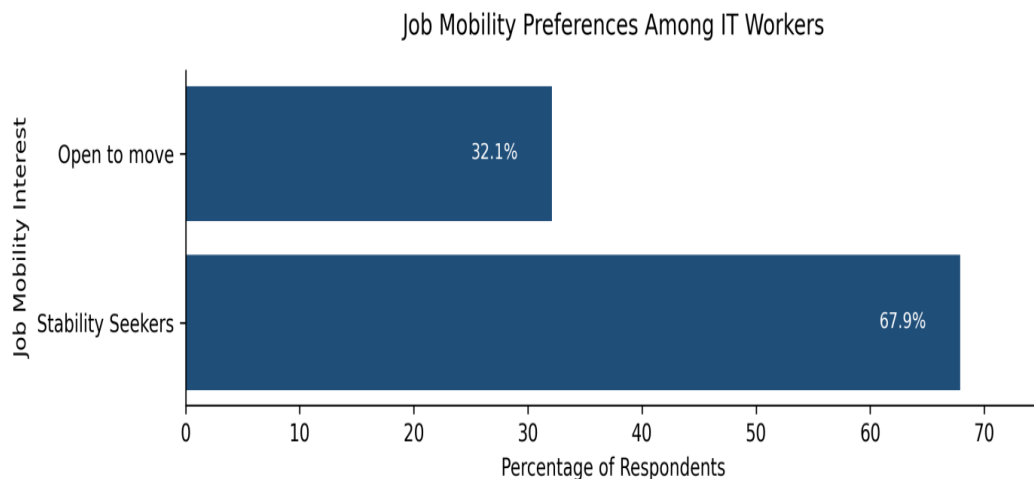


Figure 3: Job Mobility Interest

Regarding the question "What is your daily salary?" (Calculated as nominal monthly salary / 30), another point to consider is that in this industry sector, the average daily salary is 1,655 Mexican pesos (\$98.62 at an exchange rate of \$16.78 Mexican pesos per dollar) (Posthuma et al., 2021). Considering that as of January 1, 2024, the minimum wage in Mexico in the central region of the country is \$249 pesos per day and \$375 pesos per day (\$14.83 to \$22.34 daily), this indicates that in the IT sector on average, a worker in Guadalajara, Jalisco earns between 6.64 and 4.41 times more than other workers in different sectors.

It was also found that the average number of overtime hours worked in this sector is 25 per month, which indicates that workers in this sector consider other factors besides overtime hours when deciding whether or not to stay in their jobs. Despite this being a considerable number of hours, 75% of respondents said they were satisfied with their jobs.

It was also found that, on average, technology workers receive a salary increase of 2.57%, which is much lower than Mexico's annual inflation rate. This leaves us with another question that should be answered in another research study: If the initial salary of a worker in the IT sector is considered high, is it ethical for annual salary adjustments to be lower than the country's annual inflation rate?

Two other important findings were that, on average, people who work in the IT sector in Guadalajara, Jalisco, receive around 37.6 hours of training per year, which indicates that they are a sector of the economically active population that takes professional growth and/or life and career plans that organizations can offer their employees very seriously. Another important factor was that, on average, people had been working for their current bosses for 3.2 years. This leads us to ask ourselves future research questions such as: Is the perceived leadership within these companies perceived as adequate, and does this factor directly or indirectly influence the percentage of employee turnover?

Figure 4 indicates that only 53.6% of the respondents belong to the technology sector, meaning that almost half of the workers belong to administrative or support fields. This data tells us that a technical degree is optional for this sector; however, knowing the idioms and/or acronyms is very useful for adequate communication between employees of this type of organization.

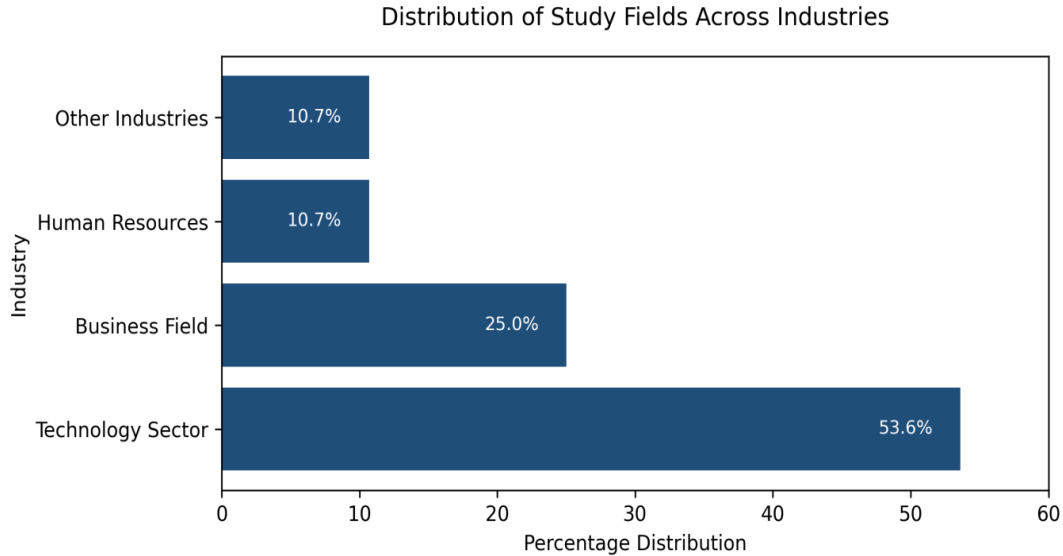


Figure 4: Distribution of study fields

Another piece of information found in this research is that the average salary in the IT sector in Guadalajara, Jalisco, is MXN 60,489.29 per month, equivalent to 8 minimum wages. This indicates that the technology industry is one of the best-paid in the country. This also leads us to conclude that the amount of salary paid is a key factor in job satisfaction, as 75% of the respondents are satisfied with their salary. While this is not the main factor, it is one of the most influential.

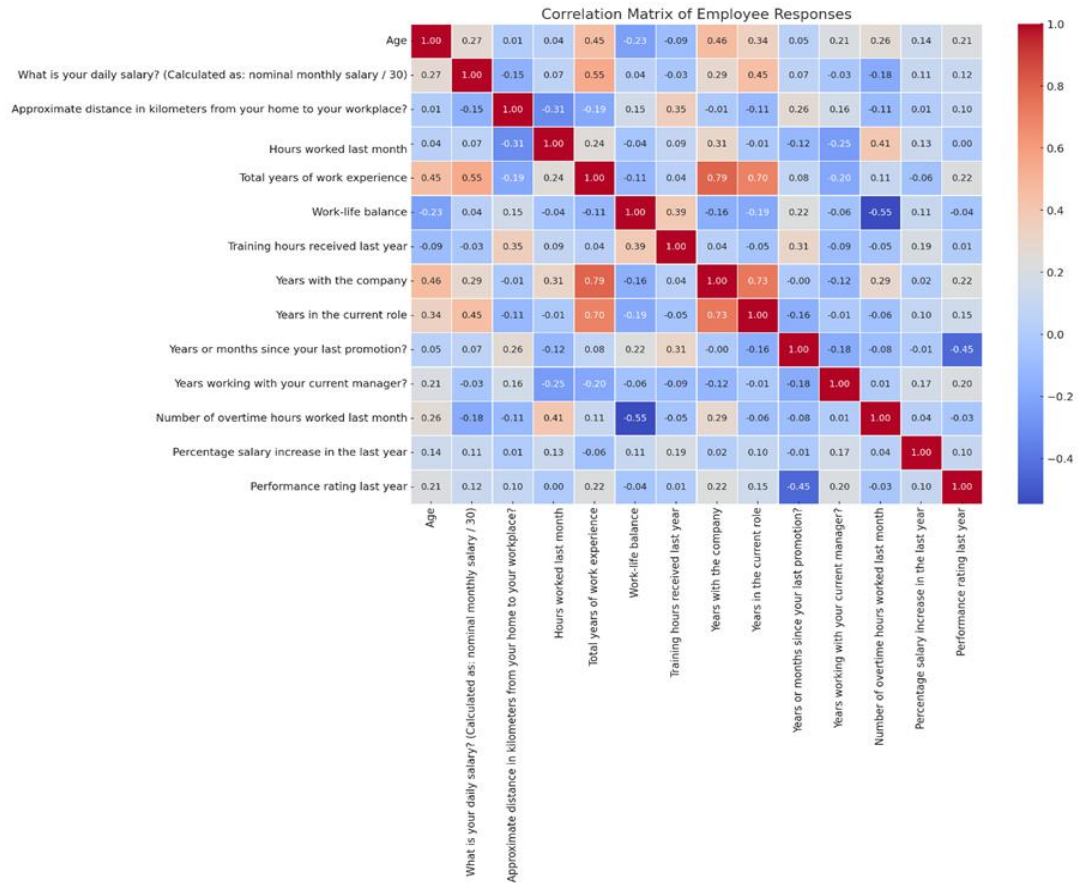


Figure 5: Correlation Matrix of Employee Responses

Figure 5 shows the positive correlation between years with the company and years of experience is 0.79, meaning that more experience correlates with a higher number of years worked at the company. The study also found a strong positive correlation of 0.70 between years in the current job and total years of experience, indicating that senior profiles tend to be more stable in their positions. Another negative correlation of -0.55 between the number of hours worked in the previous month and work-life balance. This suggests that the more hours worked, the lower the work-life balance. The study revealed a negative correlation of -0.45 between last year's performance rating and the number of years since the last promotion. This indicates that last year's performance is closely tied to the number of promotions granted by companies within a one-year period. A strong positive correlation of 0.55 was discovered between years of experience and salary range, which could suggest that more years of experience lead to a higher salary range and, consequently, greater stability. However, this must consider other factors such as organizational climate, leadership styles, teamwork, etc., variables that will be included in the next article.

Table 1: ANOVA of salary differences between organisational departments

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Value	P Value
Between Groups	5.456685	9	0.606298	5.456685	0.000002
Within Groups	0.000002	1144	0.000000		
Total	5.456687	1153	0.004732		

Table 1 presents a summary of a one-way ANOVA that was used to test the hypothesis of whether there is any significant difference among the mean salaries of the ten departments. The sum of squares of between groups is very great in comparison to that of within groups, and the mean square between groups (0.606) is very large compared to the almost zero mean square within groups. This produces an F value of 5.46 with 9 and 1,144 degrees of freedom and a p value of 0.000002, which is way less than 0.05. This means statistically that there is at least one department that differs in its mean salary from the rest, and thus does not mean that salaries are evenly distributed in the whole organisation. The salary structures differ across departments that are significant and thus should be given closer HR consideration and benchmarking.

Table 2: ANOVA of outcome differences by intention to move to another position or job

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F Value	P Value
(Consider moving to a different position and/or job outside the company this year?)	6789.12	1	6789.12	15.67	0.000089
Residual	494321.56	1144	432.01		

Table 2 considers a one-way ANOVA from the perspective of whether or not employees considering the move to another position or job in the current year are different in a key continuous outcome (say satisfaction or engagement) as compared to those who are not. The factor consideration moving gives an explanation of 6,789.12 in the degree of freedom of 1, and the mean square of 6,789.12. This yields an f of 15.67 and the p value of 0.000089, not even close to 0.05, as compared to the residual mean square of 432.01 (df = 1, 144). This statistically proves that there is a major difference in the outcome of the employees who are contemplating a move and those who are not. In practice, it means that the intention to leave that is already voiced is already linked to the quantifiable change in attitudes or experiences, and that such employees constitute a particular risk group. This shows that the targeted mobility intentions are a useful predictor of targeted retention.

5. Discussion

The verification of the IBM framework in Guadalajara is internationally applicable since the city serves as a key near shoring centre between multinational technology prospective clients and the domestic technical human resources. The experiences in this environment inform HR and analytics functions to determine whether the IBM-style models can be used to aid the retention decision-making process in other emerging and Spanish-speaking digital economies. The analysis of the Guadalajara IT sample confirms, in general, that the staff turnover in knowledge-intensive sector is conditioned by a combination of structural, organisational, and personal factors, and it also shows some contextual variations. Lu et al. (2023) discovered that turnover increased worldwide, between 23.7% and 27.9% between 2015 and 2019, particularly among employees of the new generation, whereas Posthuma et al. (2021) demonstrated that the average turnover is projected at about 19%. Concurrently, 67.9% stated they had no intentions of moving in this year, something that implies a short-term stabilisation that is contrary to the on-going "churn and burn" as projected by Posthuma et al. (2021). One guess is that macroeconomic uncertainty and relatively well-compensation in an election year can also lead to a short-run effect of decreased mobility even in a structurally mobile IT market.

Opportunities to promote and move up the ladder appeared to be very convergent with the past. In this research, the negative correlation between last year's performance rating and years since last promotion ($r = -0.45$) shows that delayed promotion is related to poorer performance rating and consequently to low morale. Jungryeol Park et al. (2024) have reported the same, stating that years since last promotion is a major positive predictor of turnover in Saudi IT companies, as they claimed that delayed careers cause more people to exit. Mohd Fuzi & Baki (2025), which stressed the necessity of analytical methods to decide on turnover, these similar results highlight the promotion as a common retention tool in both of these situations. One such difference is that stock ownership was not a determining factor in Guadalajara, but the Saudi study found stock options to be a significant predictor of retention, indicating that financial rewards do not work to the same effect in different reward systems in different cultures.

It also confirms that experience and human capital are important for stability in the research on retention more broadly. The fact that years of experience is positively correlated with salary range ($r = 0.55$) shows that old and

seasoned employees are more likely to be rewarded with higher wages and more stable employment. Rathaba and Naong (2024) reasoned that human capital development programmes have a positive impact on retention, whereas Jungryeol Park et al. (2024) established that benefits and the kind of work have a strong influence on organisational commitment in firm sizes. These assertions are in line with the Guadalajara evidence: the mean tenure of 3.2 years, the supervisor with whom they work, and 37.6 hours of training per annum indicate an environment in which experience is valued, and development is not disregarded. This supports the position that skills and career path investment are a widespread basis of retention in both the developing and the developed markets.

The similarity and nuance of this occurrence with previous research are work-life balance and temporal pressures. The high negative correlation between hours worked in the last month and the perceived work-life balance ($r = 0.55$) supports the conclusions of Gautam and Gautam (2024), as they detected workload and role ambiguity as stressors related to turnover intention, and Schiffinger and Braun (2020), who demonstrated that time pressure and scheduling satisfaction are the primary predictors of emotional exhaustion and turnover intention. Nevertheless, 75% of the respondents at Guadalajara were satisfied with the job despite an average of 25 overtime hours every month. This relative lack of fit indicates that high remuneration and positive organisational environment are likely to mitigate the adverse impact of excessive working hours, but in other nations, the same time requirements can be directly converted into withdrawal and exit.

The evidence of commitment and embeddedness in international literature is widely reflected in social relations and organisational climate in the Guadalajara IT sector. The study has revealed that 85.4% of the respondents rated their relationship with co-workers as very good or excellent, and perceived organisational climate was closely related to the level of job satisfaction. Jalil et al. (2021) also indicated that organisational commitment in SMEs was enhanced by training and co-worker support, and that Jungryeol Park et al. (2024) suggested that benefits, nature of work, and co-worker relations were the key determinants of commitment irrespective of firm size. The authors also discovered that job embeddedness and work engagement negatively correlate with turnover intention (Artiningsih et al, 2023). The observations are confirmed by the Guadalajara findings, which point to strong peer relations and a conducive climate being able to coexist with a dynamic labour market and still being able to anchor a large number of employees in their existing positions.

The quality of leadership and practice of ethical management was not directly measured during this research, but certain parallels may be provided. There is no inconsistency between the average tenure with current managers and the high levels of overall satisfaction, and research that found that ethical and supportive leadership decreased turnover intention by engaging employees psychologically and the identification factors (Qing et al., 2020; Suifan et al., 2020). Nazarian et al. (2022) demonstrated that ethical leadership influences the perceptions of justice and loyalty, whereas Albashiti et al. (2021) found that despotic leadership generates the intentions to turnover. These mechanisms cannot be explicitly tested by the Guadalajara data, but it is the positive leadership patterns that the relatively high levels of satisfaction and stability among long-term employees are closer to than the destructive ones illustrated in the literature.

Lastly, the application of the HR Analytics variables of IBM and the CRISP-style of analytic thinking places this study in an expanding body of data-driven turnover research. Fallucchi et al. (2020) showed that machine learning models on the IBM data can predict attrition with high accuracy, and Jungryeol Park et al. (2024) created superior prediction models of new employee turnover intention. The current research confirms that the majority of these variables are also significant in Guadalajara and finds a small number of them (such as daily salary and over-18 status) that do not contribute much value in this situation. This selective validation not only accords with international experience - that is, to show that IBM-based variables can travel fairly well across environments, but it also separately gives a Latin American calibration that can be used in future predictive models.

6. Conclusion

This research aimed at assessing the relevance of the IBM HR Analytics Employer Attrition and Performance variables in the Guadalajara IT industry and creating an evidence base to predict turnover. The analyses indicate that the majority of IBM variables have significant differences in employee satisfaction in this case and indicate consistent trends in the relationship between experience, promotion, salary, work-life balance, and mobility intentions. It does have a young workforce, high-paid and highly trained, though there is a high level of prior job mobility and significant departmental pay disparities. Positive correlations with experience, salary, and tenure are strong, which indicates that human capital is rewarded, and the profile of senior personnel is not changing rapidly. Simultaneously, the work-life balance is adversely linked to overtime, and those employees who already think about a move show much different results, which highlights the importance of attitudinal indicators as early alerts. The degree of job satisfaction, positive

organisational climate, as well as positive relationships with co-workers, suggests that social and cultural influences mitigate some of the dangers involved with long hours in an ever-changing labour market. On the whole, the results prove that the promotion opportunities, workload, development opportunities, and relational climate, but not the pay, only influence turnover in the IT industry in Guadalajara. In practice, IT companies are well advised to focus on open career progression, equitable promotion, proactive workload control, and, in its turn, team coherence building with the help of systematic observation of key indicators and intentions to relocate of the company issued by IBM. In future studies, the use of two companies is insufficient as it is necessary to expand the sample size, investigate direct leadership and organisational justice measures, and develop and empirically test AI-based predictive models, which combine these tuned variables to use them as proactive retention management tools.

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