
IMPACT OF ADOPTION RATE ON ORGANISATIONAL PERFORMANCE IN IT ORGANISATIONS IN INDIA

Karan Trehan¹, Dr. Shikha N Khera², Dr. Deepali Malhotra³

¹Research Scholar, Delhi School of Management, Delhi Technological University

²Professor, Delhi School of Management, Delhi Technological University

³Assistant Professor, Delhi School of Management, Delhi Technological University

Article History

Received : 2026-07-20

Revised : 2026-08-21

Accepted : 2026-08-31

Published : 2026-09-09

Abstract

The study examines the influence of HR analytics adoption on organisational performance in Indian information technology (IT) organisations by conceptualizing adoption through three dimensions: Tool Utilization, Insight Integration, and User Competency. A quantitative, cross-sectional survey design was employed with HR professionals and managerial employees who were familiar with HR analytics and workforce-related decision-making. The relationships were tested using covariance-based Structural Equation Modelling through AMOS. The findings show that nine of the twelve hypothesized relationships were statistically supported. Tool Utilization significantly influenced Workforce Productivity, Talent Retention, and HR Decision-Making Quality, but had no significant effect on Strategic Alignment. Insight Integration emerged as the strongest adoption dimension and significantly influenced all four organisational-performance outcomes, with its strongest effect observed on HR Decision-Making Quality. User Competency significantly affected Talent Retention and HR Decision-Making Quality, while its relationships with Workforce Productivity and Strategic Alignment were not significant. The results demonstrate that the organisational value of HR analytics depends not only on the use of analytical tools but also on the extent to which analytical insights are embedded in managerial decisions. The study contributes a multidimensional perspective on HR analytics adoption and offers practical guidance for improving analytics governance, decision integration, and managerial competency in Indian IT organisations.

Keywords: HR Analytics; Tool Utilization; Insight Integration; User Competency; Organisational Performance

1. Introduction

Human resource (HR) analytics has become a crucial tool for organisations to enhance their decision-making processes around their workforce by transforming employees' data into managerial insights. The development is significant in today's context of IT in India, where organisational performance relies on knowledge-intensive human capital, the retention of employees, niche skills, and effective utilization of human resources. The importance of managing the workforce in the technology sector is strategic, as it signifies a major part of India's national economy and a key source of technology services in the country (NASSCOM, 2024). In this context, HR analytics offers the opportunity for organisations to use workforce evidence in a more systematic way to assist in recruitment, performance management, employee development, retention, workforce planning, and strategic decision-making.

The use of analytical tools has been known to offer organisations a lot of value, but the existence of analytical technologies doesn't ensure better organisational results. Previous studies have validated that the importance of HR analytics is related to whether organisations can leverage the information in available HR data to take meaningful managerial action, rather than just purchase an HR analytics system (Marler & Boudreau, 2017). The increasing volume of HR analytics scholarship also suggests a transition from descriptive reporting to more advanced evidence-based and predictive use, and the fact that there are ongoing implementation and organisational readiness challenges. (Arora et al., 2023) Processes that turn analytical evidence into regular HR processes and managerial decisions are also crucial if the implementation of analytics is to be effective (Falletta & Combs, 2021). This is particularly relevant to the IT and IT-enabled services space in India. Agarwal and Raj (2022) found that factors like organisational and behavioural factors have an impact on HR analytics adoption in Indian IT and ITES organisations. Also, from the sector-level evidence, it can be seen that while the IT industry has advanced digital infrastructure, the level of adoption is not uniform across organisations and managerial groups (Bishnoi & Vikas, 2024). Later, the evidence from India suggests that the impact of analytical skill limitations, implementation issues, and organizational factors remains a factor in the practical use of HR analytics (Saxena et al., 2025).

In addition, practitioner-oriented research shows that organisational adoption is influenced by other factors beyond the availability of technology, such as organisational support, managerial acceptance, and the ability to operationalize analytics in HR processes (Dasari & Devi, 2025). These results indicate an interesting research question. Although several previous studies have focused on HR analytics capability, adoption antecedents, barriers to implementation, or broader organizational outcomes, not much research has provided detail on how HR analytics adoption is translated into outcomes. To date, literature related to HR analytics-performance indicates that the field still needs further clarity on the link between the different adoption types of HR analytics and organisational outcomes (Kiran et al., 2024). For instance, analytics could be used to enhance employee retention by discovering patterns of employee turnover and deciding on targeted interventions (Avrahami et al., 2022). However, this is only possible if the analytics results impact managerial practices. In the same way, producing an analytical insight is not the same as creating an organisation's impact value is created when the insight is accepted and acted upon by those who make decisions. (Rasmussen et al., 2024).

In order to solve this problem, this study introduces the concept of Adoption Rate as a multidimensional phenomenon in the organizational context, consisting of three dimensions: Tool Utilisation, Insight Integration, and User Competency. Tool Utilisation indicates the extent to which HR analytics platforms are being utilized; Insight Integration indicates the extent to which analytical evidence is being translated into HR policies and decisions; and User Competency indicates the analytical literacy and interpretive capacity needed to make the appropriate use of such evidence. These three dimensions are important to consider at the same time, as an organisation may often have advanced analytics capabilities but struggle to utilize these capabilities when it comes to making decisions, and the users may not have the skills to interpret the analytics output. Thus, the study will investigate the relationships between Tool Utilization, Insight Integration, and User Competency and four factors of organisational performance, namely Workforce Productivity, Talent Retention, HR Decision Making Quality, and Strategic Alignment. This focus reflects the recent evidence that HR analytics can act on organisational performance in various ways within the IT industry via the workforce and behavioural mechanisms (Vadithe & Kesari, 2025). Theoretically, the study provides a multidimensional account of HR analytics adoption, and practically, it points to the dimensions of adoption that are most relevant to certain performance outcomes.

2. Theoretical Foundation, Conceptual Framework, and Hypothesis Development

2.1 Theoretical Framework

The theoretical framework brings together the Technology Acceptance Model (TAM), Resource-Based View (RBV), and Dynamic Capability View (DCV) to provide a framework for the study of how the use of HR analytics can aid organisational performance. The study does not confront these theories in isolation, but gives each of them a complementary role. In TAM, the actual use of analytics technology is explained; in RBV, the value of analytical competency as an organisational resource is explained; and in DCV, the integration of analytical insights into organisational decisions is explained. These views illustrate how HR analytics shifts from being available to being used, understood, incorporated and, finally, applied to produce results in an organisation. Tool Utilisation is underpinned by TAM. According to Davis (1989), the perceived usefulness and ease of use are the major factors that affect the use of technology. When HR managers and HR professionals believe that these tools enhance job performance and are user-friendly, they are more likely to use dashboards, analytical platforms, and decision-support systems within HR analytics. Venkatesh et al. (2003) also highlight the importance of performance expectation, social influence, facilitating conditions, and behavioral intention on technology use. However, having HR analytics systems is not enough to create organisational value; it requires managers to use them in their day-to-day decision-making.

User Competency is based on the Resource-Based View. According to RBV, an organisation can gain a competitive edge by acquiring resources and capabilities that are hard for other organisations to replicate (Barney, 1991). While the ability to obtain analytics technologies is open to many organisations, the ability of employees to interpret analytical results, to evaluate evidence, and relate analytics to business problems is more organisation-specific. Similarly, Madhani (2023) states that the value of HR analytics lies not just in having the tools, but in building and effectively leveraging human and analytical skills. The Dynamic Capability View is a part of the Insight Integration dimension. Dynamic capabilities are the ability of an organisation to change its resources and to respond to changing environmental conditions (Eisenhardt & Martin, 2017). Creating information is just the first step in HR analytics.

If analytical evidence is used to inform decisions about recruitment, workforce planning, allocation of talent, performance management, and retention, then there is organisational value. When analytical information is integrated into managerial and strategic processes, HR analytics can link HR functions with organizational performance (Khan et al., 2024). The three theoretical perspectives are thus mutually complementary. Tool Utilisation is a measure of how engaged they are in their behaviour with analytics, User Competency is the ability to interpret the analytical outputs, and Insight Integration is the ability to turn the output of the analytics into actions for the organisation. Lee & Lee (2024) and McCartney et al. (2021) showed that analytical, business, technological, and interpretive skills are important competencies that HR professionals need in their work, particularly in the context of a data-driven environment.

There is also a significant connection between Data literacy and Analytics competency and the performance of decision-making (Fattah, 2024). In this sense, Adoption Rate is considered a multidimensional construct consisting of three different predictor constructs, namely Tool Utilisation, Insight Integration, and User Competency. This way, it would be possible to investigate whether organisational outcomes are affected differently by the different mechanisms of adoption. HR analytics has been linked to better workforce management, operational efficacy, and agility of organisations (Tessema et al., 2025; Vadithe & Kesari, 2024). The integrated framework, therefore, serves as the theoretical foundation to study the impact of the three dimensions of adoption on Workforce Productivity, Talent Retention, HR Decision-Making Quality, and Strategic Alignment.

2.2 Conceptual Framework

The conceptual framework focuses on the association between HR analytics adoption and organisational performance in Indian IT organisations. The concept of Adoption Rate is seen as a multidimensional construct where three dimensions are conceptualised: Tool Utilisation, Insight Integration and User Competency. In the structural model, these three dimensions are treated as distinct predictor variables, allowing the individual effects of the three dimensions on organisational performance to be evaluated independently. Tool Utilisation measures how often and how extensively HR analytics platforms, dashboards, and analytical applications are being utilized by HR professionals and managers. Insight Integration indicates how much evidence from analytics is integrated into HR policies, workforce planning, talent management, and managerial decisions. User Competency is the information literacy, analytical skills, and interpretive

ability needed to grasp and use the outputs of HR analytics effectively. The four outcome dimensions of organisational performance are measured as: Workforce Productivity, Talent Retention, HR Decision-Making Quality, and Strategic Alignment. This framework introduces the concept of direct relationships between each of the three dimensions of adoption and each organisational-performance outcome. This allows the study to identify if an HR analytics implementation process is more impactful on different organisational outcomes than others, instead of assuming it works in a uniform manner.

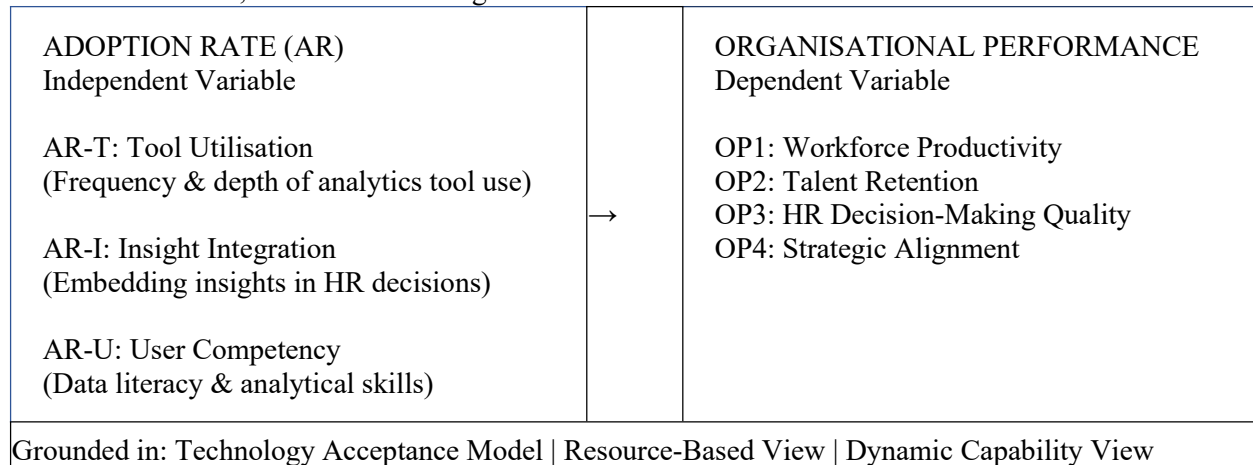


Figure 1. Conceptual Framework - Adoption Rate and Organisational Performance

In Figure 1, the conceptual framework is presented, connecting HR analytics adoption with organisational performance. Adoption Rate is reflected in three dimensions: Tool Utilization, Insight Integration, and User Competency. The four dimensions act as independent variables and are hypothesized to affect four organizational performance measures: Workforce Productivity, Talent Retention, HR Decision-Making Quality, and Strategic Alignment. The framework is based on the Technology Acceptance Model, Resource-Based View, and Dynamic Capability View, all of which are known to account for technology use, analytical capability, and integration of insights into organizational decision-making. The model thus presents a picture of the different dimensions of HR analytics adoption having a differential impact on performance.

2.3 Hypothesis Development

The study suggests that the use of HR analytics could affect organisational performance in three different ways, namely: Tool Utilisation, Insight Integration, and User Competency. Tool Utilisation captures the use of analytics tools in HR processes, and Insight Integration involves using analytical insights in HR and business decisions. User Competency is the analytical literacy and interpretive abilities needed to comprehend and use the outputs from analytics effectively. These dimensions are hypothesized to affect Workforce Productivity, Talent Retention, HR Decision-Making Quality and Strategic Alignment. Based on this, 12 hypotheses are set to test each of the dimensions of the adoption individually with regard to the same organisational performance outcomes, as presented in Table 1.

Table 1. Hypothesized Relationship

Hypothesis	Path	Hypothesized Relationship
H1	TU → WP	Tool Utilization has a significant positive effect on Workforce Productivity.
H2	TU → TR	Tool Utilization has a significant positive effect on Talent Retention.
H3	TU → HMQ	Tool Utilization has a significant positive effect on HR Decision-Making Quality.
H4	TU → SA	Tool Utilization has a significant positive effect on Strategic Alignment.
H5	II → WP	Insight Integration has a significant positive effect on Workforce Productivity.
H6	II → TR	Insight Integration has a significant positive effect on Talent Retention.
H7	II → HMQ	Insight Integration has a significant positive effect on HR Decision-Making Quality.
H8	II → SA	Insight Integration has a significant positive effect on Strategic Alignment.
H9	UC → WP	User Competency has a significant positive effect on Workforce

		Productivity.
H10	UC → TR	User Competency has a significant positive effect on Talent Retention.
H11	UC → HMQ	User Competency has a significant positive effect on HR Decision-Making Quality.
H12	UC → SA	User Competency has a significant positive effect on Strategic Alignment.

Note. TU = Tool Utilization; II = Insight Integration; UC = User Competency; WP = Workforce Productivity; TR = Talent Retention; HMQ = HR Decision-Making Quality; SA = Strategic Alignment.

3. Research Methodology

3.1 Research Design and Study Population

The study used a quantitative, cross-sectional research design to identify the relationships between the dimensions of HR Analytics adoption and organisational performance of Indian IT organisations. A survey approach was deemed to be suitable because the study aimed to measure the four outcomes of organisational performance at one time. The target population included HR professionals and middle- to senior-level managers in IT and IT-enabled service organisations in India. The respondents were eligible for participation if they held any of the following roles: exposure to HR analytics systems, HR-related information, and people-management decisions. This was a requirement to ensure that participants would be familiar with the practices that would be evaluated. The unit of analysis was the individual respondent, and constructs indicated perceptions of organisational practices and outcomes.

3.2 Sampling Technique and Data Collection

The present study adopted the purposive sampling technique to gather information from the eligible HR professionals and managerial employees in Indian IT organisations. Incomplete or unusable questionnaires were excluded. Those who had heard about HR analytics tools and were involved in decision-making related to their workforce were approached as respondents. Participants were advised prior to their participation in the study about the academic purpose of the study and the voluntary nature of participation. The questionnaire did not ask for personally identifying information, and responses were confidential.

3.3 Questionnaire Development and Measurement

The data were obtained by administering a structured questionnaire that included the measurement items of the seven constructs of the study along with the demographic questions. A five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) was used to measure all construct items. Three predictor constructs were identified for adoption of HR analytics: Tools Utilisation, Insight Integration, and User Competency. Four items were used to measure each of the three HR analytics adoption constructs: Tool Utilisation, Insight Integration, and User Competency, based on established scales relating to HR analytics and technology adoption. The frequency and depth of Tool Utilization, the level of Insight Integration (how much analytical evidence was integrated into HR decision-making processes), and User Competency (how much respondents perceived they were analytical and how well they could interpret HR analytics output) were tested. Four dimensions – Workforce Productivity, Talent Retention, HR Decision-Making Quality, and Strategic Alignment – were used to measure all aspects of organisational performance, and each dimension had 3 items. The language of the items has been modified to make them relevant to the Indian context of IT organisations. Table 2 shows the summary of construct dimension and measurement items.

Table 2: Summary of Constructs, Dimensions, and Measurement Items

Construct	Dimension	Sample Item	Source
Adoption Rate (IV)	Tool Utilisation	Analytics tools are regularly used by managers in my organisation	Agarwal & Raj (2022); Bishnoi & Vikas (2024)
	Insight Integration	HR analytics insights are systematically embedded in policy decisions	Falletta & Combs (2021); Zebua et al. (2024)
	User Competency	HR professionals in my organisation are trained to interpret analytics outputs	Lee & Lee (2024);
Organisational Performance (DV)	Workforce Productivity	Analytics use has improved overall workforce	Kiran et al. (2024); Okon et al. (2025)

		productivity	
	Talent Retention	Analytics has reduced voluntary attrition in our organisation	Avrahami et al. (2022); Bishnoi & Vikas (2024)
	HR Decision Quality	Analytics has made our HR decisions more evidence-based and fair	Khan et al. (2024); Falletta & Combs (2021)
	Strategic Alignment	Analytics enables HR strategy to align with business objectives	Madhani (2023)

3.4 Data Analysis and SEM Procedure

The data obtained were processed and analyzed using covariance-based structural equation modelling (CB-SEM) software, AMOS version 20. The structural model was estimated to test the 12 relationships proposed between Tool Utilisation, Insight Integration, User Competency and the four outcome measures of the organisational-performance model. Model adequacy was determined by the use of χ^2/df , Comparative Fit Index, Tucker-Lewis Index, Root Mean Square Error of Approximation, Standardised Root Mean Square Residual, Goodness-of-Fit Index and Adjusted Goodness-of-Fit Index. The hypothesis testing was carried out according to standardised path coefficient, standard error, critical ratio, and p-value, with a significance level of $p < 0.05$.

4. Results

Reliability and Validity analysis

The reliability of the various constructs of the questionnaire has been measured by using Cronbach's alpha. The greater the Cronbach's alpha, higher is the correlation amid the items and variables. Based on this, the reliability of the instrument is confirmed as all values are above 0.70.

Table 3: Reliability analysis of the constructs

Constructs	Cronbach' alpha
Tool Utilisation	0.904
Insight Integration	0.917
User Competency	0.876
Workforce Productivity	0.859
Talent Retention	0.842
HR Decision Quality	0.868
Strategic Alignment	0.846

Confirmatory Factor Analysis (CFA)

CFA model of factors impendent to Adoption Rate and Organizational Performance are shown in Figure 2 and 3 respectively and their results are shown in Table 4 and 5 respectively.

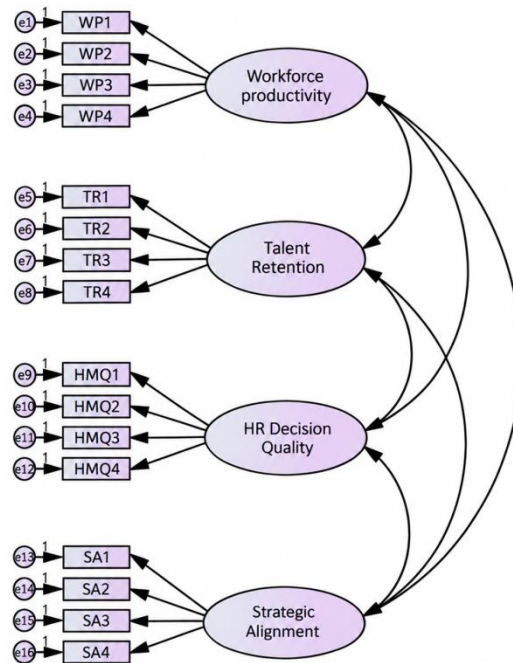


Figure 2: CFA model for Organizational Performance

Table 4: Results of Convergent and Discriminant Validity of Organizational Performance CFA model

	CR	AVE	MS V	ASV	Workforce Productivit y	Workforce Productivit y	Workforce Productivit y	Workforce Productivit y
Workforce Productivit y	0.91 6	0.73 1	0.57 9	0.24 3	0.855			
Talent Retention	0.91 1	0.72 1	0.22 3	0.14 1	0.238	0.849		
HR Decision Quality	0.91 8	0.73 6	0.44 1	0.18 0	0.313	0.472	0.858	
Strategic Alignment	0.91 4	0.72 7	0.44 1	0.24 2	0.445	0.442	0.664	0.853

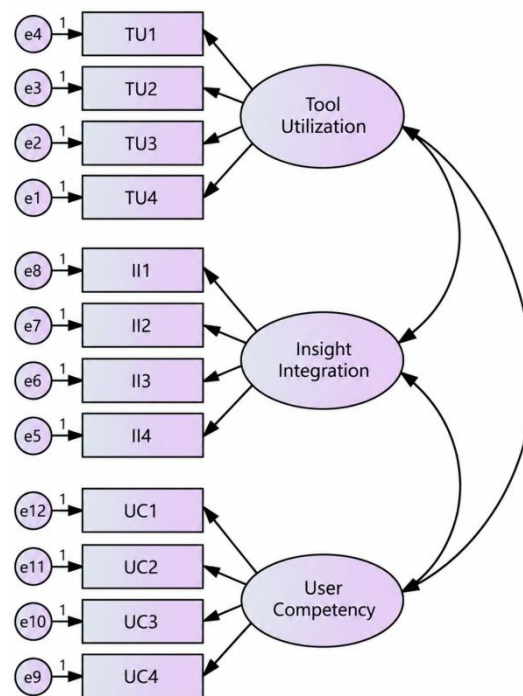


Figure 3: CFA model Adoption Rate

Table 5: Results of Convergent and Discriminant Validity for Adoption Rate CFA model

	CR	AVE	MSV	ASV	Tool Utilisation	Tool Utilisation	Tool Utilisation
Tool Utilisation	0.861	0.614	0.055	0.019	0.784		
Insight Integration	0.943	0.768	0.133	0.046	0.034	0.877	
User Competency	0.895	0.646	0.133	0.066	0.234	0.365	0.804

The results indicate that all Composite Reliability (CR) of both the models are more than 0.7, Average Variance Extracted (AVE) is more 0.5, and also CR is more than AVE hence, there are no convergent validity issues. Also for both the models, all Maximum Shared Variance (MSV) are more than AVE and Average Shared Variance (ASV) is more than AVE. Therefore, there are no discriminant validity issues. This indicates that the four factor Organizational Performance model and three factors Adoption rate model fitted the data reasonably well.

4.1 Structural Model Fit

The overall fit of the structural model was satisfactory in terms of the goodness-of-fit indices reported. The normed chi-square value was less than the upper threshold commonly used, which was $\chi^2/df = 2.14$. Comparative Fit Index was 0.961, and the Tucker-Lewis Index was 0.953, which means that the model fit well. Absolute model-fit measures were also acceptable (RMSEA = 0.049 and SRMR = 0.056). Goodness-of-fit index = 0.934 and adjusted goodness-of-fit index = 0.912. As a group, the fit statistics suggest that the model specified for the structure was a good representation of the data covariance structure. The acceptable model fit facilitated continuation to the assessment of structural paths. Importantly, model fit measures the overall fit of the model, not necessarily the statistical significance of each individual structural path. Therefore, the 12 hypothesized relationships were then tested on the basis of the standardised coefficients, critical ratios, standard errors, and significance levels.

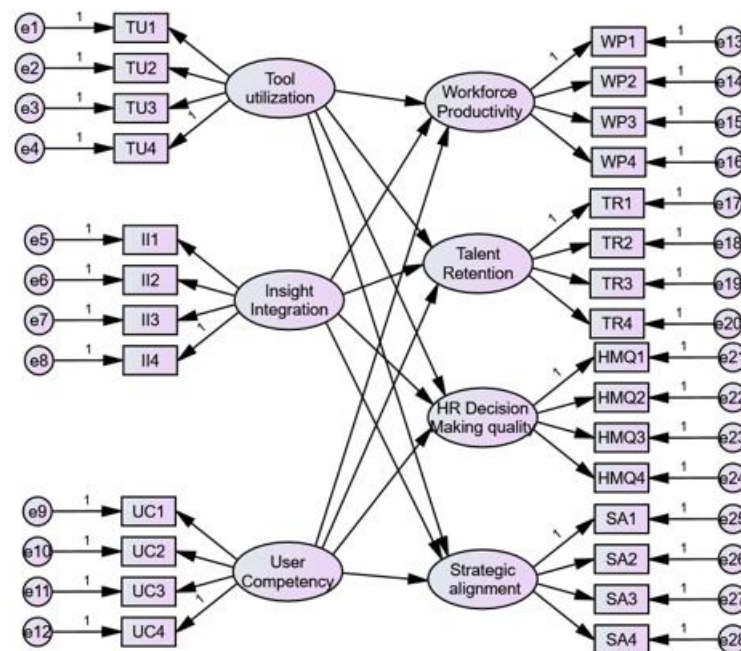


Figure 4. SEM model for impact of HR adoption Rate on Organizational Performance

In this study, the structural equation model (SEM) was used to analyze the relationship between HR Analytics adoption and organisation performance as shown in Figure 4. The model consists of three predictor constructs: Tool Utilisation, Insight Integration, and User Competency, consisting of four observed indicators. These constructs are also associated with four outcome variables: Workforce Productivity, Talent Retention, HR Decision-Making Quality, and Strategic Alignment, each of which has four measurement items. All observed indicators include error terms. The structural paths indicate the theoretical direct influence of each HR analytics adoption dimension on each organisational performance outcome, which will be tested by testing the twelve proposed hypotheses.

4.2 Structural Path and Hypothesis Results

A structural analysis was used to test twelve direct relationships between the three dimensions of HR analytics and four organisational-performance outcomes. At the 0.05 level of significance, there were nine hypotheses supported and three hypotheses that were not supported. Tool Utilisation significantly predicted Workforce Productivity ($\beta = 0.34$, $p = 0.001$), Talent Retention ($\beta = 0.28$, $p = 0.001$), and HR Decision-Making Quality ($\beta = 0.23$, $p = 0.019$), supporting H1–H3. The correlation with Strategic Alignment was not significant ($\beta = 0.11$, $p = 0.182$), so H4 was not supported. Insight Integration was found to be a significant predictor of Workforce Productivity ($\beta = 0.29$), with support for H5; Talent Retention ($\beta = 0.31$) (H6); HR Decision-Making Quality ($\beta = 0.38$) (H7); and Strategic Alignment ($\beta = 0.27$) (H8). Talent Retention (H10) and HR Decision-Making Quality (H11) were validated by User Competency, with β values equal to 0.24 and 0.26, respectively, whereas H9 was not supported, and H12 were not supported.

4.3 Explained Variance and Overall Results

The explanatory capacity of the structural model was evaluated by the R^2 values of the four dependent constructs. Workforce Productivity had an R^2 of 0.41, meaning that 41% of the variance in this metric was captured by a combination of Tool Utilization, Insight Integration, and User Competency, as shown in Table 3. The R^2 for Talent Retention was 0.47, and the R^2 for HR Decision-Making Quality was the highest at 0.55. The R^2 value for Strategic Alignment was 0.38. The adjusted R^2 values were 0.407 for Workforce Productivity, 0.466 for Talent Retention, 0.546 for HR Decision-Making Quality, and 0.376 for Strategic Alignment. The maximum standardised coefficient ($\beta = 0.38$) was found for the structural path Insight Integration to HR Decision-Making Quality. In general, the model was able to support 9 out of 12 hypotheses. The number of these relationships that were Not Supported (NS) was three: TU→SA, UC→WP, and UC→SA.

Table 6: R² Values for Dependent Constructs (Revised Model)

Dependent Construct	R ²	Adj. R ²	Interpretation
Workforce Productivity (WP)	0.41	0.407	Lower than full model — UC→WP non-significant
Talent Retention (TR)	0.47	0.466	Driven primarily by II→TR and TU→TR
HR Decision Making Quality (HMQ)	0.55	0.546	Highest R ² — all 3 IV paths significant for HMQ
Strategic Alignment (SA)	0.38	0.376	Reduced — TU→SA and UC→SA both non-significant

4.4 Hypothesis summary

The structural model involved 12 hypothesized relationships among the three dimensions of HR analytics adoption (Tool Utilization, Insight Integration, and User Competency), and four organisational performance outcomes. Nine hypotheses were statistically supported at the 5% significance level, while three hypotheses were not supported, as shown in Table 4. Tool Utilisation had significant relationships with Workforce Productivity, Talent Retention, and HR Decision-Making Quality, while its relationship with Strategic Alignment was not significant. Insight Integration was the most robustly adopted dimension, with a strong presence in all four outcomes of organisational performance. User Competency had a significant impact on Talent Retention and HR Decision-Making Quality but it did not have an impact on Workforce Productivity or Strategic Alignment in a significant way. Overall, the findings suggest that the different dimensions of HR analytics adoption have different impacts on organisational performance, with Insight Integration having a more widespread impact throughout the model.

Table 7. Summary of Hypothesis Testing Results

Hypothesis	Relationship	β	SE	CR	p-value	Decision
H1	Tool Utilisation → Workforce Productivity	0.34	0.058	5.86	0.001	Supported
H2	Tool Utilisation → Talent Retention	0.28	0.063	4.44	0.001	Supported
H3	Tool Utilisation → HR Decision-Making Quality	0.23	0.067	3.43	0.019	Supported
H4	Tool Utilisation → Strategic Alignment	0.11	0.084	1.31	0.182	Not Supported
H5	Insight Integration → Workforce Productivity	0.29	0.060	4.83	0.001	Supported
H6	Insight Integration → Talent Retention	0.31	0.059	5.25	0.001	Supported
H7	Insight Integration → HR Decision-Making Quality	0.38	0.055	6.91	<0.001	Supported
H8	Insight Integration → Strategic Alignment	0.27	0.062	4.19	0.001	Supported
H9	User Competency → Workforce Productivity	0.09	0.076	1.18	0.241	Not Supported
H10	User Competency → Talent Retention	0.24	0.065	3.69	0.004	Supported
H11	User Competency → HR Decision-Making Quality	0.26	0.062	4.35	0.001	Supported
H12	User Competency → Strategic Alignment	0.13	0.089	1.46	0.148	Not Supported

Note. β = standardised path coefficient; SE = standard error; CR = critical ratio. Hypotheses were considered supported when $p < 0.05$.

5. Discussion

The results indicate that the three dimensions of HR analytics adoption do not have the same impact on organisational performance. The dimension with the most impact for Insight Integration was in relation to HR Decision-Making Quality. This means that analytics is more valuable when information is used to make

decisions, not just to access. Productivity, retention, and decision quality were significantly impacted by Tool Utilization, and User Competency by retention and decision quality. The non-significant relationship findings for Strategic Alignment indicate that the strategic outcomes at a higher level might be influenced by organisational processes other than the analytics being used on a routine basis and analytical ability.

The results corroborate the view that HR analytics adoption is a multi-dimensional phenomenon that encompasses three dimensions, namely, Tool Utilization, Insight Integration and User Competency. They have different impacts on performance, and hence adoption is not a single organisational behaviour. A managerial viewpoint involves companies fostering regular analytics platform usage, enhancing the analytical skills of managers, and effectively integrating analytical evidence into HR decision-making processes. The significant current influence of Insight Integration suggests that organisations need to establish governance arrangements, decision processes and management practices that tie out of the analytical products directly to recruitment, retention and workforce planning and strategic HR decisions.

The results are in line with earlier studies that HR analytics can enhance organizational effectiveness when data is used in decision-making processes. The significant relationships obtained in this study support the findings of Okon et al., (2024) that data-driven HR analytics enhances HR decision-making and organisational effectiveness. The results also corroborate Shrivastava et al. (2018), who have shown, using the Google people-analytics case, that HR data can be used to enhance managerial practices when the analytical results are acted upon by specific HR actions. The findings of the present study give a more nuanced impression, however, with regard to the relationship between Regular Tool Utilisation and Strategic Alignment; they found that Regular Tool Utilisation does not automatically result in Strategic Alignment. Likewise, Gupta et al. (2026) highlighted that HR analytics has a significant impact on strategic decision-making and workforce optimisation. This is supported by the strong impact of Insight Integration in the current research, indicating that the usefulness of analytics can be significantly determined by the extent to which insights are integrated into workforce decisions. The results also support the work of Perkins and Shortland (2023), who emphasise the need to consider contextual and institutional factors in organisational decision-making. In conclusion, the comparison indicates that the current study further contributes to the previous study by showing the existence of different performance outcomes in various dimensions of adoption.

However, the cross-sectional design prevents causal conclusions from being drawn from the relationships. The study is limited to Indian IT organisations, which means that generalisation is limited to other industries and nations. Further, self-reported measures of organisational performance might suffer from perceptual bias and common-method variance. Longitudinal designs should be used in future research to look at whether an increase in the use of HR analytics is followed by an increase in organisational performance. The stability of the relationships identified within the Indian IT context can be tested through cross-sector and cross-national research. Future models could also explore mediation between employee engagement, HR decision quality, or the effectiveness in talent management, and moderation by the size of the organisation, the maturity of analytics, the support of leadership, and the culture within the organisation. These extensions may offer a more complete picture of the circumstances that result in positive, ongoing organisational value from HR analytics.

6. Conclusion

The present study explored the relationship between three dimensions of HR analytics adoption: Tool Utilisation, Insight Integration, and User Competency, and four HR organisational performance outcomes: Workforce Productivity, Talent Retention, HR Decision-Making Quality, and Strategic Alignment in Indian IT organisations. The results indicate that the use of HR analytics does not have a consistent impact on all performance dimensions. There were three rejected and nine accepted hypotheses out of the twelve hypothesized relationships. Insight Integration was found to be the most influential adoption dimension with significant positive relationships with all four organisational outcomes, and the strongest relationship with HR Decision-Making Quality. In addition, Tool Utilisation significantly impacted Workforce Productivity, Talent Retention and HR Decision Making Quality, but was not significantly related to Strategic Alignment. The relationships of User Competency with Workforce Productivity and Strategic Alignment were not significant, but User Competency has a significant relationship with Talent Retention and HR Decision-Making Quality. In general, the findings show that the value of HR analytics for the organisations is highly dependent on the availability of or use of analytical tools as well as the extent to which analytical insights are

being used in making managerial decisions. The study adds to the literature by incorporating adoption as a multidimensional construct and emphasizes the need to enhance user capability, analytic governance, and decision integration in Indian IT organisations.

References

1. Agarwal, H., & Raj, V. J. P. (2022). Adoption of Human Resource Analytics in Information Technology and Information Technology Enabled Services Industry in India. *Journal of Data Science, Informetrics, and Citation Studies*, 1(1), 50-57. DOI: 10.5530/jcitation.1.1.7
2. Arora, M., Prakash, A., Dixit, S., Mittal, A., & Singh, S. (2023). A critical review of HR analytics: visualization and bibliometric analysis approach. *Information Discovery and Delivery*, 51(3), 267-282. <https://doi.org/10.1108/IDD-05-2022-0038>
3. Avrahami, D., Pessach, D., Singer, G., & Chalutz Ben-Gal, H. (2022). A human resources analytics and machine-learning examination of turnover: implications for theory and practice. *International Journal of Manpower*, 43(6), 1405-1424. <https://doi.org/10.1108/IJM-12-2020-0548>
4. Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120. <https://doi.org/10.1177/014920639101700108>
5. Bishnoi, R., & Vikas, S. (2024). HR Analytics Adoption in India—A Sector-Wise Study. *Library of Progress-Library Science, Information Technology & Computer*, 44(2), 277. DOI: <https://doi.org/10.48165/bapas.2024.44.2.1>
6. Dasari, S. R., & Devi, V. R. (2025). Organizational adoption factors of HR analytics: a practitioner's perspective. *Management and Labour Studies*, 50(4), 567-585. <https://doi.org/10.1177/0258042X241249244>
7. Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS quarterly*, 319-340. <https://doi.org/10.2307/249008>
8. Eisenhardt, K. M., & Martin, J. A. (2017). Dynamic capabilities: What are they?. *The SMS Blackwell handbook of organizational capabilities*, 341-363. <https://doi.org/10.1002/9781405164054.ch21>
9. Falletta, S. V., & Combs, W. L. (2021). The HR analytics cycle: a seven-step process for building evidence-based and ethical HR analytics capabilities. *Journal of Work-Applied Management*, 13(1), 51-68. <https://doi.org/10.1108/JWAM-03-2020-0020>
10. Fattah, I. A. (2024). Decision-making performance of business analytics capabilities: the role of big data literacy and analytics competency. *Business Process Management Journal*, 30(6), 2096-2126. <https://doi.org/10.1108/BPMJ-11-2023-0894>
11. Gupta, S. K., Pooja, L., Pragathi, C., Jayanthi, T. G., Darshini, B. P., Sudha, S. V., & TS, S. (2026). An Application of HR Analytics Tools in Strategic Decision-Making and Workforce Optimization. *Economics, Finance and Management Review*, 2(26), 78-96. DOI: <https://doi.org/10.36690/2674-5208-2026-2-78-96>
12. Khan, N. A., Malik, A., & Khan, A. A. (2024). Human resource analytics: A novel approach to bridge the gap between human resource functions and organizational performance. *International Journal of Human Capital in Urban Management*, 9(2), 267-278. 10.22034/IJHCUM.2024.02.06
13. Kiran, P. R., Chaubey, A., & Shastri, R. K. (2024). Role of HR analytics and attrition on organisational performance: a literature review leveraging the SCM-TBFO framework. *Benchmarking: An International Journal*, 31(9), 3102-3129. <https://doi.org/10.1108/BIJ-06-2023-0412>
14. Lee, J. Y., & Lee, Y. (2024). Integrative literature review on people analytics and implications from the perspective of human resource development. *Human Resource Development Review*, 23(1), 58-87. <https://doi.org/10.1177/15344843231217181>
15. Madhani, P. M. (2023). Human resources analytics: leveraging human resources for enhancing business performance. *Compensation & Benefits Review*, 55(1), 31-45. <https://doi.org/10.1177/08863687221131730>
16. Marler, J. H., & Boudreau, J. W. (2017). An evidence-based review of HR Analytics. *The International journal of human resource management*, 28(1), 3-26. <https://doi.org/10.1080/09585192.2016.1244699>
17. McCartney, S., Murphy, C., & McCarthy, J. (2021). 21st century HR: a competency model for the emerging role of HR Analysts. *Personnel review*, 50(6), 1495-1513. <https://doi.org/10.1108/PR-12-2019-0670>

18. NASSCOM. (2024). Technology sector in India: Strategic review 2024. <https://nasscom.in/knowledge-center/publications/technology-sector-india-strategic-review-2024>
19. Okon, R. I. C. H. A. R. D., Odionu, C. S., & Bristol-Alagbariya, B. E. R. N. A. D. E. T. T. E. (2024). Integrating data-driven analytics into human resource management to improve decision-making and organizational effectiveness. *Ire Journals*, 8(6), 574.
20. Perkins, S. J., & Shortland, S. (2023). Do executive remuneration decision-makers know what's going on? The gap between independence and institutional contexts. *Journal of Organizational Effectiveness: People and Performance*, 10(3), 413-436. <https://doi.org/10.1108/JOEPP-08-2022-0219>
21. Rasmussen, T. H., Ulrich, M., & Ulrich, D. (2024). Moving people analytics from insight to impact. *Human Resource Development Review*, 23(1), 11-29. <https://doi.org/10.1177/15344843231207220>
22. Saxena, M., Bagga, T., Gupta, S., & Rameshwar, R. (2025). Exploring the antecedents, analytical tools, and challenges in the implementation and adoption of HR analytics: a study in the Indian context. *Sage Open*, 15(2), 21582440251328078. <https://doi.org/10.1177/21582440251328078>
23. Shrivastava, S., Nagdev, K., & Rajesh, A. (2018). Redefining HR using people analytics: The case of Google. *Human Resource Management International Digest*, 26(2), 3-6. <https://doi.org/10.1108/HRMID-06-2017-0112>
24. Taasiringan, E. S. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*.
25. Tessema, S. A., Yang, S., & Chen, C. (2025). The effect of human resource analytics on organizational performance: Insights from Ethiopia. *Systems*, 13(2), 134. <https://doi.org/10.3390/systems13020134>
26. Vadithe, R. N., & Kesari, B. (2024). Impact of human resource analytics adoption on organizational agility and operational performance: examining the TOIE model. *SN Computer Science*, 5(7), 909. <https://doi.org/10.1007/s42979-024-03269-3>
27. Vadithe, R. N., & Kesari, B. (2025). Examining the Impact of HR Analytics on Organizational Performance in the IT Sector: The Mediating Effects of Employee Job Engagement and Workforce Motivation. *Journal of Human Values*, 09716858251364994. <https://doi.org/10.1177/09716858251364994>
28. Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 27(3), 425-478. <https://doi.org/10.2307/30036540>
29. Zebua, D. K., Putra, F. D., & Framulya, N. (2024). The role of HR analytics in enhancing organizational performance: A literature review. *Indonesia Journal of Engineering and Education Technology (IJEET)*, 2(2), 363-368. DOI: <https://doi.org/10.61991/ijeet.v2i2.69>