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IMPACT OF HUMAN RESOURCE INFORMATION SYSTEM (HRIS) ON EMPLOYEE'S PRODUCTIVITY IN SERVICE SECTOR OF INDIA

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ABSTRACT

Purpose : This study explains the impact of Human Resource Systems (HRIS) on the employee's productivity in the service sector of India.

Research Methodology : We have collected primary data from 106 employees, who are working in service sector in different organizations situated in the NCR Region of Delhi, India, through a structured questionnaire. The validity of the model and hypotheses has been tested through Smart PLS.

Findings : The results of this study portraits a positive relationship between HRIS adoption and employee's productivity. The Use of HRIS enhances human resource processes, improves communication, and empower employees to access the relevant information.

Managerial Implications : HRIS has practical implications for service sector organizations, helping them in making well informed decisions for maximizing the productivity of their work force.

Scope for future studies : Future studies in this field can explore further the lasting impact of implanting HRIS in the organization and also in examining how the emerging technologies, such as artificial intelligence and machine leaning could improve the system.

Originality/Value : This study contributes towards the growing body of the knowledge on HRIS system in the service sector of India by offering strong evidence of its influence on the productivity of the employees of an organization.

INTRODUCTION

The service sector, which includes industries such as finance, healthcare, hospitality and retail sector, is crucial for economic growth and the success of global business. Central to these industries is their work force, as human resources play a key role in improvement of their productivity and customer satisfaction. Now, the human resource management of most organizations has improved their working with the help of latest technological solutions designed to streamline various H.R functions in their organizations. One of the major innovations is the introduction of Human Resource Information System. The HRIS automates and helps in integrating the processes of human resource department of an organization such as recruitments, training, and performance management and employee engagement making it easy to manage data and make effective decisions (Marker & Fisher, 2013; Tansley et al. 2001).

The adoption of HRIS in service sector organizations marks a significant shift towards optimizing the human resource management. It allows for access to employee the essential data in real time and supports decision making based on data, promotes strategic workforce management (Becker & Huslid, 2000). However, the impact of HRIS on the productivity of employees is the matter which requires further study. Employee's productivity is considered an important performance measure of the service sector, closely related to organizational performance (Obeidat, 2016). Therefore, understanding how HRIS adoption affects employee's productivity will be of importance to both practitioners and academic researchers.

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This study makes a modest attempt to address the gaps in the existing research by analyzing the impact of HRIS on employee's productivity in the service sector using Smart PLS. It provides valuable insights into how HRIS enhances productivity and offers strategic recommendations for implementing HR technology to maximize the outcomes.

LITERATURE REVIEW

The following studies have been reviewed for this study :

As per the study of **Cai & Rodriguez, 2023,**"HRIS interacts with various resources such as people, data, processes and information technology to develop and improve performance and support decision makers, whether managers or system users, by providing timely information".

Panjaitan,2023; Savitriet al, 2023 have pointed out that, "The system covers data into information and then generates reports for users, such as employee records, benefits, compensation, employee relations, training, job positions".

N. Kumar et al. (2019), has observed that, "Organizational systems include both manual and digital processes for task execution. Hence, an H. R strategy should align with both the corporate business plan and organization's Information System strategy plan".

P. Kumar (2022) and Pulakos (2009) has pointed out that, "Performance management is the centrist one of human resource management, despite its effectiveness; it harbors several flaws that contribute to poorly designed performance management systems within organisations".

Oldham and Da. Silva (2013) have observed that, "Instantaneous access to new information provides the employee with new individual creativity. The Information and digital technologies are likely to improve and promote innovation of individuals and organization itself".

According to the study of **R. et al., (2020),**"Participative climates affect worker satisfaction more than decision-making. Goal setting does not seem to boost productivity".

The findings of **Dimri et al, (2024)** research says that ,"Our prominent issue leading to sub-par appraisals is the reluctance of both managers and employees to provide honest feedback, often due to concerns about damaging interpersonal relationships".

However, according to the study of **Al Dimour et al, (2016),** "The successful adoption of HRIS is contingent upon several aspects, including the usability of the system and the level of assistance provided by the organization".

From the analysis of above studies, we may observe that there is a very high degree of correlation between Human Resource Information System and the productivity of employees in an organization. However this is subject to the effect of various contextual environments and prevailing atmosphere of working and circumstances in an organization. These factors may include customization of HRIS system, organizational support and employee's involvement. The potential benefits of adopting HRIS include the streamlining of HR operations and the enhancement of productivity.

RESEARCH GAP

It has been observed that very fewer researches have been conducted on the impact of Human Resource Information System on productivity in the Service Sector of India. There are only few inclusive and comprehensive studies in discussing HRIS adoption and its relationship with employee's productivity. The literature found on this topic is generally qualititative in nature or on case studies, which does not provide the required number of quantitative studies

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measuring the impact and analysis of HRIS on employee's productivity in the service organizations of India. As such there exist a huge research gap in this area and this study would focus on the quantitative methods to establish the relationship between HRIS and employee's productivity.

OBJECTIVES :

The main objectives of this study are :

- To understand the HRIS System in a Service Organizations in India.
- To find out the factors contributing towards enhancement of Employee's Productivity in Service Organizations in India.
- To explore the relationships between HRIS implementation and Employee's Productivity in the Service Sector of India.

HYPOTHESIS :

We have developed the following hypothesis for this study :

H1 : There is a positive impact of HRIS implementation on employee's productivity in the service sector of India.

RESEARCH METHODOLOGY

Data Sampling

We have applied both the approaches of data collection i.e. Primary data collection and Secondary study by analyzing the available research papers and studies on this broad theme.

Primary Data Collection

The primary data for this study has been collected through a standardized questionnaire. Simple Random Sampling approach was used and a very well structured questionnaire sent to some organizations of service sector situated in the NCR Region of Delhi. These were collected through the online platform resulting in 106 complete and relevant responses for this study. This research has been conducted from 6th Sept. to 20th October 2025.

Secondary Data Collection

We have collected and reviewed the secondary data available on this topic from various research papers and studies published in national and international journals, books, peer-reviewed journals and reputable internet databases served as the main sources of information for this study.

Research Tools

Partial Least Squares Structural Equation Modeling is a prominent tool for analyzing complex relationships in the fields like marketing, management, and social sciences. It handles small samples and non-normal data effectively, offering reliable estimates. With a user friendly interface, it supports both confirmatory and exploratory research, aiding theory development and validation (Domri et al., 2024).

Research Instruments

The initial segment is intended to capture the demographic profile of the respondents, and the second part is concerned with the employee's perception towards HRIS (Makkar & Sanjay, 2016). And the third part, the measurement of employee's productivity was conducted on a scale of five items, as outlined by Farooq & Sultana, (2022). The scale utilized for collecting

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data was the 5-Point Likert Scale ranging from5 meaning, "Strongly agree" down to a meaning, "Strongly disagree".

Data Analysis and Findings

Table 1 : Demography of respondents

Demography	Description	No. of responses	Percentage (%)
Gender	Males	64	60
	Females	42	40
Age	20-30	58	56
	31-40	26	25
	41-50	12	11
	51 & above	10	08
Work Experience	0 to5 years	36	34
	6 to10 years	45	42
	11 to 15 years	15	14
	16 & above	10	10

ANALYSIS :

It can be observed from the analysis of the profile of respondents chosen for this study that 60% are from the male category, the age group of 56% participants is between 20 to 30 years, 25% falls in the age category of 31 to 40 years, 11% in the age group of 41 to 50 years and 8% from 51 & above. As far as the work experience is concerned the majority of the respondents i.e. 42% are having 6 to10 years of experience and 34% of the respondents have work experience of less than 5 years, 14% employees falls in the category of 11 to 15 years experience and 10% of the respondents have work experience of 16 years and above.

MEASUREMENT MODEL:

We have developed the following model for this study by applying the Partial Lease Squares Structural Modeling (PLS-SEM) technique. This model was chosen because of its efficacy with both the frameworks of basic and complicated data. It is also very useful for data which deviates from normality and complexity throughout the process of analysis. We have applied this Model for the purpose of measurement of data. PLS-SEM Model is considered to be more accurate than the other model i.e. CBS-SEM for evaluation and validation of analysis. In this analysis, we used convergent and discriminate validity approaches to examine the measurement's model's accuracy (Hair at.al. 2019). Table3 illustrates that all elements in this research fulfill numerous academic requirements.

COMMON METHOD BIAS : The issue of common method variance (CMV) arises when the same individual rates both for independent and dependent variables). Harman's single – factor analysis has been conducted, revealing that only 45.8 of the total variance were accounted for in our data set, in this study. Employee's Productivity Indicator for 1, 3 and 5 has been presented in the measurement table, whereas the productivity measures for employees falling in 2 and 4 category were removed from the analysis, because of their low loading. The following table demonstrates that this study fulfills the academic requirements of various researchers.

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Figure 1 : Measurement Model Initial :

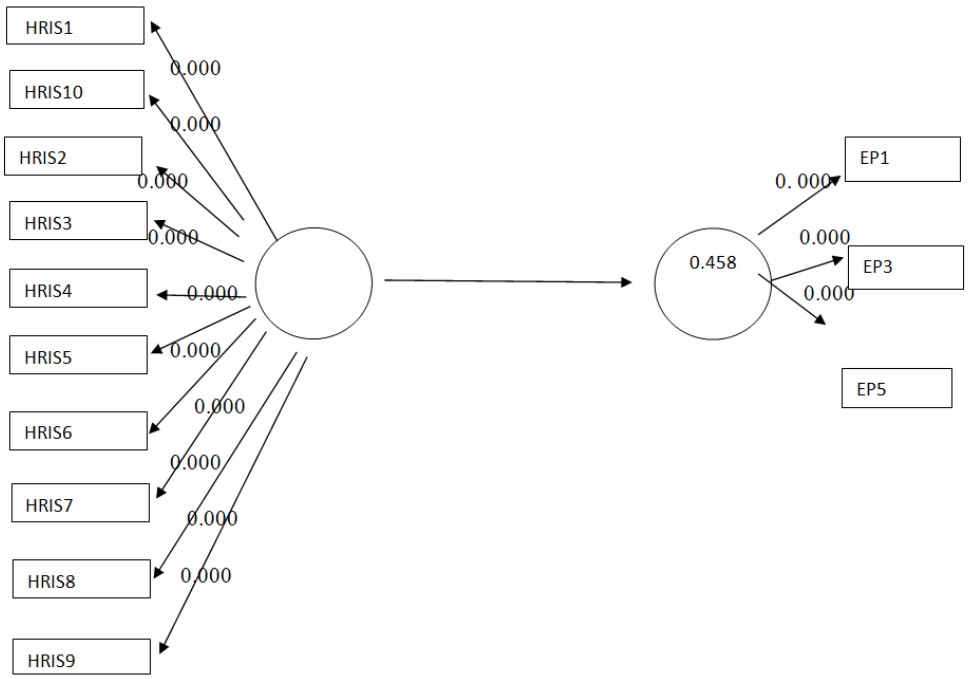

Table- 2 : Measurement Model for Constructs

Construct	Indicator	Factor loading
HRIS 1	0.787	
HRIS 2	0.904	
HRIS 3	0.794	
HRIS 4	0.838	
HRIS 5	0.892	
HRIS 6	0.739	
HRIS 7	0.878	
HRIS 8	0.968	
HRIS 9	0.804	
HRIS 10	0.890	
Employee Productivity 1	0.944	
Employee Productivity 3	0.832	
Employee Productivity 5	0.872	

The PLS-SEM Model has also been used to analyze the measurement model for constructs as depicted in (Figure 2). The research used convergent and discriminate validity approach to examine the measurement model's accuracy (Hair et al, 2019).

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MEASUREMENT MODEL

Table 3 : Construct's Reliability and Convergent Validity

Particulars	Cronbach's alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)	Average Variance Extracted (AVE)
HRIS	0.915	0.918	0.914	0.781
Employee Productivity	0.963	0.966	0.963	0.726

The study conducted by Leguina (2015) established the convergent validity, composite reliability, and discriminate validity of the calculating model. The Conbrach's alpha results are presented above in (Table 3), indicating that all the variables exhibit values over the threshold limit of 0.70, as suggested by (Fornell & Larcker,1981). According to Leguina, (2015), composite reliability ratings within the range of 0.7 to 0.9 are indicative of good dependability. The measurement Model's composite reliability, as determined in our investigation has exhibited the scores of 0.7 to 0.9 for all variables.

DISCRIMINATE VALIDITY

Table 4 : Discriminate Validity : Heterotrait –Monotrait Ratio (HTMT)

Particulars	Employee's Productivity
HRIS	0.675

According to Henseler et al, (2014), it is recommended to utilize Heterotrait –Monotrait (HTMT) values. The values below 0.85 indicate discriminate validity. The evidence provided by the AVE values supports the convergent validity of the data. According to Fornell & Larcker, (1981), constructs demonstrate convergent validity when their EVE values exceed 0.5. As observed from the analysis of data presented above (Table 4) , the EVE values are above the threshold limit of 0.5, which confirms the convergent validity. Consequently, the model also attained the outcome as depicted above.

MODEL FIT AND PATH COEFFICIENT

Table 5 : Path Coefficient

Particulars	Original Sample(O)	Sample Mean (M)	Standard Deviation	T Statistics	P Values
HRIS > EP	0.637	.632	0.111	5.754	0.000

We have utilized the bootstrapping approach to investigate the postulated association between the components. The results presented in Table 5 indicate a significant positive association between HRIS and Employee's productivity (H1 t=5.754, p=0.000).

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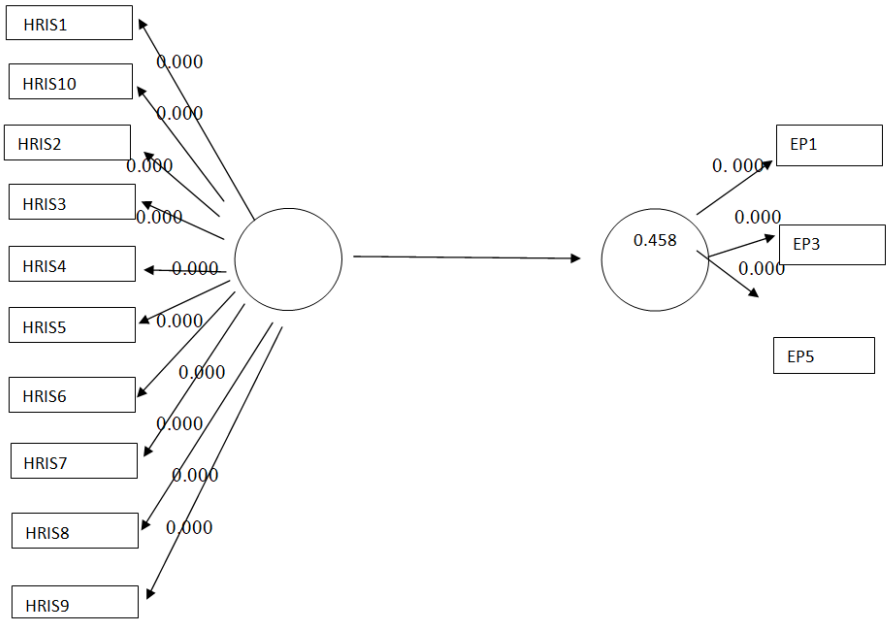
Figure 2 : Measurement Model Final:



DISCUSSION

The Hypothesis testing, which aimed to determine whether the implementation of HRIS has a significant positive impact on employee's productivity, produced the following results :

To access the significance of the relationship, the Bootstrap procedure within the Smart PLS software has been employed. The results shown in Table 5 reveal that the t-statistics equals 5.754, which is greater than 1.96, confirming the significance of the relationship. This model proves to be statistically significant and accounts for 40.6% of the variance in the development of HR staff production capacity. Consequently, Hypothesis is upheld.

CONCLUSION

The conclusion of this study is based on the results of our Primary and Secondary Study. It highlights the complex effects of Human Resource Information System on the productivity of employees working in the Service Sector of India. HRIS has gained attention for its potential to transform HR practices. Earlier research by Transley et al., (2001) noted HRIS's ability to boost operational efficiency through automation, better data quality, and instant assess of HR information. Marler & Fisher, (2013) reported significant productivity improvements, especially in recruitment and training access. However, Al-Dmour et al., (2016) assessed that HRIS success depends on system usability and organization. P. Kumar, (2023) observed that factors like system customization and organization's size affect HRIS effectiveness.

Primary data collected and found complete and relevant from 106 respondents working in the organizations engaged in the Service Sector in NCR Region of Delhi. The analysis has been done systematically by developing a study model, and using the Partial Least Square Structural Equation Modeling through PLS-SEM Technique. Though, the results of this empirical study varied up to some extent but generally the positive outcomes regarding HRIS and employee productivity has been observed and confirmed after matching with the hypothesis developed for this study.

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This study provides results that show the effectiveness of HRIS in enhancing productivity as per the employee's opinion, working in the Service sector of India. It can significantly improve employee's productivity by optimizing HR processes and use of available resources. However, its effectiveness depends on factors such as system customization, organizational support, and employee's engagement. Organizations should consider these contextual elements to maximize HRIS implementation benefits for improving productivity of the employees.

MANAGERIAL IMPLICATIONS

The findings of this study are very useful to the management for practical application and for theoretical reference to the researchers and academicians. Form the viewpoint of management, the results highlight the strategic importance of implementing and integrating HRIS within the service oriented organizations. The managers need to recognize the potential of HRIS as a powerful tool for enhancing employee's productivity. As such, managers should invest enough resources to ensure the effective use of HRIS within their organizations to increase their productivity. Further, it is recommended that organizations should invest resources in the holistic training programs to make their employees proficient in using HRIS technologies. This strategic investment will further strengthen the benefits and positive impacts generated from the implementation of HRIS.

This study also adds to the theoretical understanding of HRIS in the service sector, with an emphasis on its importance as a productivity facilitator. This observation is added to the growing body of academic literature on HRIS and widens its applicability to the service sector, giving a more integrated view of how technology based HR practices affect the productivity of employees. The results are also based on the fact that data protection and customization of HRIS systems are considered important and present theoretical grounds concerning the determinants that may affect the efficiency of HRIS implementation. It provides a wealth of information for professionals and researchers on the topic of Human Resource Management Information System in India.

LIMITATIONS OF THE STUDY

- This study bases the data on the self-report of employees, which is prone to error and subjective.
- Time constraint proved to be limitation for the study as we were able to obtain 106 correct responses only for this study.
- Unwillingness from the employees in filling the questionnaire also served as a limitation for the study.

SCOPE FOR FUTURE STUDIES :

These may include :

- Future studies may consider using objective indicators of productivity, such as production measurements or performance ratings.
- A future study can be conducted on the impact of HRIS in various sub sectors of this sector to be able to understand this field in a much better way.
- Future studies could include longitudinal research on long term impacts of HRIS implementation on employee productivity, comparative studies of service sector and organizational sizes, and the importance of certain features of HRIS.

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These areas would offer a more comprehensive and better perspective on the effect of HRIS on the service sector.

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