

TECHNOLOGY ELEVATION AND APPLICATION OF HUMAN RESOURCE MANAGEMENT BY INDIAN SME'S

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Abstract

The dynamic Indian Industry extends from Large to Medium and to highly aggressive Small-scale industries forming the backbone of Indian Economy. The prodigious SME's tout radical advancement towards the inductive use of Technology in Human Recourse Management encouraging better decision making, cost-effective production leading to improved processes and highly motivated workforce. Conglomeration of Innovation and Technology in HRM for Indian SMEs will provide real time data and centralized administrative process, thereby, paving ways to prioritize work that are much need-worthy. Credentials of Technology are purposed around its skill-set, unpredictable to determine all possibilities its exhibits, its impressive use in HRM will tandem the disruptive work done by smaller organisation thus, acclimatize employees to the abstruse tech-innovative environment. Hence, this paper attempts to analyze the data collected for the study with the use of various statistical tools. The converged descriptive and inferential information will provide the deeper insight as how the Indian SMEs are peculiarizing technology edge box in HRM for improving employee's efficiency and reducing work redundancy.

Keywords: SMEs, HRM, Technology, Industries and etc.

INTRODUCTION

i) Human Recourse Management in SME's

Indian SME's have evolved themselves over a period of time. They form the core of Indian economy by contributing to approximate 8% of the GDP and more than 45% of the industrial output and 40% of total export (MSME Annual Report,2020). They provide humongous employment to the unskilled and backward sector people and uplift their lifestyle. Indian SMEs are growing in myriad by imbibing technology innovatively and converting their indigenous ways of working to novel ones. With the enforcement of MSME Act 2006, the sector has paced itself by giving a cut-throat competition to larger industries. SMEs sector differs across many jurisdictions and government policies and after year 2020 its classification became more vivid by providing them more coverage on basis of investment. The number of the registrations of SMEs under Udyam Portal, shows the trust of Entrepreneurs in venturing more business, states like Uttar Pradesh constitutes the highest (14.19%), West Bengal (13.98%), then Gujarat (5.23%) and that is how registration along with trust for SMEs has grown over the years. (MSME Annual Report, 2020).

SMEs in India are sprouting immensely but still their perpetuality vanishes early. This is mainly due to lack of presence of Human Resource Management in such organisation. HRM in SMEs help them to foresee the future jeopardy and lay down various policies and provision to control the damage (O'Riordan, 2017). HRM in SMEs specially in manufacturing sector is vital as it mitigate the losses before the production is through. It further aids and encourages training of unskilled laborers in the organisation and helps in taking corrective actions by proper planning and direction. It is because of HRM, that small sized organisation which needs prompt and quick action planning are able to survive the brunt of market competitiveness.

ii) HRM in SMEs of Gujarat, Ahmedabad

Gujarat is the immensely industrialized state encouraging Entrepreneurs to venture their business here. Geographically the state is the seventh largest that provides a well-developed infrastructure, attractive government policies, alluring connectivity and good investment availability. SMEs registration in Gujarat has increased from 12190(2015-16) to 19985 (2019-20) in numbers, along with massively increase in employment from 185,758 (2015-16) to 304,827(2019-20) lakhs (Gujarat Industrial Policy,2020). Due to manifold addition and registration of SMEs, there is increment in number of Employment. These unskilled, less trained workforces need to be managed prudently. With sophisticated algorithms and adoption of AI, the workers mobility and productivity will get enhance. Advancement of HRM with technology will keep SME abreast of ever-shifting needs of workforce and away from daunting threats of competition in market.

iii) **HRM Technological Advancement**

In order to manage and sustain the workforce for longer span of time, an efficient use of Human Resource Management is a requisite. It is through rapid and poised use of Human Resource Management, the workforce is organised systematically and attains desired goal in optimum time (Boxall and Purcell, 2016). With the introduction of technology in HRM, the workload reduces and the output obtained is relatively used to obtain timely goal (Parry & Tyson, 2011). The delegation of work and responsibility is very precise and it frequently keeps changing in small-scale organisation. With the help of HR-software and soft tools, the data related to delegation can be managed, as well as made available at one portal without getting tampered, unlike paper-work (Matt & Rauch, 2020). The easiness attained in recruiting, training, learning, controlling gaps, remunerating, feedback and grievance redressal of employees, with the help of HRIS tools and technology has been soaring immensely. IT solution reduces burnout and stress load, which is why increasing time to rejuvenate the mundane monotony of workplace improves in multiplies (Nadar 2017). The Gen(AI) tools for employers and employees have become user friendly by giving broader access through mobile devices, thereby providing continuity and privacy of information (Saraswathi T et.al 2023).

REVIEW OF LITERATURE

Human Resource Information System (HRIS) works as a custodian of handling Employees data and Human Resource Department policies at a single platform (Soothodu, Sachin & Shetty, Susheela, 2021). The role of e-HRM has improve the traditional ways of working of HR in Smaller organisation, it has reduced the workload of the owner of organisation by rightfully managing the tandems of Employees information (Parry & Tyson 2011). The study done by Selvam, (2015) identified the impact of technology on recruiting, training, selecting, data storage and its retrieval, performance management, remuneration, motivation, and more such practices, that have improved decision-making and have positively impacted the internal operation of organisation.

SMEs are indefinitely grappled with limited resources and face unique challenges to survive. But with innovative HRM practices they find ally in technology which helps SMEs to evolve and excel in the digitalised world (Matt & Rauch, 2020). Scalability is another vital factor of SMEs, technology imbibed with HRM system seamlessly supports SMEs to expand their business. Learning involved with the use of AI tools provides dexterity meanwhile preparing employees for the new roles, enhancing critical thinking and encourage emotional intelligence (Saxena, M. and Saxena, M. and Saxena, Nikhita, 2023).

HR technology is size agnostic and in SMEs talent pool is meager, which pushes HR or the owner to be more innovate to address the changes occurring often and frequent. But due to manageable level of linearity, it becomes comparatively easy for the HR to ingest changes in the organisation (Kishore et al., 2012). HRIS offers variety of tools to the management, with the possession of such analytical tools and software, the manager or the owner of SMEs is able to work hassle free and smoothly. Mapping requirement with output, the deficiencies are overcome, bridging the gaps to achieve organisational objective. (Sapora Bradle, 2019).

RESEARCH METHODOLOGY

1) **Research Objective**

- To study about the various Digital HR practices followed in the SMEs
- To study the opinion of Employer and Employee for the most used technology in HR practices by the Selected SMEs

Research methodology incorporated both qualitative and quantitative data models for arriving at the output. Here the use of multiple methods and measures of a specific construct is done (Judge and Zeithaml, 1992). The research methodology mentioned the use of statistical tools and software (SPSS Version 20) applied for the field of management. It emphasizes the importance of tools and techniques in any field of work, including analysis. As said, "With the right tools and techniques, analysts can gain new insights and understanding that they may not have been able to see otherwise. It's fascinating how even the smallest changes in approach can lead to big breakthroughs in innovation and problem-solving." (Strauss & Corbin, 1998).

i) Research Design : The research approach is descriptive in nature with the main objective to acknowledge the use and infusion of technology in HR practices followed by the selected SMEs.

ii) Scope of the Study: The SMEs in Ahmedabad were focalized to study the subject. It was selected due its dynamism in infrastructure, the government supportive policies for the SMEs. Therefore, Employees and Employers as Respondents from each 150 SMEs were selected to study the use of technology for HR practices.

iii) Data Source: It's to be noted that primary data is often based on empirical evidence, which allows the researcher to gain a more in-depth understanding of the subject matter. On the other hand, secondary data is

useful for providing clear conceptual specifications. That's why it's was recommended to use both types of data for research purposes.

2) The Sample Design

i) **The Population:** The Employer and Employees of the SMEs from Ahmedabad were taken as the sample for the purpose of study. They were the ones on whom the point of incidence of adopting and following the technology falls. They helped in adopting, following and implementing the technology in the HR practices for their organisation.

ii) **Sampling Unit:** Sampling units were Employer and Employees from the selected SMEs. One Employee and one representing the Employer were selected from 150 SMEs each.

iii) **Sample Size:** This Research was planned with the objective of the investigation the use of technology done by the SMEs for the HR practices applied for betterment of Employees of the organisation. Data was collected rigorously with the help of the judgmental technique which served the purpose and provided no untoward claims of generalizability (Weiss, 1994). The tables 1.1 and 1.2 below gives the exact number of Employers and Employees taken from the SMEs for the subject study

Table 1.1 The number of Employers selected for study in SMEs

Organisation	Small Enterprises	Medium Enterprises	Total Employers
Employers	95 Respondents	55 Respondents	150

(Source: Developed by the Researcher)

Table 1.2 The number of Employees selected for study in SMEs

Organisation	Small Enterprises	Medium Enterprises	Total Employers
Employees	95 Respondents	55 Respondents	150

(Source: Developed by the Researcher)

iv) **Sampling Techniques:** The researcher's here, used non-probability sampling methods in the descriptive examination which was in line with De Vaus's (2002) approach. Additionally, to improve the results' authenticity, the researcher employed techniques such as convenience and judgmental sampling.

v) **Research Instrument Development :** A well-developed Structured Questionnaire was used as a research instrument for both Employer and Employees of SME's. A descriptive method was adopted for the research approach.

vi) **Data Analysis Plan:** The respondent Employer and Employee were the best choice for the study of application of Technology for HR practice. It was with help of Excel and SPSS (Statistical Package for Social Science 20) that data was easily gathered and reasoned. Further various testing on variables were applied for obtaining accuracy in the result like Mean Rank, Wilcoxon Rank Sum.

QUANTITATIVE DATA ANALYSIS AND INTERPRETATION OF DIGITAL HR PRACTICES

Various Digital HR practices followed in the SMEs

From the given Questionnaire the Selected SMEs were asked to identify the present and prevent electronic or digital HR practices followed and practices. Table 2 depicts, the most used and leading digital HR practices applied across the respondent SMEs, the mobile applications i.e., 87.5% acceptable and most convenient to use, followed by e-Communication with 54.2% of the cases. While the least preferred are SAAS 7.3% cases and e-Employment laws 8.3% of the cases. The rest of e-practices are less used and less preferred by the smaller organisation as visible from the data below.

Table 2 : Digital HR Practices followed in the SMEs

Digital HR Practices	N	Percent %	% of cases
e-Employment laws	8	3.4%	8.3%
e-Recruitment	21	9.0%	21.9%
e-Reporting	16	6.9%	16.7%
e-Health and Safety	15	6.4%	15.6%
e-Communication	52	22.3%	54.2%
Mobile apps	84	36.1%	87.5%
HRIS Software	15	6.4%	15.6%
SAAS	7	3.0%	7.3%
Cloud Technique	11	4.7%	11.5%
Others (specify)	4	1.7%	4.2%
Total	233	100.0%	

(Source: Primary data)

Uses of Technology for HR practices in SMEs

The gathered information lays down the fact that very little or meager use of the technology is being done by the SMEs. The table 3 below shows the technology used in HR practices by the selected SMEs, it was measured on the **ordinal scale** of 5 to 1. From the Table 4, it was obvious that Mobile App, Social Media and Biometric Attendance were “very frequently=4” used, while HR software was “Rarely =2” used for the management of the organisation. The highest Model Value (5=Always) was for Biometric Attendance, followed by Mobile App and Social Media, i.e. Modal value (4=Very Frequently) amongst the other option provided. This difference might have occurred due to easy availability, cost efficient and low level of skill required for the use of technology.

Table 3: The frequency for the use of technology in HR practice

Usage of technology		Always=5 (in %)	Very Frequently=4 (in %)	Sometimes =3 (in %)	Rarely =2 (in %)	Never=1 (in %)
Mobile App	Employer	24	40	15.3	4.7	16
	Employee	21.3	35.3	20.7	6.7	16
Usage of HR S/W	Employer	10	6	17.3	36	30.7
	Employee	5.3	10.7	18	30	36
ATS	Employer	2.7	4.7	9.3	19.3	64
	Employee	2.7	4.7	12	21.3	59.3
Social Media	Employer	35.3	38.7	8	2	16
	Employee	25.3	44	9.3	4	17.3
Biometric Attendance	Employer	48.7	32	2	1.3	16
	Employee	45.3	29.3	6	2	17.3
Any other (specify)	Employer	1.3	6	24.7	6.7	61.3
	Employee	3.3	4	12	4	76.7

(Source: Primary data)

Table 4 : Maximum used technology for HR practice

Uses of Technology in HR Practices in SMEs						
Respondents	Mobile App	Usage of HR software	ATS (Application tracking system)	Social Media	Biometric Attendance	Any other (specify)
Employer Mean	3.51	2.29	1.63	3.75	3.96	1.79
Employee Mean	3.39	2.19	1.70	3.56	3.83	1.53
Employer Median	4.00	2.00	1.00	4.00	4.00	1.00
Employee Median	4.00	2.00	1.00	4.00	4.00	1.00
Employer Mode	4	2	1	4	5	1

<https://www.gapbodhitaru.org/>

Employee Mode	4	2	1	4	5	1
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(Source: Primary data)

To test these median differences, the following hypothesis was derived.

H₀ : Both employers' and employees' do acknowledge the use of technology in HR practices in their organization

H₁ : Both employers' and employees' do not acknowledge the use of technology in HR practices in their organization

The above hypothesis is varied using Wilcoxon-Rank Sum test, which suits both the samples (Employers' and Employees' of SMEs). The variables are measured on an ordinal scale.

The technology used for HR		N	Mean Rank	Sum of Ranks
MOBILE APP (Employer-Employee)	Negative Ranks	32 ^a	32.27	1032.50
	Positive Ranks	31 ^b	31.73	983.50
	Ties	87 ^c		
	Total	150		
HR SOFTWARE (Employer-Employee)	Negative Ranks	37 ^d	40.78	1509.00
	Positive Ranks	39 ^e	36.33	1417.00
	Ties	74 ^f		
	Total	150		
ATS (Employer- Employee)	Negative Ranks	41 ^g	35.12	1440.00
	Positive Ranks	26 ^h	32.23	838.00
	Ties	83 ⁱ		
	Total	150		
SOCIAL MEDIA (Employer-Employee)	Negative Ranks	32 ^j	36.25	1160.00
	Positive Ranks	38 ^k	34.87	1325.00
	Ties	80 ^l		
	Total	150		
BIOMETRIC ATTENDANCE (Employer-Employee)	Negative Ranks	27 ^m	27.37	739.00
	Positive Ranks	26 ⁿ	26.62	692.00
	Ties	97 ^o		
	Total	150		
TECH. OTHERS (Employer-Employee)	Negative Ranks	69 ^p	50.76	3502.50
	Positive Ranks	19 ^q	21.76	413.50
	Ties	62 ^r		
	Total	150		
a. TECH_MOBILE_APP (Employer<Employee) b. TECH_MOBILE_APP (Employer> Employee) c. TECH_MOBILE_APP (Employer=Employee) d. TECH_HR_SOFTWARE < Q11.2_HR_SOFTWARE (Employer<Employee) e. TECH_HR_SOFTWARE > Q11.2_HR_SOFTWARE (Employer>Employee) f. TECH_HR_SOFTWARE = Q11.2_HR_SOFTWARE (Employer=Employee) g. TECH_ATS < Q11.3_ATS (Employer<Employee) h. TECH_ATS > Q11.3_ATS (Employer> Employee) i. TECH_ATS = Q11.3_ATS (Employer=Employee) j. TECH_SOCIAL_MEDIA < Q11.4_SOCIAL_MEDIA (Employer<Employee) k. TECH_SOCIAL_MEDIA > Q11.4_SOCIAL_MEDIA (Employer> Employee) l. TECH_SOCIAL_MEDIA = Q11.4_SOCIAL_MEDIA (Employer=Employee) m. TECH_BIOMETRIC_ATTENDANCE < Q11.5_BIOMETRIC_ATTENDANCE (Employer<Employee) n. TECH_BIOMETRIC_ATTENDANCE > Q11.5_BIOMETRIC_ATTENDANCE (Employer> Employee) o. TECH_BIOMETRIC_ATTENDANCE = Q11.5_BIOMETRIC_ATTENDANCE (Employer=Employee) p. TECH_OTHERS < Q11.6_OTHERS (Employer<Employee) q. TECH_OTHERS > Q11.6_OTHERS (Employer> Employee) r. TECH_OTHERS = Q11.6_OTHERS (Employer=Employee)				

Table 5 : Mean rank (Employer and Employee response on the use of technology for HR)

The above Table 5 calculated the mean rank for the technology used by Employer and Employees of the selected organisation for the HR Practices. From above table, it can be inferred that Mobile app, Social Media & Biometrics are the most tech by the subject selected in SMEs

Result: Hypothesis

Table 5 : Test Statistics for Wilcoxon Rank Sum (Use of Technology in HR)

Hypothesis Result Statistics Use of technology in HR in SMEs						
	MOBILE APP (Employer-Employee)	HR SOFTWARE (Employer-Employee)	ATS (Employer-Employee)	SOCIAL MEDIA (Employer-Employee)	BIOMETRIC ATTENDANCE (Employer-Employee)	TECH OTHERS (Employer-Employee)
Z	-.174 ^b	-.247 ^b	-1.937 ^b	-.500 ^c	-.214 ^b	-6.481 ^b
Asymp. Sig. (2-tailed)	.862	.805	.053	.617	.831	.000
a. Wilcoxon Signed Ranks Test b. Based on positive ranks. c. Based on negative ranks.						

(Source: Primary data)

Higher mean rank for the Negative ranks is almost similar to the Positive mean ranks, this signifies the agreeable response of both Employers and Employees for the same option. The lowest of the scored value is converted into Z score (positive ranks marked) being -.174 for Mobile app and likewise. These values are significant at $p = .862$ (Mobile App), **.805** (HR software), **.053** (ATS), **.617** (Social Media) and **.831** (Biometric Attendance). The 2-tailed asymptotic test signifies the value to be more than 0.05 (i.e. $p > .05$), therefore the null hypothesis (H_0) can't be rejected. Hence, it can be said that the use of technology for the HR Practices is almost same for Employer and Employees of the selected SMEs. The most used technology is same for both the organisation.

FINDINGS AND CONCLUSION

Uses of Technology for HR practices in SMEs

(H₀). Here it implies that Both Employer and Employee agree with the use of Technology in HR practices for their organization. (H₀). It seems that the most commonly used technologies for HR practices are the mobile applet, social media, and biometric attendance. The study also reveals that the respondent Employers and Employees are almost equally willing to adopt new technologies such as HR software, ATS, and any other technology that might more useful and relevant in the coming times. It's fascinating to see how technology is transforming the HR landscape in Small and Medium-sized businesses and reducing their workload.

ii) Finally, to Conclude with

As per recent survey, it has been observed that digitalizing a business does not necessarily mean starting a new venture. Instead, it involves remodelling the existing business to utilize the available resources in a unique way. The research also indicates that Small and Medium enterprises (SMEs) are willing to embrace technology to digitalize their HR practices. However, the lack of urgency in making such changes is due to the need for skills and time. While SMEs have adopted some basic HR practices such as biometric attendance, social media, and mobile apps, they are far from involving high-level software and cloud technology due to hounding perishing fear. There is a need for skilled and highly educated IT staff in SMEs to achieve this. Nevertheless, SMEs are still keen on using latest technology in HR practices and support digitalization in their organization. The latest technology can help SMEs reduce costs, offer virtual services, introduce sophisticated products, and revolutionize various production methods. This will help SMEs to differentiate themselves from competitors, optimize costs, and create better competition at a global level.

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