

Talent Management as HR Strategy for Employee Retention: An Analysis

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ABSTRACT--- *Employees are the key force behind the success of an organization; hence it may not be an exaggeration to say that they are the life blood of the organization. They are the most valuable and critical assets. It is therefore essential not only to attract the best talents but also to retain them. There are of course various factors which influence retention of best talent in the organization. This paper examines the perceptions of employees on factors influencing talent retention in selected public and private sector firms in India. The study has been conducted based on primary data collected through questionnaire from 390 respondents belonging to 30 firms. The data analysed through factor analysis and Principal Component Analysis revealed that working environment, salary, regular training programs, healthy peer relationships, commitment of management, regular communication, appreciating supervisor, implementation of systematic approach etc. are critical to retain employees. Therefore, organisations will have to adopt the strategies, such as fair selection procedure, career advancement schemes, flexible working hours, career advancement schemes, emphasis on personal growth and advancement of the employees depending on the demographic profile of the employees to be able to retain the employees. They may thus use talent management practices as an effective HR strategy for success.*

Keywords--- *Talent management, competitive advantage, fair selection, career advancement schemes, flexible working environment*

I. INTRODUCTION

Employees are the most important and valuable resources of any organization. Based upon their contribution and selfless work, they are treated as the life-blood of an organization. However, the value of efficient employees does not reduce in an organization even after the implementation of advanced technology as technology also requires human pools to operate. In this globalization era, competition is increase in a tremendous way, which not only affects the organization but also affects the job market. To remain stay in the global market and to compete with the competitors, organizations need not attract only the best talents but also make strategies to retain them on the job on a long term basis. The toughest job of the organization is not only to attract the best talent but also how to keep them in the organization and how to utilize their talent for the benefit of the organization. This study focuses on the various factors influencing talent retention which not only attract the best talent but also keep those talent pools within the organization.

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In the present scenario, organizations are focusing on their human resources and are trying to manage them by fulfilling their needs as human resources are the life blood of the organizations. Talent management is considered as one of the important tool in the recruitment process to recruit the talented employees which give rise to the utilization of employee's talent, skills, knowledge and capabilities to achieve the organizational objectives

In today's competitive world, the biggest challenges faced by the business is to attracting, assessing, providing them training and retaining those talented employees for a long term basis. Talent management consisting of the entire process of planning, recruiting, developing, managing, utilizing the skills and knowledge of the employees throughout the organization. Every organization have now realized the need and the requirement of effective talent management and trying to give emphasis on various methods to develop and retain the existing talent in their organization rather than trying to acquire new talents because the cost of identifying, developing and retaining is much more.

Again, research by Bethke-Langenegger, Mahler, and Staffelbach (2011) has described that talent management practices with having strong strategy is statistically significant and have impact on attracting and retaining the talented employees and achieving the organizational goals, providing customer satisfaction and created brand image. Further, the prominent researchers of human resource management and strategic management write that *"the workforce is the most expensive yet poorly managed asset in most organizations"* (Becker, Huselid, & Beatty, 2009, p. 56).

II. REVIEW OF LITERATURE

As stated before, organizations face challenges of varying nature and magnitude while attracting the best talents and strategically retaining them in the organisation. It is for this purpose that the present study has been undertaken to examine the various factors that contribute to the talent retention in the Indian context and the inter-relationships that exist among these factors. In order to be more focused on the objectives of the study, and to be able to fit the working relationship between the variables that the different studies already conducted on talent management within and outside India have been reviewed as follows:

Dhanabhakyan, M. and Kokilambal, K. (2014) have conducted a study on *"A study of existing talent management practices and its benefits across industries"* with the aims to bring out talent management practices which are adopted in four major industries such as Banking, Healthcare, Manufacturing and IT industry of India. The study result indicated that there is a direct impact of talent management practices on the overall benefits of the organisation.

LeAnn M. Brown. (2014) has conducted a study entitled *"A proposed talent management model for leader – managers in State Owned Enterprises (SOEs) in China"*, with the objective to study the talent management models and its implication in SOEs in China. The study was conducted by conducting phenomenological interviews with 11 state-owned companies and 17 leader-manager participants. The findings of the study synthesized, to introduce a proposed talent management model for SOEs in China. It provides HR practitioners a framework to manage talent within their organizations, in particular in the areas of recruiting, developing & retaining successful leader-managers within SOEs in China.

Tajuddin, D. et al. (2014) have conducted a study entitled *“The need of talent management as a business strategy for Malaysian banking institutions”*, with the objective to identify the need of talent management as a business strategy for Malaysian banking institutions. To examine the purpose, there are three variables, namely Talent Management Practices (TMP), Employee Value Proposition (EVP) and Talent Brand Strategy (TBS) are considered against 12 indicators of Malaysian banking sector and tested the direct and indirect relationships with the TM.

Jindal, P. and Shaikh, M. (2015) have conducted a study entitled, *“A study of behavioural training as talent management strategy in organisations”* with the purpose to clear the concept of behavioural trainings and talent management and the impact of behavioural training on organizations for talent management. The study led to the findings that the organizations are realizing the importance of behavioural training which can be a strategy of talent management.

Rachel, D. et.al. (2016), have conducted a study entitled *“Impact of Talent Management on Organisation Culture”*, with objective to identify the impact of talent management in terms of organizational effectiveness which includes cost cutting, maximum output, time saving techniques, perfection increased, better control and employee performance and also recruitment, retention, employee development, leadership, workforce planning and so on. The study result highlighted that talent management helps to increase workplace productivity and increases the effectiveness of the organisation. Further, it also helps to increase the process of attracting, capability mapping, developing new capabilities and retaining the human capital with the right current and future work capabilities. Thus by implementing all these strategies, organizational readiness for the future will be achieved.

Moayedi, Z. and Vaseghi, M. (2016), have conducted a study entitled *“The Effect of Talent Management on Organizational Success”*, found that organization’s efforts to recruit, develop and maintain talent, directly linked to their success in the business environment. Further, financial value of the organization depends on the quality of their talents, and talents quickly increase the financial value of the organization.

Rana, N., (2017), have conducted a study entitled *“A study of Talent management strategy at select IT companies”*, with the objective to study the evolution process and the prominent features of talent management. The researcher has conducted the study in selected IT companies such as IBM, TCS, and Cognizant. The study concluded with the recommendation that, to drive optimal levels of success and improving the work performance of the employees, business leaders need to engage high-performing employees.

Agarwal, T. (2018), has conducted a study entitled *“Effect of Talent Management Practices and organizational performance on employee retention: Evidence from Indian IT firms”*, with objective to examine the role of talent management practices and organizational performance on employee retention in the Indian IT sector. The primary data was collected from 33 IT firms, leading to a total of 68 responses. Statistical tools such as correlation, regression and SPSS 21.0 were used for the analysis of data. The results revealed that there is a significant relationship between talent management and employee retention.

Gerard, N. (2018), defines a study entitled *“Millennial managers: exploring the next generation of talent”*, with aims to clarify why millennials enter the healthcare management field and how their motivations correlate with preferences for working in various healthcare sectors and with various patient populations. The data were collected from 107 millennials pursuing bachelor degrees in healthcare management by using a modified version of the multidimensional work motivation scale. Further data were collected on millennials preferences for working

in various healthcare sectors and with various patient populations. Correlation analyses were conducted to examine the relationship between types of motivation and workplace preferences. Cross-cultural differences were also examined within this generational set. The results of the study indicate a significant positive relationship between intrinsic motivation and preferences for working on the payer side of the industry and within finance and IT functions. Findings also reveal a significant positive relationship between pro-social motivation and preferences for working with more vulnerable patient populations.

III. OBJECTIVES OF THE STUDY

- To analyze the retention factors influencing the retention of employees in selected firms.
- To analyze the initiatives taken by the organization towards the retention of employees in the organizations.

IV. METHODOLOGY

The following methodology has been adopted for the study:

Data Source and method of data collection

The study has been conducted mainly on primary data collected through our own developed questionnaire. The questionnaire consisting of 27 items describing effective talent management practices were distributed among the respondents selected through convenient sampling from 30 different public and private sector Indian organizations out of which 15 are public and 15 are private sector units and collected back upon being filled up by the respondents.

Sample size and sampling

A total of 450 sets of questionnaires were distributed among the respondents of which 390 questionnaires were included in the study for being complete in all respect.

Demographic profile

The sample respondents of 390 included in the study has a distribution of 185 from public sector units and 205 from private sector units; 89 from banking, 78 from manufacturing, 69 from power and energy, 84 from IT/ITES, 70 from pharmaceuticals; 224 male respondents and 166 female respondents; 169 respondents from 20-35 age group, 127 respondents from 36-50 age group and 94 respondents from above 50 years of age. Also, the respondents included 94 graduates, 131 post graduates and 165 with professional and technical degrees. Finally, the respondents also consist of 153 of 2-5 years of working experience, 132 respondents of 6-10 years of experience and 105 respondents of more than 10 years of work experience. Table 1.1 depicts the demographic profile of the respondents.

Table 1.1: List of sample units showing the total number of respondents

Categories	Sub categories	No. of respondents	Total	Percentage

Work Segment	Public	185	390	47.44%
	Private	205		52.56%
Sector	Banking	89	390	22.83%
	Manufacturing	78		20.00%
	Power and Energy	69		17.69%
	IT/ITES	84		21.53%
	Pharmaceuticals	70		17.95%
Gender	Male	158	390	57.43%
	Female	232		42.57%
Age group	20-35 years	169	390	43.33%
	36-50 years	127		32.56%
	Above 50 years	94		24.11%
Education	Graduate	94	390	24.10%
	Post graduate	131		33.59%
	Technical/ Professional	165		42.31%
Work Experience	2-5 years	153	390	39.23%
	6-10 years	132		33.85%
	Above 10 years	105		26.92%

Tools and techniques used:

The important statistical technique used in the study is Factor Analysis with the calculation of Kaiser-Meyer-Olkin measure of sampling adequacy, Bartlett's test for sphericity and Principal Component Analysis. Principal Component Analysis has been used to identify the important factors influencing talent management practices. SPSS 23.0 version package has been used for all the statistical calculations.

Factors affecting talent retention

Table 1.2 indicates 27 attributes which has been chosen through extensive literature review in order to find out the effective talent management practice as a strategy of talent retention.

Table 1.2: Table of variables and assigned code

Variable Code	Variables
VAR1	Identification of potential
VAR2	Systematic approach
VAR3	Talent development
VAR4	Inspiring leadership and ideology
VAR5	Carefully tackling the barriers
VAR6	Creates readiness
VAR7	Identifying the talent pools

VAR8	Talent development strategies
VAR9	Salary as a motivational tool
VAR10	Team performance
VAR11	Career development system
VAR12	Flexible working hours
VAR13	Talent retention strategies
VAR14	Appreciation at work place
VAR15	Management commitment
VAR16	Open and clear feedback
VAR17	Regular training program
VAR18	Healthy peer relationships
VAR19	Intrinsic rewards as a motivation
VAR20	Create enthusiasm
VAR21	Efficiency of personnel department
VAR22	Rewards, incentives and bonus
VAR23	Improving performance
VAR24	Fair selection
VAR25	Work environment
VAR26	Regular communication
VAR27	Personal growth and advancement

V. DATA ANALYSIS AND INTERPRETATION

The Factor analysis result has been shown in Table 1.6. To know the adequacy, KMO and Bartlett's test also has been conducted before the factor analysis and the test results displayed in Table 1.3. Further, total variance and rotated component matrix have also been checked and the results have been displayed in Table 1.4 and Table 1.5 respectively.

Test of sample adequacy

KMO and Bartlett's test have been conducted to analyse the sample adequacy of the collected data as below;

Table1.3: Sample Adequacy Test

KMO and Bartlett's test for components of talent management		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.746
Bartlett's Test of Sphericity	Approx. Chi-Square	5116.632
	Df	351
	Sig.	.000

The above result of the test of KMO and Bartlett's test indicates that the value of sample adequacy is 0.746 and the value of Chi Square is 5116.632, which are statistically significant at 95% level of confidence. This implies that all the variables that are taken for the study are significant.

Test of Variances

The following Table explains and provide details of the extracted factors;

Table1.4: Components of talent management

Comp onents	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	4.902	18.156	18.156	4.902	18.156	18.156	4.059	15.035	15.035
2	3.562	13.193	31.349	3.562	13.193	31.349	3.109	11.516	26.551
3	2.631	9.745	41.094	2.631	9.745	41.094	2.689	9.961	36.512
4	1.981	7.336	48.429	1.981	7.336	48.429	2.200	8.149	44.660
5	1.675	6.205	54.634	1.675	6.205	54.634	2.114	7.829	52.490
6	1.450	5.371	60.005	1.450	5.371	60.005	2.029	7.516	60.005
7	1.291	4.783	64.788						
8	1.117	4.136	68.924						
9	.934	3.461	72.385						
10	.900	3.332	75.718						
11	.830	3.074	78.791						
12	.728	2.696	81.487						
13	.663	2.457	83.944						
14	.590	2.186	86.130						
15	.554	2.053	88.183						
16	.445	1.649	89.832						
17	.403	1.494	91.326						
18	.353	1.306	92.632						
19	.322	1.193	93.825						
20	.312	1.154	94.980						
21	.276	1.021	96.001						
22	.248	.920	96.921						
23	.236	.874	97.795						
24	.204	.754	98.549						
25	.178	.660	99.209						
26	.137	.506	99.714						
27	.077	.286	100.000						

Extraction Method: Principal Component Analysis

From the above table, a total of 6 numbers of factors has been extracted and the Cumulative frequency of the extracted factors is 60.005. Again, it is found that the total twenty seven variables are reduced into six major factors

with Eigen values 4.059, 3.109, 2.689, 2.200, 2.114, and 2.029, which are statistically significant in all respects. The individual values of the six major factors are 15.035, 11.516, 9.961, 8.149, 7.829 and 7.516 with total cumulative variance 60.005. This indicates the existence of the six major factors with their loading variables respectively.

Rotated component matrix

Table 1.5. displayed the twenty seven variables which has been factorised through Rotated Component Matrix.

Table 1.5 : Rotated Component Matrix

	Component					
	Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
VAR7	.910	.078	.476	-.146	.083	.045
VAR2	.880	.083	.483	-.146	.197	.063
VAR1	.751	.067	.418	-.153	.249	.098
VAR21	.664	.091	-.032	-.310	.026	.051
VAR5	.609	-.138	.138	-.037	.227	-.516
VAR18	.183	.849	-.052	.081	-.262	.012
VAR3	.196	.844	-.061	.071	-.279	.042
VAR17	.087	.821	.057	.097	-.222	-.042
VAR8	.053	.743	.483	-.146	.197	.063
VAR6	-.653	.692	-.021	-.311	-.048	-.056
VAR26	-.735	-.105	.871	-.097	.037	.025
VAR10	-.708	-.085	.809	-.108	.030	.091
VAR15	.020	-.159	.779	.022	.093	-.036
VAR16	-.025	-.090	.641	-.060	.026	.060
VAR14	.046	.218	.503	.076	.171	.706
VAR4	.275	-.043	.436	.709	-.098	.333
VAR13	.297	.038	.081	.893	-.117	.350
VAR9	-.002	-.218	-.136	.805	-.153	.338
VAR23	.125	-.241	.145	.669	.813	-.051
VAR19	.104	-.261	.132	.530	.802	-.052
VAR25	.227	-.575	.200	.203	.752	-.255
VAR24	.252	-.559	.133	.221	.701	-.298
VAR12	-.053	-.087	-.867	-.149	.508	.013
VAR22	-.059	-.055	-.858	-.132	.461	.034
VAR20	.025	.078	.264	.054	-.155	.862
VAR11	.019	-.006	-.100	.033	.158	.663
VAR27	.207	-.044	.236	-.195	.201	.535

Table 1.5 indicates that variables coded as VAR7, VAR2, VAR1, VAR21 and VAR5 have been clubbed together as the first major factor of talent management. Similarly, the variables coded as VAR18, VAR3, VAR17, VAR8 and VAR6 have been merged as the second component of talent management. Furthermore, the variables coded as VAR26, VAR10, VAR15, VAR16, VAR14 and VAR4 have been group together as the third essential factor of talent management. Likewise, the variables coded as VAR13, VAR9, VAR23 and VAR19 have been combined together as the fourth prime factor of talent management. Similarly, the variables coded as VAR25, VAR24, VAR12 and VAR22 have been blended as the fifth factor of talent management. Finally, the variables coded as VAR20, VAR11 and VAR27 have been joined as the sixth factor of talent management.

Identification of attributes

Table 1.6 indicates the arrangement of the factors extracted from Rotated Component Matrix with their respective attributes.

Table 1.6: Principal factors along with attributes

Sl. No.	Principal factors	Variable No.	Attributes	Factor score					
1.	Talent acquisition	VAR7	Identifying the talent pools	.910					
		VAR2	Systematic approach	.880					
		VAR1	Identification of potential	.751					
		VAR21	Efficiency of personnel department	.664					
		VAR5	Carefully tackling the barriers	.609					
2.	Talent development	VAR18	Healthy peer relationships		.849				
		VAR3	Talent development		.844				
		VAR17	Regular training program		.821				
		VAR8	Talent development strategies		.743				
		VAR6	Creates readiness		.692				
3.	Talent engagement	VAR26	Regular communication			.871			
		VAR10	Team performance			.809			
		VAR15	Management commitment			.779			
		VAR16	Open and clear feedback			.641			
		VAR14	Appreciation at work place			.503			
		VAR4	Inspiring leadership and ideology			.436			
4.	Talent retention	VAR13	Talent retention strategies				.893		
		VAR9	Salary as a motivational tool				.805		

		VAR00023	Improving performance				.669		
		VAR19	Intrinsic rewards as a motivation				.530		
5.	Work environment	VAR25	Challenging and supportive work environment					.752	
		VAR24	Fair selection					.701	
		VAR12	Flexible working hours					.508	
		VAR22	Rewards, incentives and bonus					.461	
6.	Career development practices	VAR20	Create enthusiasm						.862
		VAR11	Career development system						.663
		VAR27	Personal growth and advancement						.435

(Source: Extracted from Table 1.5)

From the above analysis, it is found that talent management practices of the Indian industries get influenced by six major factors. They are (i) Talent Acquisition, (ii) Talent Development, (iii) Talent Engagement, (iv) Talent Retention, (v) Work Environment, and (vi) Career Development Practices.

VI. FINDINGS

Different factors such as talent acquisition, talent development, talent engagement, talent retention, work environment and career development practices are mostly affecting the talent management practices in Indian organizations. The study result reveals that talent engagement is the most important factor of talent management practices followed by talent acquisition and talent development. The fourth factor extracted through factor analysis is talent retention, which signifies the various strategies to attract and retain the talent pools. Work environment also influence the effective and best practices of talent pools within the organization which motivates the employees. Career development practices of the young masses were found as the sixth talent management competency which makes the practices more effective.

VII. CONCLUSION

The objective of the study was to identify the different factors of talent retention in Indian firms. Majority of the employees in Indian firms believe that the talent acquisition is followed by talent development, talent engagement, work environment and career development practices of talent pools have effect on organisational development and effective talent management. Again the analysis showed that working environment, healthy peer relationships, commitment of management, regular communication, appreciating supervisor, salary and benefits, implementation of systematic approach etc. are highly sensitive to the demographical variables. Therefore, organisations will have to adopt the strategies, such as fair selection procedure, career advancement schemes,

flexible working hours, career advancement schemes, emphasis on personal growth and advancement procedures and so on depending upon the demographic profile of the employees to be able to retain the employees and to ensure smooth functioning..

REFERENCES

1. Agarwal, T. (2018), "Effect of Talent Management Practices and organizational performance on employee retention: Evidence from Indian IT firms", IOSR Journal of Business and Management (IOSR-JBM), e-ISSN: 2278-487X, p-ISSN: 2319-7668. Volume 20, Issue 4. Ver.III (April. 2018), PP 42-52 www.iosrjournals.org.
2. Bhargava, R. (2013), "Use of Information Technology for talent acquisition in IT and ITES sector", International Research Journal of Business and Management, ISSNNo. 2322-083X, Vol.V, pp.30-39.
3. Dhanabhakym, M.andKokilambal, K. (2014), "A study of existing talent management practices and its benefits across industries",International Journal of Research in Business Management, Vol. 2, Issue 7, pp. 23-36.
4. Fakhreidin, Hadia (2013), "The effect of Talent Management on Organizational success: A comparative study in the Petroleum sector in Egypt", Journal of US-China Public Administration, ISSN 1548-6591, Vol. 10, No. 4, 358-367, pp. 358-367
5. Fukofuka, S. (2014), "Factors that predict employee retention in profit and not for profit organization", Global Journal of Human Resource Management, Vol.2, No.4, pp.1-8
6. Ganapavarapu, L.K. and Sireesha, P. (2014), "Talent management: A critical review", Journal of Business and Management (IOSR-JBM), Volume 16, Issue 9, pp. 50-54.
7. Ganga, K., Yajid, M. and Khatibi, A. (2016), "The HR strategies impact of talent retention on performance of private sector organizations in Sri Lanka", European Journal of research in Social Sciences, Vol.4, No.6, ISSN NO.2056-5429, pp.73-83.
8. Gerard, N. (2018), "Millennial managers: exploring the next generation of talent", Emerald insight, www.emeraldinsight.com/1751-1879.htm.
9. Jindal p. and Shaikh M. (2015), "A study of behavioral training as talent management strategy in organisations", Universal Journal of Management Vol. 3(1), pp.1-6
10. LeAnn M. Brown(2014),"A proposed talent management model for leader – managers in state owned enterprises in China", International Journal of Human Resources studies, ISSN 2162-3058, Vol.4, pp. 198-211.
11. Kehinde J.(2012), "Talent management: effect on organizational performance", Journal of Management Research, ISSN 1941-899X, Vol.4, No.2, pp.178- 185.
12. Khatri, P., Gupta, S., and Chauhan, S.(2010), "Talent management in HR", Journal of Management and Strategy, Vol. 1, No. 1.
13. LeAnn M. Brown(2014),"A proposed talent management model for leader – managers in state owned enterprises in China", International Journal of Human Resources studies, ISSN 2162-3058, Vol.4, pp. 198-211
14. Rani A. and Joshi, U. (2012), "Talent management and as a strategic tool for the organization in selected Indian IT companies", European Journal of Business Management, ISSN: 2222-1905, Vol.4 (4), pp.20-28.

15. R. V. Dhanalakshmi and Gurunathan, K. (2014), "A study on talent Management as a strategy to influence employee engagement and its affect on organizational outcomes", International Journal of Business and Administration Research Review, ISSN No. 2347 – 856X, Vol.2, Issue, pp.183-186.
16. Razaq, A. (2012), "Retention of adept employees: Preliminary study on PTC- Pakistan", IOSR Journal of Business and Management (IOSRJBM), ISSN: 2278-487X, Volume 3, Issue 5, pp. 13-16.
17. Samal, A. (2014), "Talent retention issues in financial services: A case of insurance sector of India", MITS International Journal of Business Research, Vol. 1, Issue 1, ISSN No.2349-1701.
18. Siddarth Singh Bist and Srivastava N. (2013), "Talent management scenario in the banking industry", Indian Journal of Research – Paripex, Vol.2, No.4, pp.274-276.
19. Shafieian Golchin (2014), "Define talent management components", International Scientific Publications and Consulting Services, Voi.2014, pp. 1-7.
20. Sharma, S., Sharma, P. and Tiwwari, A.K (2015), The International Journal's: Research Journal of Economics and Business Studies, Vol. 01, No. 06, pp.1-9.
21. Sheokand S. and Verma A.(2011), "Impact of talent management in nurturing future leaders", The International Journal of Business Management, ISSN 2321 – 8916, Vol.2, Issue 11, pp.10 -16
22. Tajuddin, D., Ali, R. and Kamaruddin, B.H.(2014), "The need of talent management as a business strategy for Malaysian banking institutions", Australian Journal of Basic and Applied Sciences, 8(5) Special 2014, pp. 69-7.
23. Veloso, E., Dutra, J., and et.al. (2014), "Talent retention strategies in different organizational contexts and intention of talents to remain in the company", Journal on Innovation and Sustainability, Vol.5, ISSN No.2179-3565, pp.50-61.