Factor Analysis among the variables relating to purpose of using social media websites and non-acceptance of social media in recruitment

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ABSTRACT - In the era of Globalization, advancement of technology and stiff competition, particularly, in the I.T. Industry, companies have to adopt new H.R. strategies and practices so as to constantly evolve and grow. In this context, existing recruitment strategies have to be replaced by new strategies. Many companies are now extensively depending on the internet to connect to larger audiences globally. Organizations are in a position to attract profiles, resumes from potential candidates by announcing their vacancies on their own websites. E-recruitment is evoking interest among the companies typically over the last few years. The spread of information technology and growth of Internet has paved way for companies willing to hunt for talent on the job seeking websites. In the years to come, social networking will soon be an indispensable part of the hiring process. It is cost effective, does not require setting up an office and forms an effective tool for recruiters. The main purpose of this study was to understand the application of factor analysis in social science research and to reduce a large number of variables into manageable smaller factors for further analysis of the employers' perception on social media recruitment with reference to the I.T. Sector in Bangalore.

Key words: E-Recruitment, Social Networking, Factor Analysis, Variables, I.T.Sector

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I. INTRODUCTION

In the era of Globalization, advancement of technology and stiff competition, particularly, in the I.T. Industry, companies have to adopt new H.R. strategies and practices so as to constantly evolve and grow. In this context, existing recruitment strategies have to be replaced by new strategies. It has been observed by H. R. specialists that social networking websites are effective job search tools and that in just a few years' job advertisements in newspapers will be replaced by online job boards. Even job fairs are finding stiff competition in the social media. Also, it has evidently been visible that a lot of companies have their own formal pages on these websites, where job seekers can learn about the organization business, culture, ethics etc. Studies have indicated that India is the 4th top country in the world in internet usage. Hence, recruiters have a large pool from this source from which they can search for prospective employees. In the years to come, social networking will soon be an indispensable part of the hiring process. It is cost effective, does not require setting up an office and forms an effective tool for recruiters.

A study was conducted to understand the employers' perception on social media recruitment with reference to the I.T. Sector in Bangalore. The recruiters in Bangalore were the population for this study. The study focused on individuals (unit of analysis) who take ownership for recruitment in the company, and are likely to make crucial decisions relating to recruitment. The sample size *(Krejcie, R. V., Morgan, D. W. 1970)* for the study was 450 respondents indicating a true representative of the population. The sample entails an empirical selection of small groups from the overall population such that the group stand to represent the entire population. The

respondents were selected on the basis of 'Snowball Sampling Technique', where, using word- of- mouth enabled to collect data from the respondents. Factor Analysis was conducted to reduce a large number of variables into manageable smaller factors for further analysis in this study. Factor analysis was carried with an objective to reduce a large number of variables into manageable smaller factors for further analysis.

II.   REVIEW OF LITERATURE

Shyamalee, Wickramasinghe & S. Dissanayake (2013) assessed the employability skills expected from civil engineering graduates. Exploratory factor analysis was run to generate factors relevant to the employability of those graduates. They were knowledge in design and standards of construction, attitudes towards work, management skills, attitudes, technical, administrative and engineering knowledge.

Li-Tze Lee & Tien-Tse Lee (2011) conducted factor analysis in a study to identify the soft skills categories which affects success at the workplace. There were 43 questions in the original survey; after factor analysis, 38 remained to form six new constructs Positive attitudes, Open-mindedness, Interpersonal relationships, Teamwork, Communication skills and Creativity representing the important soft skill categories.

Niraj Kishore Chimote (2010) examined the issue of training effectiveness from the trainee's perspective by evaluating the training program conducted for 108 trainees of a leading private sector bank. Kirkpatrick's model was used for evaluation. The results of Exploratory factor analysis (dimension reduction) identified factors as extracted that matched theoretical factors according to Kirkpatrick's model of training evaluation. However, there are exceptions with respect to training schedule, application and applicability of training program, decisions made during the program and its final outcome.

Roberts & Roach (2009) in their study found that the sites involving social media and networking in particular, multiply the possibilities of interpersonal contact and exchange. Both applicants and employers can maintain, mobilize and develop their social network more efficiently due to these sites.

Ferris (2002) found that recruitment process effectiveness has an influence on organizational efficiency. Similarly, many researchers agreed that selection and effective recruitment process will lead to high performance and better competitive advantage for an organization. The most important aspect in recruitment process is to make sure, job postings include the necessary information such as corporate culture, nature of job, clear job description, required skills and any other relevant criteria to apply for the requisite job.

III.   OBJECTIVES OF THE STUDY

- To understand the application of factor analysis in social science research.

- To reduce a large number of variables into manageable smaller factors for further analysis in the study (Employers' Perception about social media recruitment in the I. T. Sector in Bangalore).

IV.   ANALYSIS & INTERPRETATION

Table 1

Factor analysis among the variables relating to various sources of recruitment

Total Variance Explained

Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	2.145	23.839	23.839
2	1.958	21.759	45.598
3	1.936	21.510	67.108

Rotated Component Matrix[a]			
	Component		
	1	2	3
Recruitment consultants	.808		
Contractors	.791		
Professional Bodies	.678		
Social Media Recruitment		.934	
Online Job Portals		.880	
Employee Referrals			.812
Head Hunting			.726
Campus Recruitment			.639
Poaching			.511
Extraction Method: Principal Component Analysis **Rotation Method:** Varimax with Kaiser Normalization			
a. Rotation converged in 4 iterations			

Factors represent the underlying concepts that cannot be adequately measured by a single variable. The above table highlights the factor analysis on the opinion given by the respondents' relating to the reason for not using social media for recruitment. Principal Component Analysis technique was adopted with varimax rotation. The factorability of the items was examined and the items with

loadings above 0.5 were considered for reasonable factorability.

To measure the sample adequacy, Kaiser-Meyer-Olkin measure and Bartlett's test of sphericity was adopted. It was found that KMO test value was .641 which is above the recommended value of 0.6, and Bartlett's test of sphericity was significant (χ^2=1277.388, p<.001). Three factors were extracted using Eigen values. The factors with Eigen values more than one were extracted. Three factors extracted together account for 67.108% of the total variance. Three items namely Recruitment consultants, Contractors and Head Hunting have loadings of 0.808, 0.791, and 0.678 on Factor1. This factor can be referred to as 'Indirect Sources'. Two items namely Social Media Recruitment and Online Job Portals have loadings of 0.934 and 0.880 constituting Factor 2. 'Internet Sources'. Four set of items namely Employee Referrals, Professional bodies, Campus Recruitment and Poaching with factor loadings of 0.812, 0.726, 0.639 and 0.511 constituted as Factor 3 which can be referred to as 'Direct Sources'.

Table 2 Factor analysis among the variables relating to purpose of using social media websites

Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	2.416	26.846	26.846
2	1.931	21.459	48.305
3	1.818	20.197	68.502

Rotated Component Matrix[a]			
	Component		
	1	2	3
Meet like-minded people	.813		
Communicate with Friends & Family	.727		
Communities	.699		
Chatting	.556		
Business and Network		.867	
Blogging		.717	
Participate in discussions		.651	
Job search			.814
Search for other information			.786
Extraction Method: Principal Component Analysis. **Rotation Method:** Varimax with Kaiser Normalization.			
a. Rotation converged in 8 iterations.			

To measure the sample adequacy, Kaiser-Meyer-Olkin measure and Bartlett's test of sphericity was adopted. It was found that KMO test value was .651 which is above the recommended value of 0.6, and Bartlett's test of sphericity was significant (χ^2=1412.602 p<.001). Three factors were extracted using Eigen values. The factors with Eigen values more than one were extracted. Three factors extracted together account for 68.502% of the total variance. Four items namely Meet like-minded people, communicate with friends & family, Communities and Chatting had loadings as 0.813, 0.727, 0.699 and 0.556 got extracted as Factor1. This factor can be referred to as 'Social use'. Three items namely Business and Network, Blogging and Participate in discussions have loadings as 0.867, 0.717 and 0.651 constituting Factor 2. This factor is termed as 'Job Related use'. Two items namely Job search and search for other information with factor loadings as 0.814 and 0.786 constituted as Factor 3 which can be referred to as 'Searching for Information'.

V.   FINDINGS

Based on the study results, it was found from the factor analysis among the variables relating to various sources of recruitment, that the 3 factors extracted were 'Indirect Sources', 'Internet Sources' and 'Direct Sources'. Further, the factor analysis among the variables relating to purpose of using social media websites revealed that the 3 factors extracted were 'Social Use',

'Job Related use' and 'Searching for Information'.

VI.   CONCLUSION

Factor Analysis was pioneered in the field of psychology, where it is still used in various studies to identify various variables. Apart from psychology, it is an extremely useful tool in the field of social science research studies. Factor analysis helps to reduce a large number of variables into manageable smaller factors for further analysis. It extracts maximum common variance from all variables and puts them into a common score. As an index of all variables, we can use this score for further analysis. It is often used to determine a linear relationship between variables before subjecting them to further analysis. It is an inexpensive and simple research tool to be used in a wide variety of situations. Lastly, it can be used to identify a lot of underlying dormant factors that other tools may not be able to highlight in research studies.

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