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IS A POSITIVE DIVERSITY CLIMATE AN ANTECEDENT OF ORGANIZATIONAL REPUTATION? AN EMPLOYEE PERSPECTIVE

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Abstract

The purpose of this paper is to fill the gap in the reputation literature on employee views of organizational reputation by taking employees' perceptions of workplace diversity climate as the antecedents of perceived organizational reputation, thereby making a perceived organizational reputation profile extraction. 403 respondents participated in the empirical research assessing employees' perceptions of organizational discrimination, workplace diversity and organizational reputation. To reveal the hidden relationships among the three scales, obtained data was analyzed utilizing cluster analysis. Focusing on assessing the reputation of an organization from employees' perspective, this study is the first attempt to investigate the effect of employees' perceptions of workplace diversity climate on their perceptions of organizational reputation. As well as enhancing the theoretical framework to assess the employee views of organizational reputation, this study aims at modelling employee perceptions multi-dimensionally through data mining techniques. It was observed that a positive diversity climate that is directly experienced in the workplace has a pronounced effect on employee's organizational reputation perceptions.

Keywords: Organizational Reputation, Workplace Diversity, Organizational Discrimination, Cluster Analysis, Data Mining.

1. INTRODUCTION

Organizational reputation is a perceptual representation of a company's past actions and prospects that describe the firm's overall appeal to all its key constituents when compared to other leading rivals' (Fombrun, 1996). It is a multi-dimensional construct and its related terms and concepts are steadily growing in interest among management researchers (Money, 2017). Flourishing along multiple dimensions, organizational reputation literature has made remarkable progress, and the level of analysis of the antecedents of reputation has also expanded (Newburry, 2017). Despite certain categorial challenges, this multi-faceted construct has been subject to divergent measurement tools and systems. This implies that reputation from being a potentially holistic and multidisciplinary construct is turned into a sophisticated methodology for measuring stakeholder perceptions (Schultz, 2017). Since it is very often acknowledged to be socially constructed (Rindova and Martins 2012), the basis of such stakeholder perceptions including employees' perceptions is fundamentally formed by social evaluations which organizations are also subject to (George et al., 2016). Depending on the evaluator, reputation can mean different things and an organization may have distinct reputations stemming from the perceptions of a particular stakeholder group (Gardberg and Fombrun, 2002). In this context, the role of employee perceptions on organizational reputation is very often referred to in reputation literature (i.e. Wartick, 2002, Whetten and Mackey, 2002, Chun, 2005, Walker, 2010, Cian and Cervai, 2014).

With increasing diversity in the workforce, diversity in the workplace and managing a diverse workforce have been the subject of a remarkable amount of recent research, particularly within the last 10 years. These studies typically explored the effect of diversity on organizational survival and organizational performance (i.e. Harrison et al., 2002, Filatotchev and Toms, 2003, Randel and Jaussi, 2003). However, the existence of the heterogeneity of employee characteristics in terms of sex, race, ethnicity, disability, belief or religion, age, sexual orientation, and gender identity throughout the world (Aydın and Özeren, 2018) has opened an inviting door for both reputation and diversity researchers. Researchers have started to examine the relationship between organizational reputation and diversity perceptions. In this regard, the relationship between corporate reputation and female presence at board level (Brammer et al, 2009), mediating role of reputation on the relationship between board racial diversity and firm performance (Miller and María, 2009), the impact of board diversity and gender composition on firm reputation (Bear et al, 2010, Larkin et al, 2012) have been investigated. As is seen, however, these preliminary studies categorically centered upon the role of board members.

Thus, within this research, we aim to contributes to the literature by examining the relationship between corporate reputation and diversity perceptions of employees by utilizing a cluster analysis.

Cluster analysis has so far been used in a broad array of contexts in social sciences. Particularly, it has been utilized in specific researches like market segmentation (Dolnicar, 2002; Punj & Stewart, 1983), supply chain integration (Kannan & Tan, 2010), hotel performance comparison (Sainaghi et al, 2018) to the determination of people's eating habits (Newby & Tucker, 2004), and the classification of products (Pappas et al, 2008). However, many studies have also been conducted from the management paradigm (Brusco et al., 2017; Wallace et al., 2004; Ketchen & Shook, 1996). In this study, by clustering employee's attitudes and behaviors, we aim to extract different employee profiles based on the relationship between employees' diversity expectations and corporate reputation perceptions. Traditionally, association rule mining is used for extracting profiles while decision trees for mapping relationships and various methods for estimating groups. However, clustering analysis can give detailed results regarding the calculation of the weights of the groups and the resulting cluster differentiation. This allows inferences to be made in terms of determining the threshold values of the extracted profiles.

2. METHOD

This study aims to create different employee profiles by analyzing the relationship between the diversity employees feels in their organizations. Participants that constitute the research sample were randomly selected from retail employees who were requested to participate in an online survey started in 2019. A 7-point interval scale was used, with 1 as ‘strongly disagree’ and 7 as ‘strongly agree’, and the survey was applied online. 403 respondents' took part in the empirical research. Diversity perceptions of the employees were measured through the 16-item diversity perception scale developed by Barak, Cherin, and Berkman (1998). Along with organizational and personal dimensions, the scale has four factors: organizational fairness, organizational inclusion, personal diversity value factor, and personal comfort factor. Reputation perceptions of the employees were measured through the 23-item reputation scale developed by Fombrun, Ponzi, and Newburry (2015). The scale is composed of 7 dimensions: Products, innovation, workplace, governance, citizenship, leadership, performance. The seven-dimension structure of the corporate reputation scale allows employees to evaluate the reputation of their workplaces on multiple criteria.

2.1. Cluster Analysis

Cluster analysis, in general terms, is the determination of data sets that are compatible within the same group and separated from other groups (Tan et al., 2013). In summary, it is a method that clusters close data and enables them to move away from each other in different clusters. From store-customer grouping (Punj & Stewart, 1983) to obtaining web-document categories (Abualigah et al., 2018), clustering methods have a wide range of applications (Kishor & Venkateswarlu, 2016). In this study, the clusters investigated in line with the perceptions and expectations of individuals also determine the employee profiles formed within the sample. However, there is no preliminary information on how many clusters the observations will be divided into, as there is no previous profiling study in terms of reputation and diversity. For this reason, instead of the k-Means (Pelleg & Moore, 2000; Bishop, 1995) algorithm, which is very popular in the literature, the x-Means algorithm is used, in which the number of clusters is not predetermined. The x-Means algorithm is one of the most widely used cluster algorithms, which is based on expectation-maximization and produces very good results despite its high processing density (Kishor & Venkateswarlu, 2016).

3. RESULTS

The data in the study were obtained through a questionnaire form. The 39-item form consists of 4 factors (OF, OIF, PD, PC) the diversity scale and 7 factors of (WP, G, LS, C, PS, P, IN) the Reputation scale. Since the 4 items in the diversity scale were designed as a reverse coded, the data were arranged and the summary of the scale data obtained from 403 people participating in the study is given in table 1.

Table 1. Summary of Data

Scale	Factors	Five Number Summary					Statistics			
		min	Q_1	Q_2	Q_3	max	sd	mean	skewness	kurtosis
Diversity	OF	1,00	3,333	4,167	5,500	7,00	1,669	4,189	-0,014	-0,853
	OIF	1,00	3,250	4,000	6,000	7,00	1,684	4,201	-0,057	-0,931
	PD	1,00	2,333	4,000	5,667	7,00	1,717	4,142	-0,092	-1,407
	PC	1,00	2,333	4,000	5,667	7,00	1,771	4,141	-0,106	-1,378
Reputation	WP	1,00	3,000	4,000	6,000	7,00	1,811	4,148	-0,101	-1,106
	G	1,00	2,667	4,000	6,000	7,00	1,830	4,055	-0,009	-1,106
	LS	1,00	3,000	4,000	6,000	7,00	1,804	4,088	-0,032	-1,106
	C	1,00	3,000	4,000	6,000	7,00	1,798	4,091	-0,037	-1,092

PS	1,00	3,250	4,000	5,250	7,00	1,704	4,099	-0,060	-0,873
P	1,00	3,000	4,000	4,667	7,00	1,646	3,921	-0,004	-0,757
IN	1,00	3,000	4,000	5,333	7,00	1,728	4,070	0,040	-0,947

In order to determine the relationship between the factors, the Pearson correlation coefficient was calculated and the results are given in Table 2. It has been determined that PS, P and IN factors in the corporate reputation scale are incompatible with other factors and there is no relationship between them. Thus, these factors were not used in the cluster analysis applied in the continuation of the study.

Table 2. Correlation Coefficient of Factors

	OF	OIF	PD	PC	WP	G	LS	C	PS	P	IN
OF	1,000										
OIF	0,813**	1,000									
PD	0,682**	0,681**	1,000								
PC	0,708**	0,681**	0,797**	1,000							
WP	0,853**	0,824**	0,685**	0,725**	1,000						
G	0,855**	0,835**	0,700**	0,725**	0,844**	1,000					
LS	0,861**	0,837**	0,694**	0,723**	0,850**	0,872**	1,000				
C	0,851**	0,841**	0,694**	0,723**	0,846**	0,853**	0,857**	1,000			
PS	0,045	0,069	0,027	0,043	0,030	0,040	0,027	0,043	1,000		
P	-0,035	-0,013	-0,067	-0,042	-0,004	-0,061	-0,025	-0,026	-0,050	1,000	
IN	0,042	0,027	-0,012	-0,008	0,043	0,024	0,047	0,024	-0,013	-0,029	1,000

It is seen that OF and OIF factors in the diversity scale have a high positive relationship with the WP, G, LS and C factors in the corporate reputation scale. Similarly, PD and PC factors representing the expectations of employees in the diversity scale also have a positive relationship with the WP, G, LS and C factors. Thus, it is observed that the diversity approach experienced by employees in the workplace is more effective on their perceived reputation.The Expectation Maximization (EM) algorithm running on the related data created 7 different cluster centers and these values are given in Table 3.

Table 3. Initial Clustering Result with Expectation Maximization Algorithm (EM)

		CLUSTERS						
		C1.1	C1.2	C1.3	C1.4	C1.5	C1.6	C1.7
OF	mean	4,012	4,058	6,548	1,895	4,008	3,862	4,024
	s.d.	0,371	0,681	0,197	0,847	0,350	0,905	0,284
OIF	mean	4,079	3,767	6,495	2,022	4,010	4,293	3,961
	s.d.	0,317	1,118	0,249	0,996	0,334	0,947	0,380
PD	mean	2,098	3,384	5,976	2,107	6,031	5,528	4,002
	s.d.	0,555	0,772	0,470	0,480	0,445	0,515	0,025
PC	mean	2,077	4,419	6,069	1,910	6,079	4,095	3,989
	s.d.	0,457	1,000	0,511	0,445	0,350	1,280	0,070
WP	mean	4,107	4,086	6,522	1,514	4,006	4,121	4,009
	s.d.	0,481	1,100	0,262	0,310	0,456	1,337	0,546
G	mean	4,036	3,644	6,522	1,461	3,994	4,043	4,125
	s.d.	0,428	1,042	0,279	0,280	0,479	1,352	0,510
LS	mean	3,936	3,979	6,516	1,485	3,997	3,923	4,078
	s.d.	0,406	1,113	0,246	0,253	0,444	1,221	0,368
C	mean	4,049	3,921	6,505	1,490	3,932	4,058	4,003
	s.d.	0,581	1,045	0,280	0,278	0,464	1,135	0,607

The distribution of the clusters formed by including the observations closest to the cluster centers obtained is given in Table 4.

Table 4. Initial Distribution of Clusters

	C1.1	C1.2	C1.3	C1.4	C1.5	C1.6	C1.7
n	40	72	97	81	33	44	36
%	9,93%	17,87%	24,07%	20,10%	8,19%	10,92%	8,93%

The distances between the calculated cluster centers were calculated with the Euclidean metric (Eq. 1) and how far the clusters moved from each other was determined.

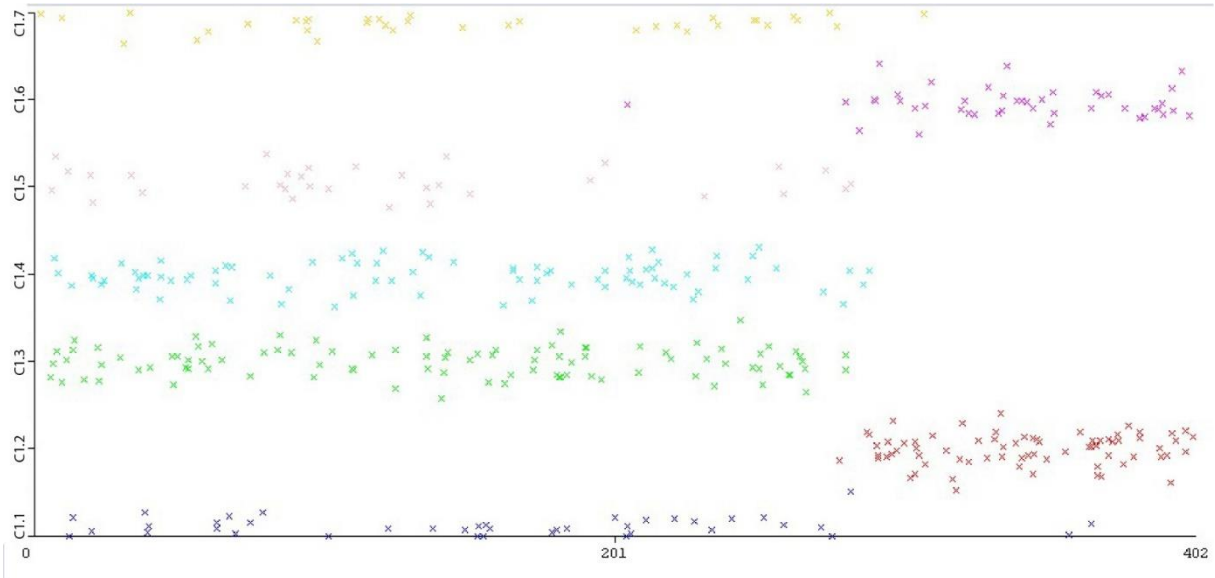
$$d(x,y) = \sqrt{\sum_{i=1}^{n}(x_i - y_i)^2} \quad (1)$$

Calculated Euclidean distances -*dissimilarity values between clusters*- are given in Table 5.

Table 5. Initial Distances Between Formed New Clusters (Dissimilarity Matrix)

	C1.1	C1.2	C1.3	C1.4	C1.5	C1.6	C1.7
C1.1	0						
C1.2	2,722	0					
C1.3	8,243	7,100	0				
C1.4	5,887	6,258	13,232	0			
C1.5	5,614	3,155	6,190	8,130	0		
C1.6	3,988	2,280	6,386	7,177	2,080	0	
C1.7	2,708	0,927	6,729	6,524	2,918	1,588	0

The very low dissimilarity between some profiles (such as C2-C7) indicates that these profiles are very close to each other. In such cases, it is difficult to decompose the observations, this difficulty is seen in Figure 1, which shows the scatter plot of the data.



Graph 1. - Initial Distribution of Clusters

Since each cluster obtained here represents an employee profile, the number of clusters is reduced by determining a threshold value based on the values in the dissimilarity matrix to clarify the distinction between profiles. The new clusters and cluster centers obtained are given in Table 6.

Table 6. Final Clustering Result with Expectation Maximization Algorithm (EM)

		CLUSTERS		
		C2.1	C2.2	C2.3
OF	mean	4,0202	6,4445	1,8951

	s.d.	0,5609	0,7487	0,8472
OIF	mean	3,9776	6,4874	2,0216
	s.d.	0,7938	0,2522	0,9955
PD	mean	4,0658	5,9798	2,107
	s.d.	1,4585	0,4662	0,4796
PC	mean	4,0957	6,0674	1,9095
	s.d.	1,4163	0,5146	0,4445
WP	mean	4,0523	6,5185	1,5144
	s.d.	0,9082	0,2606	0,3102
G	mean	3,8998	6,5253	1,4609
	s.d.	0,892	0,2768	0,2801
LS	mean	3,9563	6,5152	1,4846
	s.d.	0,8497	0,2431	0,2526
C	mean	3,9671	6,4983	1,4897
	s.d.	0,8488	0,2819	0,2777

The 3 new clusters and the distribution of these clusters are given in Table 7.

Table 7. Final Distribution of Clusters

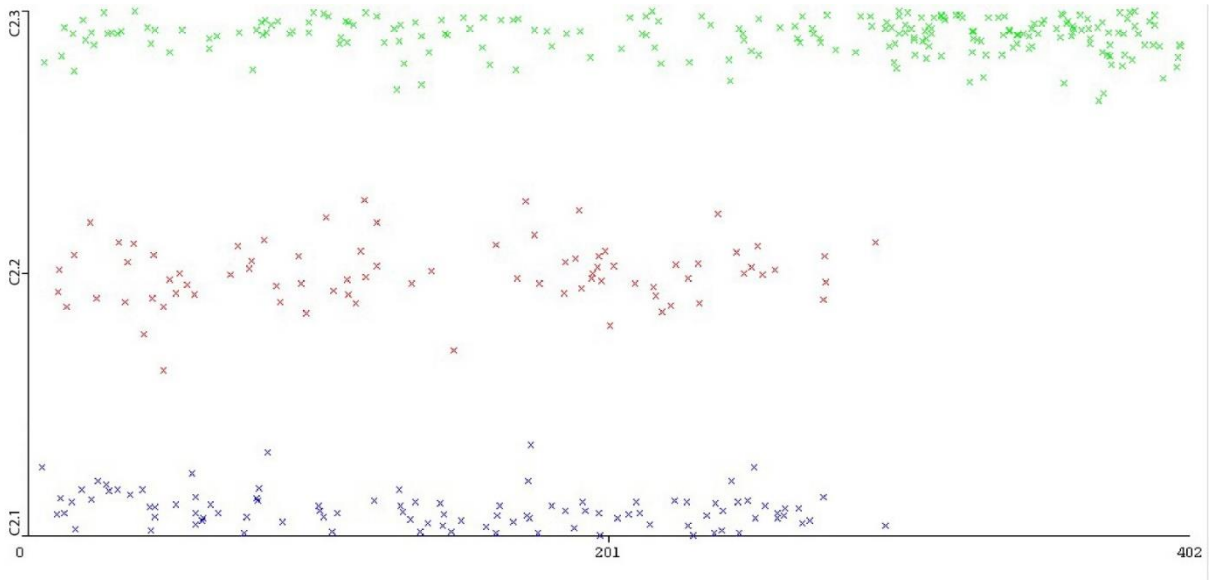
	C2.1	C2.2	C2.3
n	223	99	81
%	55,33%	24,57%	20,10%

Due to the reduction in the number of clusters, the clusters became more pronounced and the dissimilarity values between them were calculated over 6,449. The dissimilarity values obtained for all clusters are given in Table 8.

Table 8. Final Distances Between Formed New Clusters (Dissimilarity Matrix)

	C2.1	C2.2	C2.3
C1	0		
C2	6,757	0	
C3	6,449	13,191	0

As a result of combining some profiles due to the similarity between them, 3 clusters that clearly differ from each other are obtained and shown in Figure 2.



Graph 2. Final Distribution of Clusters

When the algorithm is run with raw data and the number of clusters is not specified, it is observed that employees create k = 7 different profiles (C1.7,…, C1.1). When the similarities of the obtained profiles are measured with Euclid distance, it is revealed that the clusters formed do not decompose well enough. For this reason, the algorithm was rerun with different cluster numbers (k = 6, 5, 4, 3), and it was found that the clusters formed completely differ from each other. Thus, 3 completely independent profiles were obtained. However, in order to follow the formation of groups that can be seen as minorities in the process of extracting information from the collected data, the transition process from 7 to 3 groups was remodeled and is given in Figure 1.

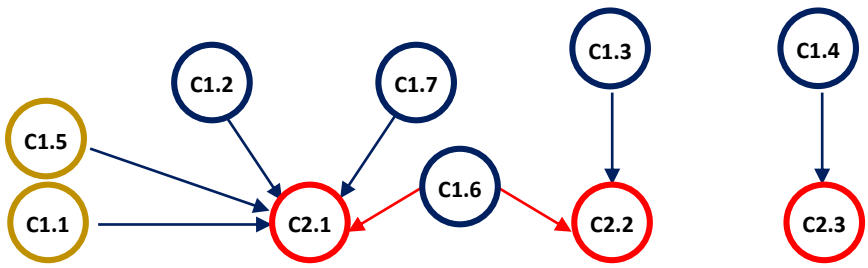


Figure 1. Initial Distribution of Clusters

Figure 1 is a summary of the transition from 7 profiles to 3 profiles obtained from the data. Here, it is clearly seen that the profile with low scores on C1.4 Diversity scale and Reputation scale has been transferred to the C2.3 profile in the last case. Similarly, high scores

were given to both the diversity scale and the reputation scale in the C1.3 profile, and this profile was transferred to the C2.2 profile completely. As the scores of only 2 observations (0.5%) from the C1.6 profile, which is a part of the indecisive group, were relatively higher, they were transferred to the C2.2 profile in the last case. All other participants in the undecided group came together in the C2.1 profile. There was no statistical loss in the process of reducing the 7 profiles formed in the first case to 3 profiles. Particularly, although the C1.1 and C1.5 profiles obtained in the first grouping were included in the indecisive group, the Diversity scale formed two sub-profiles in which there were differentiations in the items belonging to personal dimensions.

Employees who gave high scores to the diversity scale questions also gave high scores to the questions of the reputation scale, and vice versa. Therefore, the strong positive correlation observed here was effective in the formation of the profiles. The indecisive profile is of great importance in this process. This is because these indecisive employees are those who are expected to be most affected by the improvements to be made. Thus, the positive perception of diversity by the employee will positively affect the reputation of the organization.

4. CONCLUSION

The relationship between employees' expectations the effects of manager attitudes on these expectations is very often revisited in organizational behavior and human resource management literature. However, there is a gap in the literature regarding the relationship between employees' organizational reputation perceptions and the diversity observations and practices they experience in the workplace. Through a data mining method, this study suggests a profile extraction that models the attitudes of employees using cluster analysis which is a very convenient method to make such inferences. Thus, with the EM algorithm applied, the hidden patterns were revealed and the employees were modeled through a data mining method. Accordingly, while the dimensions of the discrimination experienced within the organization were investigated in the first two of the factors (OF, OIF) in the diversity scale, the other two factors (PD, PC) question the employee's diversity expectation in the workplace. When the three different employee profile values obtained in the study are examined, however, it is observed that the participants gave more precise answers in the first two factors. Thus, it is concluded that compared to employees' expectations of diversity, a positive diversity climate that is directly experienced in the workplace has a more pronounced effect on employee's reputation perceptions. Furthermore, the responses of the participants are observed to be a little more ambiguous in the other two factors (PD, PC) where employees' own views, rather than

actual experiences, on diversity are measured. It is also important to note that the number of participants who are almost undecided about the management's practices to diversity constitutes 55% of all participants. Consequently, this study contributes to the reputation literature by expanding on our understanding of the link between reputation and diversity climate. It was observed that an organization's approach and positive diversity climate is found to have a high effects on employees' perceptions. The positive diversity experiences of the employees within the organization also strongly and positively affects the corporate reputation perception of the employees. This supports prior research emphasizing the beneficial effects of prodiversity climates (Holmes, 2020) and offers a novel framework to strengthen the suggestions that employees respond positively when diversity is promoted in the organization (McKay et al., 2007). Another interesting information gain that can be deduced from the average values of the three different profiles reached is that if the organization's practices of diversity are adopted positively by an employee, the employee tends to evaluate such practices above his/her own expectations. In a parallel fashion, if the organizational practices of diversity are adopted negatively by an employee, the employees tend to see their personal diversity values above what the organization feels in the workplace.

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