



## Cluster Analysis on Institutional Commitment and Organizational Climate

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### ABSTRACT

This research work is an attempt to study the Formation of different clusters with the help of different dimensions of Institutional Commitment and Organizational Climate. This study would also focus to find out the importance of predictors for the formation of different clusters and to understand the changes of the importance of the predictors with the change in the number of clusters. The work is done using Descriptive Survey Method and Stratified Random Sampling has been applied on a sample of 400 teachers from West Bengal Board of Secondary Education (WBBSE). The findings conclude that with the increase in the number of the clusters the importance of the predictors also change, where Gender, Location and Autonomy turn to be the major predictors.

**Keywords:** Institutional Commitment, Institutional Climate, Cluster Analysis, Mahalanobis Distance

### Introduction

Institutional commitment is not a novel concept; on the contrary, it has a long history. The phrase '*institutional commitment*' or '*organisational commitment*' originally appears in the literature on industrial and organisational psychology. An employee's psychological connection or emotional commitment that they experienced as a result of their involvement with a specific organisation is referred to as their attitudinal standpoint. Different people have described institutional commitment in a variety of ways. Cambridge Dictionaries Online states that the term '*commitment*', denotes "*a willingness to give your time and energy to something that you believe in, or a promise or firm decision to do something*". Buchanan (1974) is of the view that commitment is "*a partisan, affective attachment to the goals and values, and to the organization for its own sake, apart from its purely instrumental worth*". the psychological ties a person has to the business, their sense of involvement at work, their loyalty, and their commitment to the company's values. Employees' acceptance of organisational aims and their willingness to do their absolute best while abiding by the organization's customs and methods of doing things, according to the researcher, can be summarised as organisational commitment.

Employees' shared impressions of and meaning associated with the rules, practises, and procedures they come across, as well as the behaviour they see being encouraged and supported, make up the organisational environment (Ostroff et al. 2003). Significant quantitative studies on organisational climate started around 1970. Early studies on organisational climate were characterised by scant consensus over its definition, almost no abstract orientation to the original tools intended to measure it, and, paradoxically, almost complete disregard for the term '*organisational*.' Early climate research therefore followed a more conventional individual differences approach that was common in industrial psychology at the time. The early 1980s saw the explosion of the study of organisational culture, pushing organisational climate into the background while it battled the levels-of-analysis problem. The fact that organisational culture seemed to better represent the complexity of the organisational environment than climate studies did in the 1980s may have contributed to the rise in interest in this field. Pettigrew observed that, "*[There is] the impression that climate studies have been boxed in by the appearance in the nest of this rather over nourished, noisy, and enigmatic cuckoo called organizational culture. This pressure from an interloper may, however, be energizing climate researchers to rethink the role of climate studies.*" Pettigrew's portrayal of climate science was prescient since important advancements in conceptual thinking and research procedures were made as a result of increasing interest in the subject (Kuenzi & Schminke 2009).

Hierarchical and k-means clustering do not scale efficiently when N is very large, two step cluster analysis is a method of the statistical software package SPSS used for large data bases (Garson 2009). This analysis can be applied with both categorical and continuous variables and is appropriate when there are categorical variables with three or more categories (Adhikari et al. 2023). A technique that just takes one iteration through the data is two-step cluster analysis. The process is broken down into two main steps: the initial grouping of observations into tiny subclusters, which are then regarded as distinct observations, makes up the first stage. When deciding whether to construct a new cluster or to add an observation to an existing one, the distance criteria are utilised. These fresh observations are grouped utilising the hierarchical cluster approach. The number of clusters can either be predetermined or determined by the algorithm of the two-step cluster analysis. The subclusters are used as the basis for the analysis and are aggregated into the necessary number of clusters in the second phase, groping. Traditional grouping methods can be easily applied because the number of subclusters is considerably lower than the numbers of data. The approach grows increasingly accurate as the number of subclusters increases (Zhang et al. 1996). Mahalanobis

Distance is also used in educational research as an important field in education. Studies like Adhikari (2023), Mohanta et al. (2023a), Mohanta et al. (2023b), Sen et al. (2023), Ahmed et al. (2022a), Ahmed et al. (2022b), Ahmed et al. (2021), Gorain et al. (2021), Mahato and Sen (2021), Ahmed et al. (2020), Sen and Pal (2020) etc. Cluster analysis is another important recent aspect in the field of educational research. Several studies have been observed in educational research using cluster analysis, such as Gorain et al. (2022), Mohanta et al. (2023), Saha, Sen and Adhikari (2021), Sen et al. (2023), Adhikari et al. (2023) etc. show the use of Mahalanobis distance in the field of educational research.

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## Literature Review

- **Reviews on Institutional Commitment and Organizational Climate**

**Mohanta and Saha (2022)** in their paper *A Conceptual Delving into Organizational Climate in School Education*, is of the opinion that an institution's culture often serves as a reminder of its environment. The organisational climate of such a successful institution serves as a point of reference for the members' perceptions of a collection of traits that exist within an organisation. The attitudes and sentiments of a company's workforce are reflected in its culture. A leader must establish a pleasant work atmosphere for their team members in order to uplift their morals and values and guarantee the effortless and effective continuance of their work habits. This research article's objective is to describe and pinpoint patterns in the different studies and approaches employed to look at student performance and school climate. The role institutional atmosphere plays in establishing a value are critically examined. **Sanchez (2022)** has worked on *Influence of Professional Commitment and Organizational Climate on the Work Engagement of Employees in the Department of Education*. This study's main objective was to ascertain whether job engagement mediates the link between organisational environment and professional devotion. The researcher's quantitative, non-experimental strategy included a correlational approach. The responders were non-teaching staff employees at a public school. Regression analysis, mean, and Pearson-r were used to analyse the collected data. The results of the study demonstrated that non-teaching employees have very high levels of organisational climate, professional commitment, and job engagement. Additionally, there are significant relationships between organisational atmosphere, professional commitment, and engagement at work.

**Shukla and Waris (2016)** made a study on *Professional Commitment of Secondary School Teachers in Relation to Their Gender and Area: A Comparative Study* to study secondary school teachers' professional commitment in regard to their gender and area. For their investigation, the researchers employed 600 secondary school teachers from Uttar Pradesh—300 from the city and 300 from the countryside. A method known as intentional sampling was used to choose the sample. The Professional Commitment scale for teachers developed by Dr. Ravinder Kaur, Sarbjit Kaur Ranu, and Sarvjeet Kaur Brar in 2011 was used to gather the data. The results showed that while there was no significant difference between male and female secondary school teachers' professional dedication, there was a significant difference between their professional commitment according to area. **Berberoglu (2018)** has conducted an investigation on *Impact of Organizational Climate on Organizational Commitment and Perceived Organizational Performance: Empirical Evidence from Public Hospitals*. The purpose of this study was to evaluate healthcare professionals' perceptions of organisational climate and to investigate if climate affects employees' loyalty to the company and perceptions of performance. The healthcare professionals working in North Cyprus's public hospitals were surveyed using a self-administered questionnaire for the study. To examine the collected data and assess the hypothesis, linear regression analysis and ANOVA were both utilised. The results showed a link between perceived organisational performance and organisational climate. According to the findings of a straightforward linear regression, the culture of an organisation has a big impact on how dedicated its employees are to it and how well it is perceived to be operating.

- **Cluster Analysis**

**Nelson (2014)** in his research paper *Student motivational profiles in an introductory MIS course: An exploratory cluster analysis* concentrates on the profiles of students in an introductory MIS course based on a variety of variables related to academic major choice. A survey that was given to 12 sections of the course was used to collect the data. Students' assessments of task value (interest, importance, and utility) in the area of information systems, self-efficacy with regard to computers and applications, and attitudes towards computer use were all taken into account in a two-step cluster analysis, which also employed gender as a categorical variable. Five clusters were uncovered. One all-male cluster showed positive motivation on all dimensions, one all-female cluster showed positive motivation except for computer efficacy, one all-male cluster showed negative motivation except for computer efficacy, one all-female cluster showed negative motivation except for applications efficacy, and one IT-averse cluster showed very low scores on all dimensions of motivation. All of the MIS majors in the sample were represented by one of the two clusters of positive motivation. The variation of additional traits among different student sections that were not examined in the cluster analysis, such as the quantity of IS courses taken in high school, the attitude towards change, and the impact of salient referents on academic major choice, was then investigated using a profile analysis.

**Benassi et al. (2020)** in their paper *Using Two-Step Cluster Analysis and Latent Class Cluster Analysis to Classify the Cognitive Heterogeneity of Cross-Diagnostic Psychiatric Inpatients* is of the opinion that the diversity of cognitive profiles among psychiatric patients carries significant clinical information. The appropriate way to describe this cognitive variability, though, is still up for debate. Although cluster analysis methods like the Two-Step and the Latent Class are appropriate for clinical data, the literature has paid little to no attention to them. In the current study, 387 mental inpatients with a range of disorders had cognitive profiles, and it was intended to evaluate the validity of cluster solutions produced from Two-Step and Latent Class cluster analysis. Latent Class cluster analysis and two-step cluster analysis produced consistent and reliable results. All psychiatric inpatients can be divided into Low and High Cognitive Profiles, with schizophrenia and bipolar disorder patients showing higher cognitive variability than patients with depressive illness and personality disorder.

**Saha et al. (2021)** in their research paper *Analysis of Attitude Towards Yoga Among College Students Using Clustering Techniques* discusses Yoga is an ancient practice that combines physical, mental, and spiritual aspects. In the study, attitudes towards yoga practise are examined among college students

in the Purulia district of West Bengal, India. 570 undergraduate students' opinions on a measure measuring their attitude towards yoga were gathered. Four independent variables—gender, college location, student residence, and streams – as well as one dependent variable—the questionnaire's score – are all taken into account in this study. The task of grouping a collection of things into the same group such that they are more similar to each other is known as data clustering. Five clusters are created using a two-step cluster analysis to carry out the current investigation.

**Gorain et al. (2022)** in their research paper *A Study on Relationship and Cluster Analysis among Internet Dependency, Social Isolation and Personality*. The current study examines different psychological characteristics of college students. Investigations are made into the relationships between several variables, including Internet Dependency, Social Isolation, and five different personality traits. Science and the arts are two groups that are considered in this study. With the aforementioned goals in mind, relationships between the variables Internet Dependency, Social Isolation, and five different personality traits are investigated for art, science, and all learners of art and science. These traits are Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness. Each pair of variables has a link that is either very weak or average. Unexpectedly, three groups emerge. Science students formed a separate cluster, while male and female arts students formed two unique clusters.

**Mohanta et al. (2023)** in their research work *Introspecting Institutional Commitment Using Cluster Analysis* attempts to study the likeness of the responses given by secondary school teachers regarding Institutional Commitment. The study used a two-step cluster analysis technique, which results in a number of groups depending on the location of the institutions and the gender of the professors. Examined is how the Predictors affect cluster formation.

**Mohanta et al. (2023)** in their research work *Perceptual Environment: A Study on Organizational Climate Using Cluster Analysis* has under taken 400 Secondary School Teachers through Stratified Random Sampling. The findings demonstrated that gender had an impact on inferences made about the institutional climate. The aforementioned two facts could be used to imply that responses to institutional environments depend on both gender and location of the institution. **Sen et al. (2023)** in their research *Clustering Technique for Analyzing Leadership Style of the Head of the Institutions* compares the responses provided by Head of the Institutions on Leadership style. The study used a two-step cluster analysis technique that results in a number of clusters, with the institutions' locations serving as a major cluster predictor. Examined is how the Predictors affect cluster formation. The creation of each cluster in respect to the predictors varies. The outcome demonstrated that as the number of Clusters increased, so did the number of predictors. Additionally, it was discovered that location becomes the key predictor. Depending on where the institutions are located, similar perspectives on leadership styles have been identified.

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## Objectives

The objectives of this study are:

1. Formation of different clusters with the help of different dimensions of Institutional Commitment and Organizational Climate.
2. To find out the importance of predictors for the formation of different clusters.
3. To study the changes of the importance of the predictors with the change in the number of clusters.

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## Methodology

**Method:** The method used in the research work is Descriptive Survey Method.

**Sample:** To undertake the research work a sample of 400 teachers from West Bengal Board of Secondary Education (WBBSE) were taken.

**Sampling Procedure:** In order to collect data Stratified Random Sampling has been applied.

**Statistical Techniques Used:** In order to classify the total sample into different clusters, two step clustering technique is used in the research work.

## Discussion and Analysis

The Results and Discussions will follow few abbreviations, which are enumerated here:

Professional - Professional Commitment

Academic - Academic Commitment

Affective - Affective Commitment

Learner - Commitment to the Learner.

Autonomy - Employees Perception of Autonomy

Manager - Trust on Manager

Team - Team Work

Reward - Reward and Recognition

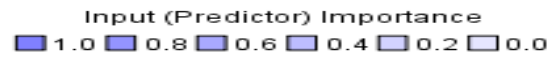
Perception - Employees Perception towards Fairness

Support - Employees Perception Towards Organizational Support.

Gender – Teachers (Male & Female)

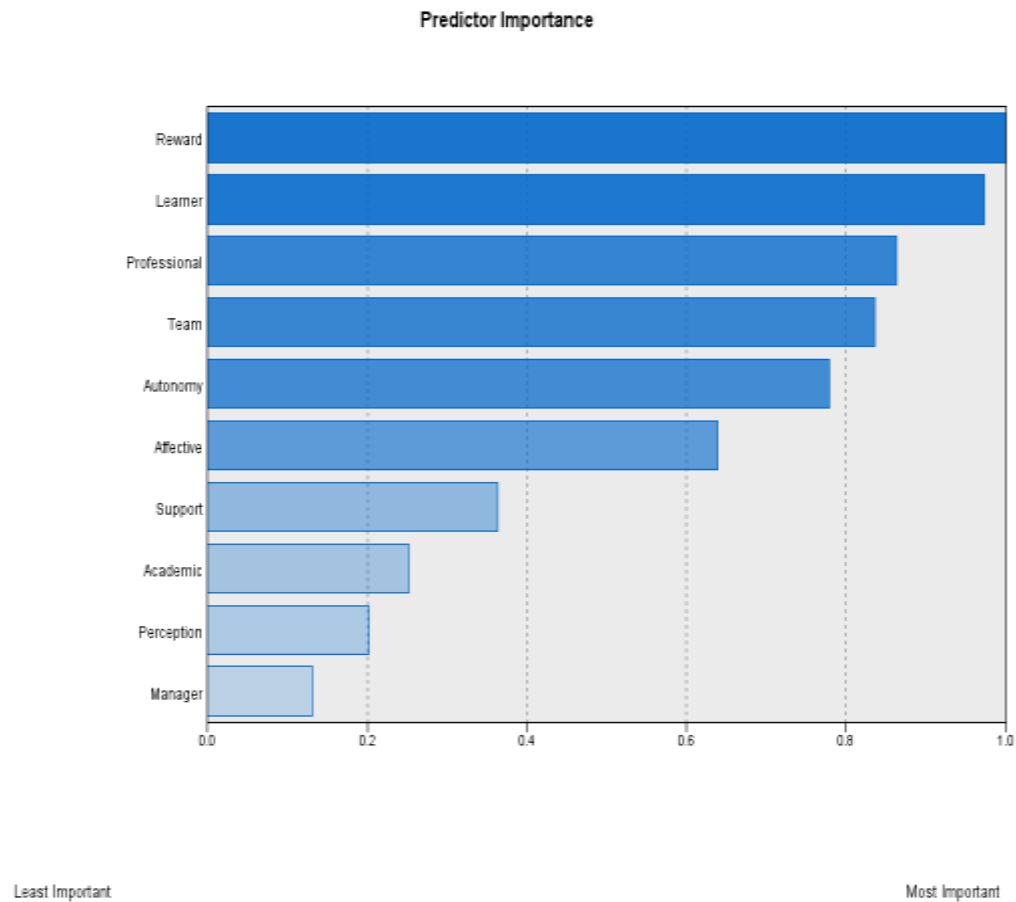
Location – Location of the Institutions

### Clusters



Cluster	1	2
<b>Label</b>		
<b>Description</b>		
<b>Size</b>	51.7% (207)	48.2% (193)
<b>Inputs</b>	Reward 38.95	Reward 43.73
	Learner 39.68	Learner 44.01
	Professional 47.73	Professional 52.60
	Team 31.46	Team 35.00
	Autonomy 31.51	Autonomy 35.68
	Affective 51.90	Affective 57.51
	Support 35.31	Support 37.99
	Academic 43.38	Academic 46.27
	Perception 39.31	Perception 41.98
	Manager 28.96	Manager 30.74
	Gender female (50.2%)	Gender male (59.6%)
	Location urban (55.1%)	Location urban (50.3%)

Table 1: Formation of 2 Clusters



**Figure 1: Predictor Importance for the clusters described in Table 1**

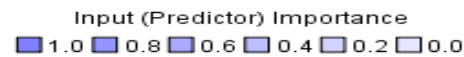
Table 1 represents 2 clusters.

Cluster 1 is the largest cluster (51.7%). This cluster is a female dominated cluster with 50.2%. The cluster is formed of urban population of 55.1%. Professional (47.73) and Academic (43.3) form the two largest dimensions in this cluster, with the lowest being Manager (28.96).

Cluster 2 is the smaller one (48.2%). This cluster is a male dominated cluster with 59.6%. The cluster is formed of urban population of 50.3%. Affective (57.51) and Professional (52.60) form the two largest dimensions in this cluster, with the lowest being Manager (30.74).

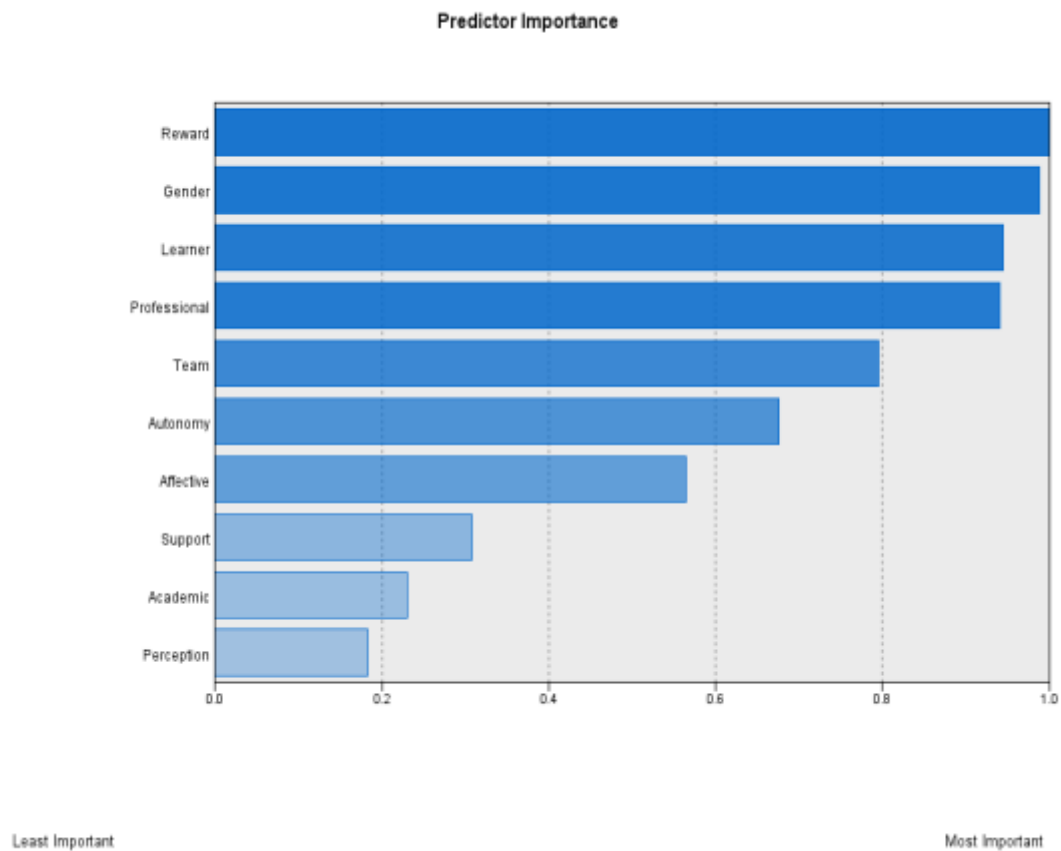
From Figure 1, it is clear that Reward, Learner and Professional become the three major predictors of the clusters, while Manager, Perception and Academic turns to be very low predictors of the clusters mentioned in Table 1. Autonomy and Affective are the medium Predictors for the clusters.

### Clusters



Cluster	2	1	3
<b>Label</b>			
<b>Description</b>			
<b>Size</b>	43.2% (173)	28.5% (114)	28.2% (113)
<b>Inputs</b>	Reward 44.00	Reward 38.79	Reward 39.55
	Gender male (60.1%)	Gender male (100.0%)	Gender female (100.0%)
	Learner 44.23	Learner 39.53	Learner 40.27
	Professional 52.98	Professional 47.53	Professional 48.23
	Team 35.17	Team 31.48	Team 31.81
	Autonomy 35.76	Autonomy 31.25	Autonomy 32.40
	Affective 57.64	Affective 51.57	Affective 53.04
	Support 38.06	Support 35.32	Support 35.68
	Academic 46.41	Academic 43.28	Academic 43.78
	Perception 42.12	Perception 39.43	Perception 39.44
	Manager 30.91	Manager 28.71	Manager 29.25
	Location rural (50.9%)	Location rural (61.4%)	Location urban (72.6%)

Table 2: Formation of 3 clusters



**Figure 2: Predictor Importance for the clusters described in Table 2**

Table 2 represents 3 clusters.

Cluster 2 is the largest cluster (43.2%). This cluster is a male dominated cluster with 60.1% population. The cluster is formed of rural population of 50.9%. Gender (60.1%), Location (50.9%) and Professional (52.98) form the largest dimensions in this cluster, with the lowest being Manager (30.91).

Cluster 1 is the second largest one (28.5%). This cluster is a male dominated cluster with 100% population. The cluster is formed of rural population of 61.4%. Gender (100%), Location (61.4%), Affective (51.57) form the largest dimensions in this cluster, with the lowest being Manager (28.71).

Cluster 3 is the smallest one (28.2%). This cluster is a female dominated cluster with 100% population. The cluster is formed of urban population of 72.6%. Gender (100%), Location (72.6%), Affective (53.04) form the largest dimensions in this cluster, with the lowest being Manager (29.25).

From Figure 2, it is clear that Reward, Gender, Learner and Personal become the major predictors of the clusters, while Perception, Academic, Support and Affective turns to be very low predictors of the clusters mentioned in Table 2. The medium predictors are Team and Autonomy.

As seen in Figure 2, it can be observed that with the increase in the number of clusters from two to three, Manager does not find a place in the predictors. But with the increase in the number of clusters in this case Reward, Learner and Professional (as seen to be high predictors in Figure 1) remains to be high in Figure 2.

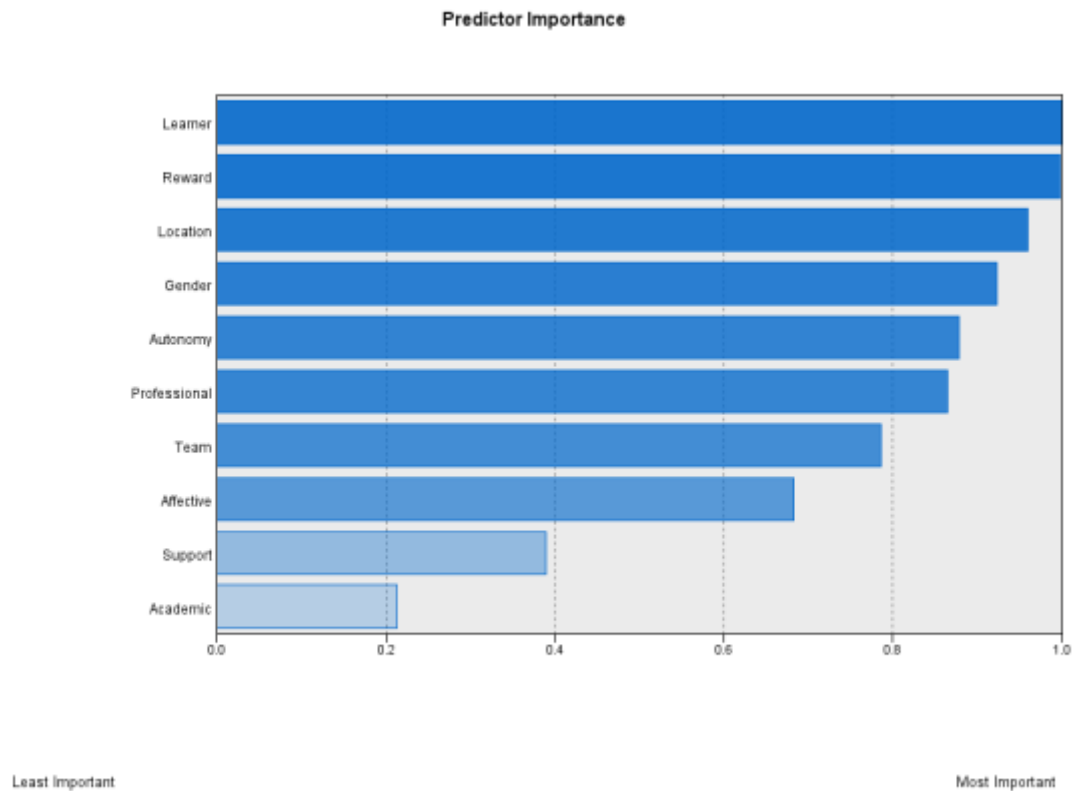
### Clusters

Input (Predictor) Importance  
 1.0 0.8 0.6 0.4 0.2 0.0

Cluster	3	2	1	4
<b>Label</b>				
<b>Description</b>				
<b>Size</b>	26.2% (105)	26.0% (104)	24.5% (98)	23.2% (93)
<b>Inputs</b>	Learner 40.15	Learner 43.95	Learner 39.10	Learner 43.96
	Reward 39.36	Reward 43.72	Reward 38.47	Reward 43.58
	Location urban (72.4%)	Location rural (100.0%)	Location rural (57.1%)	Location urban (100.0%)
	Gender female (100.0%)	Gender male (62.5%)	Gender male (100.0%)	Gender male (59.1%)
	Autonomy 32.10	Autonomy 35.63	Autonomy 30.70	Autonomy 35.75
	Professional 48.00	Professional 51.88	Professional 47.45	Professional 53.20
	Team 31.72	Team 34.32	Team 31.31	Team 35.48
	Affective 52.84	Affective 56.66	Affective 50.88	Affective 58.25
	Support 35.55	Support 37.18	Support 35.09	Support 38.74
	Academic 43.71	Academic 45.15	Academic 43.39	Academic 47.01
	Perception 39.34	Perception 40.69	Perception 39.61	Perception 42.95
	Manager 29.32	Manager 29.88	Manager 28.63	Manager 31.54

Table 3: Formation of 4 clusters





**Figure 3: Predictor Importance for the clusters described in Table 3**

Table 3 represents 4 clusters.

Cluster 3 is the largest cluster (26.2%). This cluster is a female dominated cluster with 100% population. The cluster is formed of urban population of 100%. Gender (100%), Location (72.4%) and Professional (48.0) form the largest dimensions in this cluster, with the lowest being Manager (29.32).

Cluster 2 is the second largest one (26%). This cluster is a male dominated cluster with 62.5% population. The cluster is formed of rural population of 100%. Location (100%), Gender (62.5%), Affective (51.88) form the largest dimensions in this cluster, with the lowest being Manager (29.88).

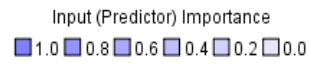
Cluster 1 is the third largest (24.5%). This cluster is a male dominated cluster with 100% population. The cluster is formed of rural population of 57.1%. Gender (100%), Location (72.6%), Affective (50.88) form the largest dimensions in this cluster, with the lowest being Manager (28.63).

Cluster 4 is the smallest one (23.2%). This cluster is a male dominated cluster with 59.1% population. The cluster is formed of urban population of 100%. Location (100%), Gender (72.6%), Affective (58.25) form the largest dimensions in this cluster, with the lowest being Manager (31.54).

From Figure 3, it is clear that Learner, Reward, Location, Gender, Autonomy and Professional become the major predictors of the clusters, while Academic and Support turns to be very low predictors of the clusters mentioned in Table 3. Team and Affective becomes the medium predictors.

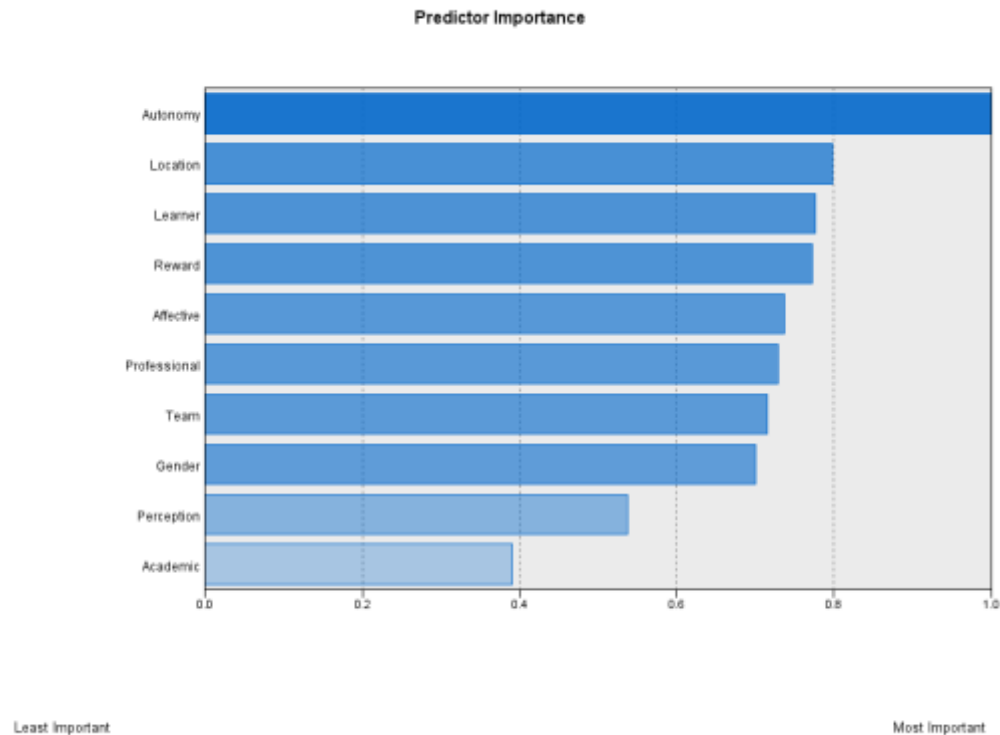
As seen in Figure 3, it can be observed that with the increase in the number of clusters from three to four, Manager does not find a place in the predictors. The high predictors in Figure 1 (Reward, Learner, Professional and Team) and Figure 2 (Reward, Gender, Learner and Professional) reshuffle themselves as Learner, Reward, Location, Gender, Autonomy and Professional to be the high predictors.

### Clusters



Cluster	2	1	5	3	4
<b>Label</b>					
<b>Description</b>					
<b>Size</b>	26.0% (104)	24.5% (98)	22.8% (91)	15.2% (61)	11.5% (46)
<b>Inputs</b>	Autonomy 35.67	Autonomy 30.70	Autonomy 35.68	Autonomy 29.97	Autonomy 35.13
	Location rural (100.0%)	Location rural (57.1%)	Location urban (100.0%)	Location urban (52.5%)	Location urban (100.0%)
	Learner 43.95	Learner 39.10	Learner 43.99	Learner 39.57	Learner 41.02
	Reward 43.68	Reward 38.47	Reward 43.59	Reward 38.57	Reward 40.65
	Affective 56.71	Affective 50.88	Affective 58.20	Affective 50.08	Affective 56.72
	Professional 51.84	Professional 47.45	Professional 53.29	Professional 49.33	Professional 46.39
	Team 34.31	Team 31.31	Team 35.58	Team 32.77	Team 30.33
	Gender male (62.5%)	Gender male (100.0%)	Gender male (60.4%)	Gender female (100.0%)	Gender female (100.0%)
	Perception 40.62	Perception 39.61	Perception 43.02	Perception 42.75	Perception 35.00
	Academic 45.08	Academic 43.39	Academic 47.08	Academic 46.38	Academic 40.37
	Support 37.18	Support 35.09	Support 38.68	Support 35.66	Support 35.67
	Manager 29.90	Manager 28.63	Manager 31.56	Manager 28.61	Manager 30.28

Table 4: Formation of 5 clusters



**Figure 4: Predictor Importance for the clusters described in Table 4**

Table 4 represents 5 clusters.

Cluster 2 is the largest cluster (26.0%). This cluster is a male dominated cluster with 62.5% population. The cluster is formed of rural population of 100%. Location (100%), Gender (62.5%) and Affective (56.71) form the largest dimensions in this cluster, with the lowest being Manager (29.90).

Cluster 1 is the second largest one (24.5%). This cluster is a male dominated cluster with 100% population. The cluster is formed of rural population of 57.1%. Gender (100%), Location (57.1%), Affective (50.88) form the largest dimensions in this cluster, with the lowest being Manager (28.63).

Cluster 5 is the third largest (22.8%). This cluster is a male dominated cluster with 60.4% population. The cluster is formed of urban population of 100%. Location (100%), Gender (60.4%), Professional (53.29) form the largest dimensions in this cluster, with the lowest being Manager (31.56).

Cluster 3 is the fourth largest one (22.8%). This cluster is a female dominated cluster with 100% population. The cluster is formed of urban population of 52.5%. Gender (100%), Location (52.5%), Affective (50.08) form the largest dimensions in this cluster, with the lowest being Manager (30.28).

Cluster 4 is the smallest one (11.5%). This cluster is a female dominated cluster with 100% population. The cluster is formed of urban population of 100%. Location (100%), Gender (100%), Professional (46.39) form the largest dimensions in this cluster, with the lowest being Manager (30.28).

From Figure 4, it is clear that only Autonomy becomes the major predictor of the clusters, while Academic and Perception turns to be very low predictors of the clusters mentioned in Table 3. Location, Learner, Reward, Affective, Professional, Team and Gender become the medium predictors.

As seen in Figure 4, it can be observed that with the increase in the number of clusters from four to five, Manager does not find a place in the predictors.

As seen in Figure 4, it can be observed that with the increase in the number of clusters from three to four, Manager does not find a place in the predictors. The high predictors in Figure 1 (Reward, Learner, Professional and Team), Figure 2 (Reward, Gender, Learner and Professional) Figure 3 (Learner, Reward, Location, Gender, Autonomy and Professional) change themselves and only Autonomy turn to be a high predictor in Figure 4.

**Clusters**

Input (Priority) importance  
 1.0 0.8 0.6 0.4 0.2 0.0

Cluster Label	2	1	3	9	8	10	7	6	5	4	
Size	14.0% (50)	13.2% (53)	12.0% (48)	11.8% (47)	11.0% (44)	9.6% (39)	9.5% (38)	7.8% (31)	7.5% (30)	3.5% (14)	
Inputs	Gender: male (100.0%) Location: rural (100.0%) Autonomy: 35.12 Perception: 42.29 Professional: 51.98	Gender: male (100.0%) Location: rural (100.0%) Autonomy: 29.38 Perception: 39.34 Professional: 46.98	Gender: male (100.0%) Location: urban (100.0%) Autonomy: 32.42 Perception: 40.56 Professional: 48.88	Gender: male (100.0%) Location: urban (100.0%) Autonomy: 35.40 Perception: 43.26 Professional: 53.43	Gender: female (100.0%) Location: urban (100.0%) Autonomy: 35.07 Perception: 34.80 Professional: 40.26	Gender: female (100.0%) Location: urban (100.0%) Autonomy: 36.35 Perception: 42.29 Professional: 53.21	Gender: female (100.0%) Location: rural (100.0%) Autonomy: 35.92 Perception: 41.16 Professional: 53.39	Gender: female (100.0%) Location: urban (100.0%) Autonomy: 29.81 Perception: 43.13 Professional: 49.98	Gender: female (100.0%) Location: rural (100.0%) Autonomy: 36.13 Perception: 42.13 Professional: 48.97	Gender: male (100.0%) Location: rural (89.2%) Autonomy: 38.57 Perception: 31.50 Professional: 49.36	Gender: male (100.0%) Location: rural (29.30) Team: 29.30 Affective: 51.50 Academic: 38.43
Manager	30.88	29.38	29.74	29.51	28.39	30.24	29.18	29.03	30.30	28.14	
Support	27.11	24.38	30.44	35.08	29.00	38.14	36.19	35.71	35.40	37.30	
Learning	43.99	38.83	39.20	44.23	40.00	44.23	43.00	39.42	38.83	44.14	
Reward	43.99	38.11	38.90	43.72	40.50	44.00	43.11	38.50	38.77	43.14	
Academic	46.99	42.45	44.98	47.40	40.23	46.77	45.18	46.71	45.73	46.43	
Affective	57.25	49.43	52.46	58.62	68.73	68.21	65.84	50.00	50.07	51.50	
Team	34.62	31.02	32.30	35.49	30.23	35.69	35.10	33.03	32.37	29.30	
Professional	51.98	46.98	48.88	53.43	40.26	53.21	53.39	49.98	48.97	49.36	
Perception	42.29	39.34	40.56	43.26	34.80	42.29	41.16	43.13	42.13	31.50	
Autonomy	35.12	29.38	32.42	35.40	35.07	36.35	35.92	29.81	36.13	38.57	
Location	rural (100.0%)	rural (100.0%)	urban (100.0%)	urban (100.0%)	urban (100.0%)	urban (100.0%)	rural (100.0%)	urban (100.0%)	rural (100.0%)	rural (89.2%)	

Table 5: Formation of 10 clusters

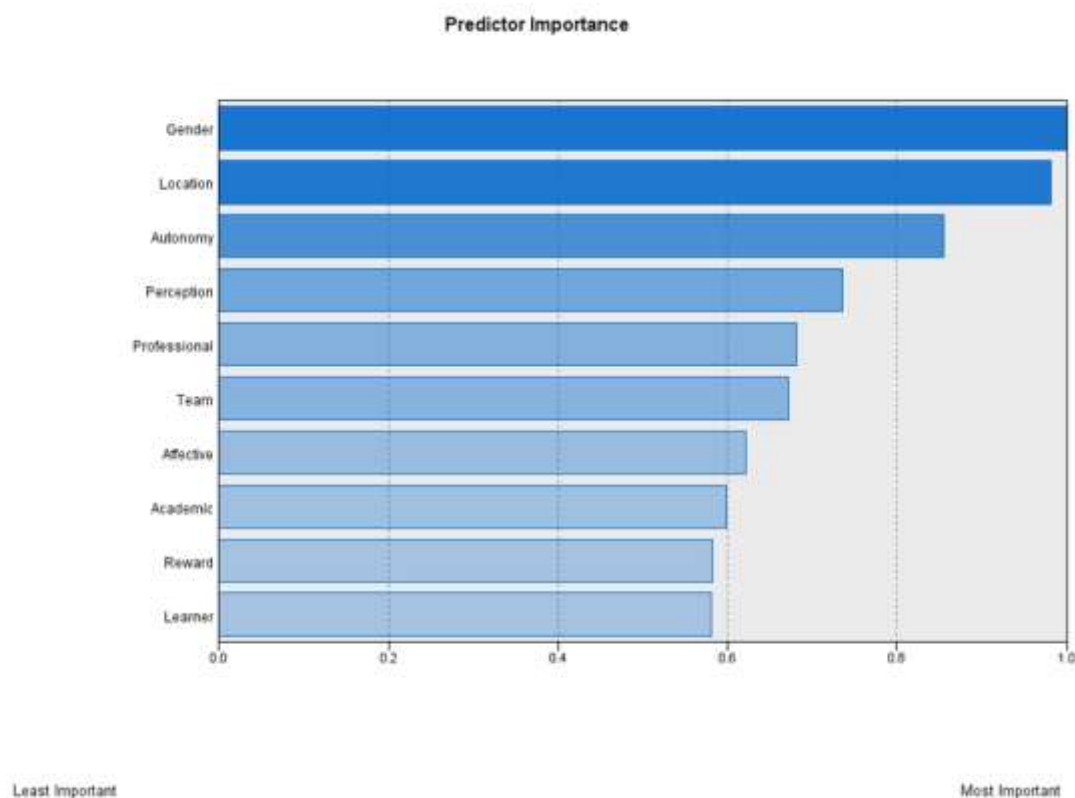


Figure 5: Predictor Importance for the clusters described in Table 5

Table 5 represents 10 clusters.

Cluster 2 is the largest cluster (14.0%). This cluster is a male dominated cluster with 100% population. The cluster is formed of rural population of 100%. Location (100%), Gender (100%) and Affective (57.25) form the largest dimensions in this cluster, with the lowest being Manager (30.68).

Cluster 4 is the smallest one (3.5%). This cluster is a male dominated cluster with 100% population. The cluster is formed of rural population of 85.7%. Gender (100%), Location (57.1%), Affective (57.05) form the largest dimensions in this cluster, with the lowest being Manager (29.64).

Clusters formed of Gender with representations like Cluster 1 (100% Male), Cluster 2 (100% Male), Cluster 3 (100% Male), Cluster 4 (100% Male), Cluster 5 (100% Female), Cluster 6 (100% Female), Cluster 7 (100% Female), Cluster 8 (100% Female), Cluster 9 (100% Male), Cluster 10 (100% Female).

Location form similar nature with representations like Cluster 1 (100% Rural), Cluster 2 (100% Rural), Cluster 3 (100% Urban), Cluster 4 (85.7% Rural), Cluster 5 (100% Rural), Cluster 6 (100% Urban), Cluster 7 (100% Rural), Cluster 8 (100% Urban), Cluster 9 (100% Urban), Cluster 10 (100% Urban).

From Figure 5, it is clear that Gender, Location and Autonomy become the three major predictors of the clusters, while Academic, Reward and Learner turns to be very low predictors of the clusters mentioned in Table 3. Perception, Professional, Team and Affective become the medium predictors.

As seen in Figure 4, it can be observed that with the increase in the number of clusters from three to four, Manager does not find a place in the predictors. The high predictors in Figure 1 (Reward, Learner, Professional and Team), Figure 2 (Reward, Gender, Learner and Professional), Figure 3 (Learner, Reward, Location, Gender, Autonomy and Professional), Figure 4 (Autonomy) change themselves and Gender, Location and Autonomy become the highest predictors in Figure 5.

## Conclusion

The social information process that determines organisational climate takes into account the significance that employees attribute to the rules, customs, and practises they come across as well as the actions they see being encouraged, supported, and expected. In understanding particular important outcomes, organisational climate research with a focus on a strategically relevant outcome and/or process performs better than general climate research with no focus. Both the survey items created to capture climate and the statistical techniques used to support such aggregation enable the collection of opinions on climate into higher levels of analysis. It has been discovered that the relationship between climate aggregate means and desired results is frequently moderated by climate strength, which is defined as the degree to which people in a unit agree on their perceptions. the psychological ties a person has to

the business, their sense of involvement at work, their loyalty, and their commitment to the company's values. Employees' acceptance of organisational aims and their willingness to do their absolute best while abiding by the organization's customs and methods of doing things, according to the researcher, can be summarised as organisational commitment.

Gender and Location have formed major clusters in the research work. It is observed that with the increase in the number of clusters the Gender and Location tend to club themselves into single clusters. For example, Table 1 consists of 2 Clusters with Gender 50.2% (Female) and 59.6% (Male) respectively. With the increase of the number of clusters, as we can see in Figure 5, one single cluster is made up of gender and location. Table 5 consists of 10 clusters with Gender 100% (Female) for 5 clusters and Gender 100% (Male) for the other 5 clusters. With the increase in number of clusters the importance of the predictors Gender, Location and Autonomy increase which can be seen in Figure 1 to Figure 5. Therefore, it can be concluded that Male teachers in rural areas, male teachers in urban areas, female teachers in rural areas and female teachers in urban areas form similar views regarding institutional commitment and organizational climate.

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