

# **Bangladesh Law and Order Situation: Clustering-Based Discriminant Analysis**

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## **ABSTRACT**

*In this paper an attempt has been made to analyze people's perception about law and order situation and law enforcing bodies in Bangladesh in the framework of **Clustering-based Discriminant analysis** in addition to descriptive analysis. Interesting outcomes have emerged from the study which are useful for policy makers. Thus, some policy implications have also been provided herein.*

**Keywords:** Law and Order, Clustering and Discriminant Analysis

## **INTRODUCTION**

The Police of Bangladesh has a glorious involvement in the struggle of freedom in 1971. Many police personnel embraced martyrdom after fighting bravely during the war of independence. In the independent Bangladesh, the police force was reorganized with a program of introducing new discipline, increasing more number of police force and recruiting women staff, etc. Henceforth, along with other law enforcing agencies the police force has been carrying out the duties of enforcing law, maintaining law and order, protecting human life rights, and the civilian assets, etc. In order to bring revitalization in this force, committees were formed in 1977 and 1986 for seeking expert opinions on the agenda. Some of the recommendations were implemented, while a host of recommendations were still on the desk. Like all other countries of the world, people of Bangladesh also expect and trust that the police will play the roles of a social regulator directed by the laws of the country and a custodian of social discipline.

In preparing a comprehensive plan for the development programs of the Bangladesh police force, an intensive report is required with the assessment of its accountability to the citizen of the country as the prime law enforcing agency.

Hence the need of assessing community perception about the performance of police force has arisen. Corollary to this assessment, the awareness of the community regarding the incidences of crimes, their types, causes and effects of the criminal activities in the locality, etc need to be studied. Additionally, the issue of the community participation in prevention of crime is also associated with the study objectives. In line with this objective a baseline survey on people's perception was conducted in 2008. Present paper has been prepared using that survey data.

### **Rationale of the Present Research**

A data set can be analyzed from different view points. A lucid analysis of an obtained data set requires sound analysis tools. For the given data set there are several segments some of which fit some specific multivariate tools. One segment of the given data set bears distinctly differentiated groups of respondents. Hence, it necessitates a tool which can befittingly identify factors which contribute to form distinctive groups. One such elegant tool is Discriminant Analysis (DA) and it has been adopted for the present research paper. Such an approach when adopted for a homogenous group of agents renders better insight of a phenomenon. These homogenous groups can be obtained through Cluster Analysis. Thus, clustering-based DA has been adopted for the present research in order to have more reliable findings.

### **Objective of the Study**

The primary objective of the police perception survey was to gain current information about the general population's perception about the police in their local area and to get the opinions of the general populace on what could improve the image of the police.

The Principal purpose of the present research is to adopt a sophisticated multivariate statistical tool namely, Cluster-based Discriminant Analysis, to identify and analyze factors which make distinctly different groups of respondents with respect to some specific issues.

### **Plan of the Paper**

Section 2 provides a conceptual frame of tools used for the study. While section 3 contains data description section 4 bears study results and analysis. Section 5 provides concluding remarks accompanied by some policy implications.

## CONCEPTUAL FRAMEWORK

This section presents a brief account of the tools used for analysis namely, Discriminant analysis and Cluster analysis.

Based on the questions posed to respondents, some groups among them have naturally emerged. For example, in response to a question whether law enforcing agencies should be informed about incidences of criminal activities, two broad groups of respondents appeared. Such grouping is definitely related to perceptions, understanding, attitudes towards law enforcing agencies etc. Similarly, such groups have also emerged in response to questions like people should come forward in combating social crimes. Thus, there is the need for analyzing groups differentiating factors. For applying Discriminant Analysis following groupings are considered.

**Issue 1:** It is a public duty to inform police about social crimes.

YES = 1    NO = 2

**Issue 2:** Society as a whole should participate in combating social crime.

YES= 1    NO = 2

### Discriminant Analysis (DA)

On the basis of a set of independent variables the researches include individuals or objects into groups (two or more). They need one nominal variable and a set of independent variables. They basically predict likelihood of an object to belong to a particular group based on information of several input variables. Linear combinations of continuously scaled variables derived from measurements made on groups of subjects form the basis of discriminant analysis.

A vector is defined so that it represents the variables for each group and thus separation between groups is maximized. These variables are known as discriminating variables. They use the set of variables to produce weighted linear combination from which they determine which variables spectacularly distinguish groups one from another.

### Linear Discriminant Function

A nominally scaled or criterion variable with one or more explanatory (independent) variables are joined together to form a linear function. Such function can be used to classify an individual into one group or another.

Suppose there are  $p$  independent discriminating variables. They form a linear function as  $D_i = d_0 + d_1X_1 + d_2X_2 + \dots + d_pX_p$ . Here  $d_i$  s are weighting Coefficients.

Let  $D^*$  is the critical value of  $D$ .

**Classification procedure can be as follows.**

If  $D_i \geq D^*$ , individual falls in category I.

If  $D_i < D^*$ , individual falls in category II.

For  $n=2$  there maybe a straight line demarcation. Discriminant analysis attempts to define the line which maximally separates groups. For  $n$ -dimensional space, they have  $n-1$  dimensional hyper plane.

### **Discriminant Loading**

Values of correlation between variables and discriminant score are termed as loadings. For assessing relative importance of variables in discriminating between groups one may use any of three means namely,

1. Mean difference of groups on each variable
2. Standardized Discriminant Function (DF) coefficients
3. Discriminant loadings

However, as long as multicollinearity is not acute; any one of the above three may serve the purpose quite well. In case of severe multicollinearity, same caveats as with regression have to be taken care of. The authors consider first two criteria for the present work.

For assessing statistical significance Mohalanobi  $D^2$  (Distance between two groups) is used. Variance-Covariance structure is assumed to be identical for both groups and each group is characterized by same set of variables.

$$D^2 = (U_1 - U_2)' V^{-1} (U_1 - U_2) \quad \text{Where,}$$

$U_1$  = Mean vector of group I,  $U_2$  = Mean vector of group II.

$V$  = Common Co-Variance matrix.

$D^2$  is distributed as F-statistic which can be used to test the significance of difference between groups.

They (the authors) then compute F ratio as follows:

$$F = \frac{n_1 n_2 (n_1 + n_2 - m - 1)}{m(n_1 + n_2)(n_1 + n_2 - 2)} D^2$$

Where  $n_1$  = number of individuals in group 1

Where  $n_2$  = number of individuals in group 2

Where  $m$  = number of independent variables

### Cluster Analysis

In discriminate analysis there are a priori groups and we try to understand which variables make the group differences. In cluster analysis groups are formed posteriori. Clustering is a tool of discovering hidden underlying data structure which would otherwise remain dormant and unattended; it is a device of uncovering homogeneous groups of objects that may exist in the data set. In other words, by cluster analysis one may identify the regularities. Structures and relations in the data which provide a parsimonious description and improved organization of the data from new perspectives, clustering is an art of exploratory data analysis. Some people term it as data “snooping”. The possible structure of multidimensional data are not apparent and cannot be interpreted immediately, Data structuring by some procedure is necessary and cluster analysis is one such efficient procedure. The chief attraction of clustering (hierarchical) is that boundaries of clusters are not prespecified but are derived according to the patterns in the measurement space.

Households having identical demographic profiles are supposed to have the similar demand structure. It is true that extra expenditure allocation supposedly varies among types of consumers. Individuals from a similar environment are supposed to have similar tastes and preferences. Individuals are interested in the attributes of the consumption items and they do differ in their reactions to different attributes of the same good. The existence of the differences in interest and emphasis of different people leads to the differences in importance of various properties of an item. In line with Lancaster (1966, 1971), if one maps the goods space to the attribute space, one can have vertex optima, facet optima and edge optima. Thus, Cluster analysis helps identify groups of alike elements. Several methods are available. One is given here.

### **Dissimilarity of Distance Measure**

General formula for distance measure is n-dimensional Euclidean distance measure as given below:

$$D_{ij} = \sqrt{\left[ \sum_{k=1}^n (X_{ik} - X_{jk})^2 \right]}$$

Where,

k = number of variables,  $X_{ik}$  = Co-ordinate of point i along axis k

$X_{jk}$  = Co-ordinate of point j along axis k

### **Selection of Clustering Methods**

The present authors are interested in homogeneous clusters which indicate high internal coherence and external nonoccurrence. Thus, they need an appropriate clustering method which can provide us with more homogeneous clusters of consumers. They believe that a hierarchical clustering method is a suitable candidate for such purpose. This procedure has the advantage and attraction that it does not need a prespecified distance between objects to be clustered as is necessary in a non-hierarchical clustering procedure.

Now, Average Linkage and Centered methods are easily manageable computationally by using algorithm (s) in existing package like SAS. So, they have decided to use these two methods for the purpose and have used the algorithm available in the SAS package. Both the methods have provided two broad clusters and they have kept those two clusters provided by Average Linkage Method. Within each cluster as well as for whole sample they have adopted DA.

### **DATA DESCRIPTION**

Information used for the research was taken from a study conducted on police perception in Bangladesh in 2008. The first author of the paper was a member of the study team. A random sample of 3500 respondents at household level using stratified random sampling procedure was selected for face-to-face interview. Here strata comprise rural-urban area. The study was conducted in Chittagoing and Rajshahi divisions for which a representative sample size was determined. A semi-structured questionnaire based on over 35 variables (social, economic, demographic, perceptual, attitudinal) was developed, pre-tested and

administered for collecting household level data. Gender balance was maintained while covering respondents of adolescents over 18 years and above from various professional groups.

Among discriminating variables major ones are personal characteristics like age, sex, education profession, reasons behind putting different opinions like yes, no, attitudes towards law and order situation, level of trust on law enforcing agencies, social implications of crimes.

## STUDY RESULTS AND ANALYSIS

At the outset, the study presents a brief background characterization of respondents followed by some descriptive analysis of survey outcomes.

In the study area of two divisions namely, Chittagong & Rajshahi about 54% respondents are males with over 44% of both rural and urban respondents being in the age group 18-29 years. While over 60% of both rural and urban respondents have education between primary to HSC, majority are from miscellaneous professional group like boatmen, public servants, doctors, lawyers, shop owners, petty businessmen, fishermen and teachers. About 19% of the respondents have completed university education.

In response to a question regarding current country situation majority of study respondents (over 60%) feel that the country is running alright. Of those who are against, 44%, opine that the country is running in wrong path because of price hike, 14% consider corruptions and 11% identify inflation to be the reasons. Although majority of respondents feel good and somewhat good about law and order situation in the country, some portion think bad about it. Mostly hijacking, theft, robbery, land litigation and police harassment are the incidences faced in personal life of respondents. Over 50% respondents seem to have good notion about law enforcing bodies, substantial fraction (41%) keep opposite view. Among Army, RAB and Police, Army is considered to be the most favorite and reliable and second best is RAB.

Most frequently occurring criminal incidences in own localities of respondents are stealing, hijacking, terrorism, addiction and prostitution. Respondents appear to be highly concerned about social implications of drug activities. According to them young generation is being degraded and total society faces the challenges of destruction. However, a notable portion of respondents feel that some vested interest, particularly of some ones of law enforcing bodies, bear links with drug related activities. Even they assert that there is no guarantee to trust police. Thus, respondents very seriously feel that social agents collectively should come forward to participate in combating social

crimes. There are various types of social crimes that occur in the society and a whole mixture of perceptions as well as attitudes about different issues like law and order situation, Law enforcing bodies and their role, Trust on law enforcing agencies, role of social agents etc exists. So, it seems important to identify which factor plays which role in creating differences. In this respect DA is an useful tool to identify factors which play role in forming groups having opposite views.

It has been noticed that diversities in opinions regarding various issue generated distinctly different groups. Thus, DA has been picked up as an analysis tool for appropriate analysis. It has been attempted to form homogeneous groups of respondents adopting cluster analysis tool (hierarchical average linkage method). Clustering tool made two broad clusters. So, the authors have adopted DA tools cluster wise (for alike elements) as well as for whole sample. They present DA results separately as follows. At first they present DA results for the whole sample followed by cluster wise results. This will enable someone to understand the importance of factors better.

### **DA Results for Whole Sample**

The study presents discriminant analysis (DA) results by indicators as mentioned before.

Independent Variables used are given below:

Age ( $X_1$ ), Education Level ( $X_2$ ), Profession ( $X_3$ ), Idea about Law and Order Situation ( $X_4$ ), Link of Law Enforcing Agencies with Drug Trafficking ( $X_5$ ), Types of People involved in drug Trafficking ( $X_6$ ), Level of trust on RAB ( $X_7$ ), Level of trust on ARMY ( $X_8$ ), Level of trust on POLICE ( $X_9$ ), Social Impact of terrorism ( $X_{10}$ ).

#### *First Discriminating Issue*

Group 1: Law enforcing bodies should be informed about any incidence of social crimes (n=2961)

Group 2: Law enforcing bodies should not be informed about any incidence of social crimes (n=539)

Table I. Wilks' Lambda

| Test of Function(s) | Wilks' Lambda | Chi-square | df | Sig |
|---------------------|---------------|------------|----|-----|
| 1 through 2         | 0.866         | 500.056    | 57 | 0   |
| 2                   | 0.974         | 91.219     | 36 | 0   |

*Discriminant Function (DF)*

$$y = -0.017X_1 + 0.007X_2 + 0.047X_3 + 0.197X_4 + 0.195X_5 + 0.15X_6 + 0.517X_7 + 0.189X_8 + 0.215X_9 + 0.118X_{10}$$

In order to verify degree of separation between groups one may apply Wilks'  $\lambda$ . It is related to likelihood ratio criterion and can be conveniently used to test equality of group means. Bartlett has shown that under the null hypothesis of equal group means, Wilks'  $\lambda$  can be shown to follow chi-square distribution. Besides this, depending on the number of variables and number of groups, F distribution can also be used to test group mean differences. Results presented above show that Wilks' Lambda is highly significant and this indicates a sharply distinct groups have been formed. For the DF of "should inform police about criminal activities", several factors have emerged to be important. Expectedly these factors may prompt some one to opt for informing police about criminal activities. It shows that education level of respondent appears to be the least important although positive. It means irrespective of educational status, people have positive attitude towards informing police. Most important is the positive effect of attitude towards trust on RAB. It is clear that respondents feel for the betterment of the society and they also consider that people's faith in RAB is important in resisting social crimes is important. People are concerned about law and order situation as well as link of law enforcing agencies with drug trafficking. Perception about link of law enforcing agencies with drug trafficking appears to be positive and important. For group one, they ideally think any sort of criminal activity should be informed although they posit the view that there is link of law enforcing agencies with drug trafficking. Respondents of the second group appear to be avert to informing law enforcing bodies. Probably they perceive it to be fruitless and they possess negative attitude towards law enforcing agencies. Variable age has negative and small impact in distinguishing two groups. Whatever maybe the law, its stringent adoption is positively needed. People's perception about social impact of terrorism keeps positive relation in forming groups. Among personal characteristics profession keeps more effect in forming groups.

*Table II. Basic Statistics of First Discriminant Issue*

| Variables                                       | G1    |        | G2    |        |
|-------------------------------------------------|-------|--------|-------|--------|
|                                                 | Mean  | St dev | Mean  | St dev |
| Age (X <sub>1</sub> )                           | 34.3  | 1.633  | 31.1  | 1.668  |
| Education Level (X <sub>2</sub> )               | 4.25  | 3.531  | 4.23  | 6.134  |
| Profession (X <sub>3</sub> )                    | 43.91 | 46.164 | 42.63 | 40.930 |
| Law and Order Situation (X <sub>4</sub> )       | 3.93  | 4.046  | 3.28  | 1.282  |
| Linking with Drug Trafficking (X <sub>5</sub> ) | 13.58 | 32.024 | 12.06 | 30.463 |
| Types of People (X <sub>6</sub> )               | 13.23 | 28.594 | 11.46 | 26.380 |
| Level of trust on-RAB (X <sub>7</sub> )         | 1.20  | 4.363  | 1.94  | 9.465  |
| Level of trust –on Army (X <sub>8</sub> )       | 4.01  | 2.93   | 3.11  | 4.95   |
| Level of trust –on POLICE (X <sub>9</sub> )     | 1.96  | 0.18   | 1.21  | 2.01   |
| Social Impact of Terrorism (X <sub>10</sub> )   | 3.11  | 1.96   | 2.09  | 1.79   |

*Second Discriminating Issue*

Group 1: Society as a whole should participate in combating social crimes. (n=3172)

Group 2: Society as a whole should not participate in combating social crimes. (n=328)

*Table III. Wilks' Lambda*

| Test of Function(s) | Wilks' Lambda | Chi-square | df | Sig   |
|---------------------|---------------|------------|----|-------|
| 1 through 2         | 0.853         | 553.401    | 38 | 0     |
| 2                   | 0.992         | 27.613     | 18 | 0.068 |

*Discriminant Function*

$$y = 0.004X_1 + 0.077X_2 + 0.086X_3 + 0.121X_4 + 0.196X_5 + 0.165X_6 + 0.563X_7 + 0.067X_8 + 0.029X_9 + 0.137X_{10}$$

For combating social crimes respondents appear to form two broad groups with regard to perception about people's participation. DF appears to differ significantly. This is clear from Wilks' Lambda test result as well as from coefficients. For distinguishing between groups all factors keep positive impact. For example, respondents consider social impact of terrorism to be positive and important. Respondents are very seriously concerned about bad impacts of

terrorism on the society. About one thing researchers need to be clear that something may not equally acceptable to all. But as long as majority accept it. They do not have to bother. Similarly, link of law enforcing agencies with drug trafficking is considered to be important. Low level of trust in law enforcing agencies creates stimulus among people to come forward to combat social crime. This trust factor keeps positive impact in distinguishing between groups. In this case also social impact of terrorism appears to be a very positive and important factor in distinguishing between two groups. In this case also professional status of respondents has more effect on forming groups.

*Table IV. Basic Statistics of Second Discriminant Issue*

| Variables                                       | G1    |        | G2    |        |
|-------------------------------------------------|-------|--------|-------|--------|
|                                                 | Mean  | St dev | Mean  | St dev |
| Age (X <sub>1</sub> )                           | 30.4  | 1.638  | 28.4  | 1.462  |
| Education Level (X <sub>2</sub> )               | 4.45  | 4.039  | 4.31  | 1.942  |
| Profession (X <sub>3</sub> )                    | 43.63 | 46.117 | 42.09 | 46.565 |
| Law and Order Situation (X <sub>4</sub> )       | 2.99  | 3.780  | 2.66  | 1.035  |
| Linking with Drug Trafficking (X <sub>5</sub> ) | 33.36 | 31.810 | 22.41 | 40.719 |
| Types of People (X <sub>6</sub> )               | 12.81 | 28.081 | 24.63 | 40.179 |
| Level of trust-on RAB (X <sub>7</sub> )         | 3.61  | 3.07   | 3.14  | 1.01   |
| Level of trust -on Army (X <sub>8</sub> )       | 3.14  | 2.11   | 2.79  | 2.01   |
| Level of trust -on POLICE (X <sub>9</sub> )     | 1.69  | 0.99   | 1.15  | 1.01   |
| Social Impact of Terrorism (X <sub>10</sub> )   | 3.11  | 1.79   | 2.05  | 1.07   |

### DA Results by Clusters

DA has been performed after forming homogeneous groups using hierarchical clustering technique. Two large clusters with  $n_1=2135$ ,  $n_2=1290$  observations were formed. A third cluster with 75 respondents was also formed and it has been ignored. Then, within each cluster we have adopted DA and such results are produced herein.

### DA Result for Cluster 1

#### *First Discriminating Issue*

Group 1: Law enforcing bodies should be informed about any incidence of social crimes

Group 2: Law enforcing bodies should not be informed about any incidence of social crimes

*Table V: Wilks' Lambda*

| Test of<br>Function(s) | Wilks' Lambda | Chi-square | df | Sig |
|------------------------|---------------|------------|----|-----|
| 1 through 2            | 0.866         | 500.056    | 57 | 0   |
| 2                      | 0.974         | 91.219     | 36 | 0   |

*Discriminant Function*

$$y = -0.017X_1 + 0.012X_2 + 0.046X_3 + 0.197X_4 + 0.195X_5 + 0.15X_6 + 0.517X_7 + 0.014X_8 + .123X_9 + .209X_{10}$$

From the results presented in the above table, it is evident that Wilks' Lambda is highly significant and this indicates a sharply distinct groups have been formed. For the DF, several factors have emerged to be important. It shows that education level of respondent appears to be the least important although positive. It means irrespective of educational status, people have positive attitude towards informing police. Like whole sample results, DA results in cluster show positive impact of education level and in this case effect of education is much more. Idea about law and order situation keeps much more positive impact in cluster I compared to that in whole sample. In cluster I respondents appear to be very heavily concerned about social impact of terrorism. Like whole sample, in cluster I also level of trust on law enforcing agencies bear positive impact.

*Table VI. Basic Statistics of First Discriminant Issue*

| Variables                                       | G1    |        | G2    |        |
|-------------------------------------------------|-------|--------|-------|--------|
|                                                 | Mean  | St dev | Mean  | St dev |
| Age (X <sub>1</sub> )                           | 32.4  | 1.615  | 37.1  | 1.812  |
| Education Level (X <sub>2</sub> )               | 4.53  | 1.877  | 4.32  | 1.962  |
| Profession (X <sub>3</sub> )                    | 40.80 | 45.853 | 44.91 | 46.617 |
| Law and Order Situation (X <sub>4</sub> )       | 2.97  | 1.194  | 3.56  | 1.337  |
| Linking with Drug Trafficking (X <sub>5</sub> ) | 5.68  | 20.392 | 1.12  | 0.329  |
| Types of People (X <sub>6</sub> )               | 10.07 | 24.566 | 6.27  | 16.777 |
| Level of trust-on RAB (X <sub>7</sub> )         | 1.39  | 6.028  | 1.00  | 0.000  |
| Level of trust-on Army (X <sub>8</sub> )        | 3.89  | 2.61   | 1.97  | 0.005  |
| Level of trust-on POLICE (X <sub>9</sub> )      | 1.96  | 1.01   | 1.27  | 0.09   |
| Social Impact of Terrorism (X <sub>10</sub> )   | 3.11  | 1.22   | 2.61  | 1.01   |

*Second Discriminating Issue*

Group 1: Society as a whole should participate in combating social crimes.

Group 2: Society as a whole should not participate in combating social crimes.

*Discriminant Function*

$$y = -0.019X_1 - 0.071X_2 - .012X_3 + 0.133X_4 + 0.235X_5 + 0.118X_6 + 0.432X_7 + 0.019X_8 + .211X_9 + 0.012X_{10}$$

With respect to second discriminating issue, there are several factors like idea about law and order situation, link with drug trafficking, types of people involved in crimes, level of trust on law enforcing agencies, social implications of crimes bear positive impact on the likelihood of a respondent to fall in the group which favors people's participation in combating social crimes.

*Table VII. Basic Statistics of Second Discriminant Issue*

| Variables                                       | G1    |        | G2    |        |
|-------------------------------------------------|-------|--------|-------|--------|
|                                                 | Mean  | St dev | Mean  | St dev |
| Age (X <sub>1</sub> )                           | 33.3  | 1.664  | 23.3  | 1.528  |
| Education Level (X <sub>2</sub> )               | 4.47  | 1.886  | 5.33  | 2.887  |
| Profession (X <sub>3</sub> )                    | 41.77 | 45.977 | 35.00 | 33.731 |
| Law and Order Situation (X <sub>4</sub> )       | 3.10  | 1.244  | 2.00  | 0.000  |
| Linking with Drug Trafficking (X <sub>5</sub> ) | 4.76  | 18.318 | 1.33  | 0.577  |
| Types of People (X <sub>6</sub> )               | 8.76  | 22.157 | 34.33 | 56.003 |
| Social impact of Terrorism (X <sub>7</sub> )    | 3.50  | 9.332  | 2.33  | 2.309  |
| Level of trust_RAB (X <sub>8</sub> )            | 3.37  | 13.062 | 2.33  | 1.528  |
| Level of trust_ARMY (X <sub>9</sub> )           | 1.48  | 0.670  | 1.00  | 0.000  |
| Level of trust_POLICE (X <sub>10</sub> )        | 2.92  | 0.938  | 3.00  | 1.000  |

**DA Results for Cluster 2**

Group 1: Law enforcing bodies should be informed about any incidence of social crimes

Group 2: Law enforcing bodies should not be informed about any incidence of social crimes

*Table VIII. Wilks' Lambda*

| Test of Function(s) | Wilks' Lambda | Chi-square | df | Sig   |
|---------------------|---------------|------------|----|-------|
| 1 through 2         | 0.853         | 553.401    | 38 | 0     |
| 2                   | 0.992         | 27.613     | 18 | 0.068 |

*Discriminant Function*

$$y = 0.004X_1 + 0.077X_2 + 0.066X_3 + 0.121X_4 + 0.196X_5 + 0.165X_6 + 0.563X_7 + 0.067X_8 - 0.019X_9 - 0.137X_{10}$$

DF group difference appears to differ significantly. This is clear from Wilks' Lambda test result. For being in favorable group 7 factors keep positive impact and 3 factors keep negative impact, Respondents consider social impact of terrorism to be positive and important.

Similarly, link of law enforcing agencies with drug trafficking is considered to be important by group 1. Most important is law and order situation. Poor trust in police keeps negative impact on the likelihood of a respondent to belong to the group which favors informing police about incidences.

*Table IX. Basic Statistics of First Discriminant Issue*

| Variables                                       | G1    |        | G2    |        |
|-------------------------------------------------|-------|--------|-------|--------|
|                                                 | Mean  | St dev | Mean  | St dev |
| Age (X <sub>1</sub> )                           | 32.4  | 1.615  | 37.1  | 1.812  |
| Education Level (X <sub>2</sub> )               | 4.53  | 1.877  | 4.32  | 1.962  |
| Profession (X <sub>3</sub> )                    | 40.80 | 45.853 | 44.91 | 41.617 |
| Law and Order Situation (X <sub>4</sub> )       | 2.97  | 1.194  | 3.56  | 1.337  |
| Linking with Drug Trafficking (X <sub>5</sub> ) | 5.68  | 20.392 | 1.12  | 0.329  |
| Types of People (X <sub>6</sub> )               | 10.07 | 24.566 | 6.27  | 16.777 |
| Level of trust-on RAB (X <sub>7</sub> )         | 1.39  | 6.028  | 1.00  | 0.000  |
| Level of trust-on Army (X <sub>8</sub> )        | 3.17  | 1.96   | 2.11  | 0.067  |
| Level of trust-on POLICE (X <sub>9</sub> )      | 1.98  | 1.01   | 1.35  | 0.018  |
| Social Impact of Terrorism (X <sub>10</sub> )   | 3.10  | 1.02   | 2.97  | 1.06   |

*Second Discriminating Issue*

Group 1: Society as a whole should participate in combating social crimes.

Group 2: Society as a whole should not participate in combating social crimes.

*Discriminant Function*

$$y = -0.015X_1 - 0.061X_2 - 0.013X_3 + 0.143X_4 + 0.255X_5 + 0.128X_6 + 0.332X_7 + 0.029X_8 + 0.021X_9 + 0.032X_{10}$$

*Table X. Basic Statistics of Second Discriminant Issue*

| Variables                                       | G1    |        | G2    |        |
|-------------------------------------------------|-------|--------|-------|--------|
|                                                 | Mean  | St dev | Mean  | St dev |
| Age (X <sub>1</sub> )                           | 23.3  | 1.664  | 33.7  | 1.528  |
| Education Level (X <sub>2</sub> )               | 5.47  | 1.886  | 3.33  | 2.887  |
| Profession (X <sub>3</sub> )                    | 47.77 | 4.977  | 35.00 | 5.731  |
| Law and Order Situation (X <sub>4</sub> )       | 2.10  | 1.244  | 2.20  | 0.000  |
| Linking with Drug Trafficking (X <sub>5</sub> ) | 3.76  | 18.318 | 2.33  | 0.577  |
| Types of People (X <sub>6</sub> )               | 9.76  | 2.157  | 0.33  | 0.003  |
| Level of trust RAB (X <sub>7</sub> )            | 2.37  | 13.062 | 12.33 | 1.528  |
| Level of trust ARMY (X <sub>8</sub> )           | 1.68  | 0.670  | 1.50  | 0.000  |
| Level of trust POLICE (X <sub>9</sub> )         | 2.90  | 0.938  | 3.10  | 1.000  |
| Social impact of Terrorism (X <sub>7</sub> )    | 2.50  | 9.332  | 2.33  | 2.309  |

Trust on RAB is the most important factor which keeps positive impact on the likelihood of a respondent to favor social participation is combating social crimes. In fact trust level on law enforcing agencies bears positive impact on the likelihood of favoring social mobilization against social crimes. Second such factor is the perception that some section of law enforcing agencies keeps links with drug trafficking. It is also clear that serious social impact of terrorism perceived by respondents.

## CONCLUSION AND POLICY IMPLICATIONS

In the present paper an attempt has been made to make an analysis of people's perceptions about law and order situation as well as about law enforcing agencies. As an analysis tool we have used 2-group based Discriminant Analysis in addition to descriptive analysis. From study results interesting policy implications have emerged. People appear to have alarming notion about law enforcing agencies. People of different age groups, different professional groups having different educational attainment posit very thin level of trust in police. People are also of the opinion that weak administration and loose law enforcement causes deterioration of law and order situation. Thus, people feel that society as a whole should come forward to combat social crimes. Moreover, people also posit the perception that some sections of law enforcing agencies bear link with drug trafficking which in turn bears links with terrorist's activities. Present analysis results clearly provide indication that more and more stringent adoption of law for combating social crimes is very much

vital. Besides, common mass should be motivated to form locally operational resistance against social criminal activities.

As a gist it can be said that analysis of results of both whole sample as well as cluster wise sample indicate the followings. (i) various types of serious crimes exist in the society (ii) people are not happy enough with law enforcing bodies (iii) community should be motivated to collectively come forward to resist antisocial activity (iv) law enforcing bodies should be more dependable for taking stern and tough action against social crimes. Thus, police options should be based on such findings. Such policies maybe (1) to generate, strengthen and sustain trust of people in law enforcing agencies through their loyal activities (2) proper support should be provided to community level social organization (3) stern actions should be taken against miscreants as well as against those members of law enforcing agencies who bear links with antisocial forces (4) strong binding Co-operations among Army, BDR, RAB and Police are very much needed (5) strong Management Information System (MIS) can be of great help and use.

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