3.1 THE STUDY

The present study is an exploratory investigation to examine the impact of Age, Gender and Income as a determinant of Cultural Diversity as independent variables on Employee Effectiveness as dependent variables in a Cross Cultural Environment. The Multivariate structure of the paradigm has following levels for each independent variable as given under:

**Employee Effectiveness**
- High
- Low

**Cultural Diversity**

**Region**
- North
- South

**Age**
- Lower than 30
- Upper than 30

**Gender**
- Male
- Female

**Income**
- Less than 35K
- Higher than 35K
The Sampling Plan

Participants

The study targeted at all levels of employees (senior, middle, and junior level) in multinational of northern and southern region of India. A total of 229 respondents were collected from IT firms located in northern region and 164 respondents are collected from southern part of India. A large portion of the respondents was male in both the regions northern and southern (N= 61% & 54% respectively). The age profile of the respondents varies with the youngest employee at 22 and the oldest executive at 57 years of age in both the region. The average income reported is 42,000 in northern and 48,000 in southern region at these levels. The further detailed demographics characteristics are explained in the following table.

<table>
<thead>
<tr>
<th>Demographic % of Northern Region (N = 229)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Income</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Country</td>
</tr>
</tbody>
</table>
3.2 THE DESIGN

The study is divided into two major parts. The first part explores the effect of independent variables on dependent variable with a multivariate factorial design having ‘4*2’ constitution.

The second part of the study identifies the effect of cross culture employee effectiveness.
The four subgroups in the research design were as follows:

\[ a = \text{Employees who are males with Age lower than 30 and income less than 35.} \]
\[ b = \text{Employees who are males with Age lower than 30 and income higher than 35.} \]
\[ c = \text{Employees who are males with Age upper than 30 and income lower than 35.} \]
\[ d = \text{Employees who are males with Age upper than 30 and income higher than 35.} \]
\[ e = \text{Employees who are Females with Age lower than 30 and income less than 35.} \]
\[ f = \text{Employees who are Females with Age lower than 30 and income higher than 35.} \]
\[ g = \text{Employees who are females with Age upper than 30 and income lower than 35.} \]
\[ h = \text{Employees who are females with Age upper than 30 and income higher than 35.} \]

### 3.3. THE SAMPLE

The initial sample of 400 employees was selected. The method for sampling is convenient as employees are selected from the MNCs at Northern (Hariyana, Punjab, Noida) and Southern region (Hyderabad, Kerela and Banglore) of India.
In view of the research design, the final sample of 393 subjects was finally selected. The distribution of the sample is mentioned above. The extraneous variables were controlled by randomization and elimination.

### 3.4 TOOLS USED FOR DATA COLLECTION

Only one standardized tool id used for data collection that is:

#### 3.4.1 Managerial Effectiveness Scale

**Profile**

- **Tool**: Managerial Effectiveness Scale
- **Author**: Upinder Dhar, Santosh Dhar and Preeti Jain
- **Nature**: Verbal
- **Structure**: 29 dichotomous items
- **Duration**: No time limit
Reliability : High

Validity : High

Cronbach Alfa: 0.97


**Scoring**

i. Scoring is done manually.

ii. The respondent is required to encircle his/her choice on the seven point scale.

iii. The encircle choice is considered as the score for respective item.

iv. The sum of all the item scores is managerial effectiveness score.

**3.5 TOOLS FOR DATA ANALYSIS**

The data were analyzed using window based Statistical Package of the Social Sciences (SPSS 19.0). The statistical tools used were test for normality and Z-test for comparing means.

**Test for Normality**

Normality should be tested for the data analysis hence to test whether the data is in normally distributed this test has been undertaken. Normality test statistics by ‘Kolmogorov- Smirnov test’ and ‘Shapiro-Wilk test’ assesses that whether a particular distribution differs significant from normal distribution (Carver & Nash, 2006). Thus the responses were tested for veracity.
of the assumption of normal distribution by using K-S Test and Shapiro-Wilk test for the total score of Employee Effectiveness. The significant value (p-value) for K-S test was found to be 0.240 (greater than 0.05) and for Shapiro-Wilk test was found to be 0.316 (greater than .05). This indicated that the distribution of final points does not differ significantly from normal distribution. This inferred that the assumption of normality with respect to the sample chosen was valid. (See Appendix 2).

Skewness and Kurtosis as the measures of deviation from normality were also calculated. A value between ± 2x.0 for both skewness and kurtosis is acceptable for showing normality of data (Gorge & Mallery, 2009). The value of skewness was found to be -0.971 and for kurtosis it was 0.894. The values related to skewness and kurtosis and the histogram of frequency distribution are shown in Appendix 2.

3.5.1 Test for Reliability and Validity

The standardized scale was used and its reliability and validity was found to be high and the value of Cronbach alfa was 0.97.

3.5.2 The Z-test

The Z-test summary table generated through SPSS takes the following form:
## Independent Sample Test

**Levene's Test for Equality of Variances**

<table>
<thead>
<tr>
<th>Climate</th>
<th>Equal variances</th>
<th>assumed</th>
<th>Equal variances</th>
<th>not assumed</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig. T</td>
<td>Df</td>
<td>Sig. (2-tailed)</td>
<td>Mean Difference</td>
</tr>
</tbody>
</table>

- **Climate**: The climate categories for which the test is conducted.
- **Equal variances**: Indicates whether the variances are assumed to be equal.
- **Assumed**: Whether variances are assumed to be equal.
- **Equal variances not assumed**: Indicates the test was conducted without assuming equal variances.
- **F**: The F-statistic value.
- **Sig.**: The significance level of the F-statistic.
- **T**: The t-statistic value.
- **Df**: The degrees of freedom.
- **Sig. (2-tailed)**: The significance level of the t-statistic.
- **Mean Difference**: The difference in means.
- **Std. Error Difference**: The standard error of the difference.
- **95% Confidence Interval of the Difference**: The confidence interval for the difference in means.
The columns labeled "Levene's Test for Equality of Variances" tell us whether an assumption of the t-test has been met. The t-test assumes that the variability of each group is approximately equal. If that assumption isn't met, then a special form of the t-test should be used. Look at the column labelled "Sig." under the heading "Levene's Test for Equality of Variances". If this value is less than or equal to α level for the test (usually .05), then null hypothesis is rejected, implying that the variances are unequal. If the p value is less than or equal to the α level, then we should use the bottom row of the output (the row labelled "Equal variances not assumed."). If the p value is greater than your α level, then we should use the middle row of the output (the row labelled "Equal variances assumed."). The column labelled “t” gives the observed or calculates t value. The column labelled "df" gives the degrees of freedom associated with the t test. The column labelled "Sig. (2-tailed)" gives the two-tailed p value associated with the test. If $p \leq \alpha$, then null hypothesis is rejected.