CHAPTER 5

RESULTS AND DISCUSSIONS
### CHAPTER- 5

**RESULTS AND DISCUSSIONS**

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1</td>
<td>Introduction</td>
</tr>
<tr>
<td>5.2</td>
<td>Testing of Hypotheses</td>
</tr>
<tr>
<td>5.3</td>
<td>Findings and Discussions</td>
</tr>
</tbody>
</table>
CHAPTER- 5
RESULTS AND DISCUSSIONS

5.1 INTRODUCTION:
This part of the chapter is an effort taken to represent the results and findings based on methodical examination, interpretation and understanding of the study. The study over all analyzed the “Measuring & Evaluating the financial performance of manufacturing companies by using techniques of capital budgeting: With special reference to Mumbai (Western Suburbs)”. Here, the entire study focused on the following essential points:
The study mostly focused on the financial performance of the manufacturing companies by using traditional techniques i.e. PB period and average rate of return and modern techniques i.e. excess present value, benefit cost ratio and breakeven point of NPV of capital budgeting. The study also analyses the effects of the long term forecasting tools on the financial performance of the manufacturing firm in Mumbai with special reference to suburbs. The study also focuses on the relationship capital budgeting techniques and financial performance of the manufacturing firms in Mumbai. The researcher also revealed through this study that, which is the most appropriate and approachable method of capital budgeting i.e. traditional method and modern method for the evaluation of financial performance of the manufacturing companies.

The study discloses that the larger portions of the respondents were saying that modern methods are mostly used techniques than the traditional methods. The researcher found that the modern method is more used technique by the financial manager and other authorities of the companies. The researcher also observed that the employees of the firms are mostly adopting modern techniques i.e. excess present value, PI and breakeven point of NPV (IRR) for the evaluation of financial performance of the manufacturing firm.
Through the research the study observed that the level of investment, age of company, annual turnover of the company and volume of capital budget were the major factors which has both positive and negative relationship with capital budgeting techniques. The researcher has represent three hypotheses for the research work i.e. Capital budgeting is the most effective tool in evaluating the profitability of manufacturing firm (Hypothesis-1), Modern method of capital budgeting Net Present Value (NPV) is considered to be more approachable technique of evaluating the performance of manufacturing firm (Hypothesis-2), For evaluating the financial performance of the manufacturing firm, Profitability Index (PI) is considered to be more approachable technique of capital budgeting (Hypothesis-3).

5.2 TESTING OF HYPOTHESES:

The researcher in the study framed and tested the following hypotheses in relation to “Measuring & Evaluating the financial performance of manufacturing companies by using techniques of capital budgeting: with special reference to Mumbai (western suburbs)” to reach the conclusion as given below:

5.2.1 HYPOTHESES No. 1- Capital budgeting is the most effective tool in evaluating the profitability of manufacturing firm.

There are three factors i.e. age of the company, annual turnover of the company and volume of capital budget are studied here to understand the influences on capital budgeting techniques. There are 225 responses has taken of each factor for the study. The overall analysis was made to prove capital budgeting is the most effective tool in evaluating the profitability of manufacturing firm, for which various tests were applied to get the result.

To understand and test the above hypotheses, chi-square test, comparisons of proportions and other tests are obtained and presented as follows to get better understanding of the results:
1) Capital budgeting technique mostly use to evaluate the Expansion in existing operating activities on the basis of Age of Company:

The test of chi-square shows:

Pearson Chi-Square = 16.126\(^a\) (v)
Likelihood Ratio = 17.206 (v)
Linear-by-Linear Association = 7.188 (v)
N of Valid Cases = 225

Pearson Chi-Square = .186 Asymp. Sig. (2-sided)
Likelihood Ratio = .142 Asymp. Sig. (2-sided)
Linear-by-Linear Association = .007 Asymp. Sig. (2-sided)

9 cells (45.0%) have expected count less than 5. The minimum expected count is .07.

Through the above tests, it is observed that, the value \( p = .186 \) is greater than significant value \( \alpha = 0.05 \) there is no significant relationship between age of company and the expansion in existing operating activities. The symmetric measure also showing the degree of relationship and says that there is no significant relation between the age and expansion in existing operating activities. Therefore, the test is rejected.

2) Capital budgeting technique mostly uses to evaluate the Expansion in existing operating activities on the basis of Annual turnover of company.

The results depicts through chi-square tests:

Pearson Chi-Square = 22.438\(^a\) (v)
Likelihood Ratio = 21.788 (v)
Linear-by-Linear Association = 8.226 (v)
N of Valid Cases = 225

Pearson Chi-Square = .033 Asymp. Sig. (2-sided)
Likelihood Ratio = .040 Asymp. Sig. (2-sided)
Linear-by-Linear Association = .004 Asymp. Sig. (2-sided)

a. 9 cells (45.0%) have expected count less than 5. The minimum expected count is .11.
From the above test results, it is observed from the Pearson chi-square test that, the value $p = .033$ is less than significant value $\alpha = 0.05$ there is significant relationship between annual turnover of company and the expansion in existing operating activities. Hence the test shows the positive relationship between the variables. Therefore, the test is **accepted**.

3) Capital budgeting technique mostly uses to evaluate the Expansion in existing operating activities on the basis of Volume of capital budget.

The results depicts through chi-square tests:

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>24.404a (v)</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>26.474 (v)</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>10.299 (v)</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>225</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>.018Asymp. Sig. (2-sided)</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>.009Asymp. Sig. (2-sided)</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>.001Asymp. Sig. (2-sided)</td>
</tr>
<tr>
<td>a. 9 cells (45.0%) have expected count less than 5. The minimum expected count is .11.</td>
<td></td>
</tr>
</tbody>
</table>

From the above tests, it is observed from chi-square test that, the value $p = .018$ is less than significant value $\alpha = 0.05$ there is significant relationship between volume of capital budget and the expansion in existing operating activities. Therefore, here it is proved that there is positive relationship between the variables and hence, the test is **accepted**.

4) Capital budgeting technique do you mostly use to evaluate the Expansion in new segment on the basis of age of company.

The results depicts through chi-square tests:

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>24.404a (v)</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>26.474 (v)</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>10.299 (v)</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>225</td>
</tr>
</tbody>
</table>
Pearson Chi-Square = .018 Asymp. Sig. (2-sided)
Likelihood Ratio = .009 Asymp. Sig. (2-sided)
Linear-by-Linear Association = .001 Asymp. Sig. (2-sided)
a. 13 cells (52.0%) have expected count less than 5. The minimum expected count is .01.

From the above test, it is observed from the chi-square test that, the value p = .069 is greater than significant value α = 0.05 there is no significant relationship between age of company and the expansion in new segment. Therefore, the test is rejected.

5) Capital budgeting technique do you mostly use to evaluate the Expansion in new segment on the basis of annual turnover of company.
The results depict through chi-square tests:
Pearson Chi-Square = 31.503\(^\text{a} \) (v)
Likelihood Ratio = 28.715 (v)
Linear-by-Linear Association = 11.666 (v)
N of Valid Cases = 225

Pearson Chi-Square = .012 Asymp. Sig. (2-sided)
Likelihood Ratio = .026 Asymp. Sig. (2-sided)
Linear-by-Linear Association = .001 Asymp. Sig. (2-sided)
a. 13 cells (52.0%) have expected count less than 5. The minimum expected count is .01.

From the above test, it is observed from the above test that, value p = .012 is less than significant value α = 0.05 there is significant relationship between annual turnover of company and the expansion in new segment. From the above test it is clear that the test is accepted.

6) Capital budgeting technique do you mostly use to evaluate the Expansion in new segment on the basis of volume of capital Budget.
The results depicts through chi-square tests:

Pearson Chi-Square = 33.513^a (v)
Likelihood Ratio = 30.795 (v)
Linear-by-Linear Association = 12.390 (v)
N of Valid Cases = 225

Pearson Chi-Square = .006 Asymp. Sig. (2-sided)
Likelihood Ratio = .014 Asymp. Sig. (2-sided)
Linear-by-Linear Association = .000 Asymp. Sig. (2-sided)

a. 14 cells (56.0%) have expected count less than 5. The minimum expected count is .01.

From the above test, it is observed that, value p = .006 is less than significant value \( \alpha = 0.05 \) there is significant relationship between volume of capital budget and the expansion in new segment. Therefore, through the above chi-square tests it is prove that the test is **accepted**.

7) Capital budgeting technique do you mostly use to evaluate the foreign projects on the basis of age of company.

The results depicts through chi-square tests:

Pearson Chi-Square = 39.836^a (v)
Likelihood Ratio = 39.452 (v)
Linear-by-Linear Association = 15.339 (v)
N of Valid Cases = 225

Pearson Chi-Square = .001 Asymp. Sig. (2-sided)
Likelihood Ratio = .001 Asymp. Sig. (2-sided)
Linear-by-Linear Association = .000 Asymp. Sig. (2-sided)

a. 12 cells (48.0%) have expected count less than 5. The minimum expected count is .01.

It is observed from chi-square tests that, value p = .001 is less than the significant value \( \alpha = 0.05 \) there is significant relationship between age of company and evaluation of foreign projects. Hence, the test is proved to be **accepted**.
8) Capital budgeting technique mostly uses to evaluate the foreign projects on the basis of annual turnover of company.

The results depicts through chi-square tests:

Pearson Chi-Square = 37.249\(^a\) (v)
Likelihood Ratio = 36.457 (v)
Linear-by-Linear Association = 14.988 (v)
N of Valid Cases = 225

Pearson Chi-Square = .002 Asymp. Sig. (2-sided)
Likelihood Ratio = .002 Asymp. Sig. (2-sided)
Linear-by-Linear Association = .000 Asymp. Sig. (2-sided)

a. 12 cells (48.0%) have expected count less than 5. The minimum expected count is .01.

From the above chi-square tests, it is observed that, value \(p = .002\) is less than significant value \(\alpha = 0.05\) there is significant relationship between annual turnover of company and evaluation of foreign projects. Therefore, the test is accepted.

9) Capital budgeting technique do you mostly use to evaluate the foreign projects on the basis of volume of capital budget.

The results depicts through chi-square tests:

Pearson Chi-Square = 34.814\(^a\) (v)
Likelihood Ratio = 32.229 (v)
Linear-by-Linear Association = 22.152 (v)
N of Valid Cases = 225

Pearson Chi-Square = .004 Asymp. Sig. (2-sided)
Likelihood Ratio = .009 Asymp. Sig. (2-sided)
Linear-by-Linear Association = .000 Asymp. Sig. (2-sided)

a. 13 cells (52.0%) have expected count less than 5. The minimum expected count is .01.

From the above chi-square test, it is observed that, Pearson chi-square value is 34.814\(^a\), and value \(p = .004\) is less than significant value \(\alpha = 0.05\) there is significant
relationship between volume of capital budget and evaluation of foreign projects. Therefore, the test shows the positive significance and the test is proved here is accepted.

10) Capital budgeting technique do you mostly use to evaluate the capital investment on the basis of age of company. The results depicts through chi-square tests:

Pearson Chi-Square = 54.412\(^a\) (v)
Likelihood Ratio = 33.118 (v)
Linear-by-Linear Association = 16.038 (v)
N of Valid Cases = 225

Pearson Chi-Square = .000 Asymp. Sig. (2-sided)
Likelihood Ratio = .007 Asymp. Sig. (2-sided)
Linear-by-Linear Association = .000 Asymp. Sig. (2-sided)

a. 12 cells (48.0%) have expected count less than 5. The minimum expected count is .04.

It is observed from chi-square test for proving hypotheses and results that, value \( p = .000 \) is less than significant value \( \alpha = 0.05 \) there is significant relationship between age of company and evaluation of capital investment plan. Therefore, the test is accepted.

11) Capital budgeting technique do you mostly use to evaluate the capital investment on the basis of annual turnover of company. The results depicts through chi-square tests:

Pearson Chi-Square = 45.789\(^a\) (v)
Likelihood Ratio = 31.849 (v)
Linear-by-Linear Association = 13.371 (v)
N of Valid Cases = 225

Pearson Chi-Square = .000 Asymp. Sig. (2-sided)
Likelihood Ratio = .010 Asymp. Sig. (2-sided)
Linear-by-Linear Association = .000 Asymp. Sig. (2-sided)
a. 12 cells (48.0%) have expected count less than 5. The minimum expected count is .05.

There is a significant relationship between the annual turnover of the company and evaluation of capital investment plan. It is proved through the chi-square test. According to the test, value $p = .000$ is less than the significant value $\alpha = 0.05$. Therefore, the test is accepted.

12) Capital budgeting technique do you mostly use to evaluate the capital investment on the basis of volume of capital budget.
The results depicts through chi-square tests:

\[
\begin{align*}
\text{Pearson Chi-Square} &= 43.685^a (v) \\
\text{Likelihood Ratio} &= 31.117 (v) \\
\text{Linear-by-Linear Association} &= 18.748 (v) \\
\text{N of Valid Cases} &= 225
\end{align*}
\]

\[
\begin{align*}
\text{Pearson Chi-Square} &= .000 \text{ Asymp. Sig. (2-sided)} \\
\text{Likelihood Ratio} &= .013 \text{ Asymp. Sig. (2-sided)} \\
\text{Linear-by-Linear Association} &= .000 \text{ Asymp. Sig. (2-sided)}
\end{align*}
\]

a. 13 cells (52.0%) have expected count less than 5. The minimum expected count is .05.

From the above said test of chi-square is used to test the above said hypothesis and it is observed through the above tests that, value $p = .000$ is less than significant value $\alpha = 0.05$ there is significant relationship between volume of capital budget and evaluation of capital investment plan. Therefore, the test is accepted.

13) Capital budgeting technique do you mostly use to evaluate general administration projects on the basis of age of the company.
The results depicts through chi-square tests:

\[
\begin{align*}
\text{Pearson Chi-Square} &= 33.122^a (v) \\
\text{Likelihood Ratio} &= 32.868 (v) \\
\text{Linear-by-Linear Association} &= 10.510 (v) \\
\text{N of Valid Cases} &= 225
\end{align*}
\]
Pearson Chi-Square = .007 Asymp. Sig. (2-sided)
Likelihood Ratio = .008 Asymp. Sig. (2-sided)
Linear-by-Linear Association = .001 Asymp. Sig. (2-sided)
a. 11 cells (44.0%) have expected count less than 5. The minimum expected count is .10.

The above chi-square tests, it is signified that, value $p = .007$ is less than significant value $\alpha = 0.05$ there is significant relationship between age of company and evaluation of general administration projects. Therefore, the test is accepted.

14) Capital budgeting technique do you mostly use to evaluate general administration projects on the basis of annual turnover of the company.

The results depicts through chi-square tests:
Pearson Chi-Square = 44.227 $^a$ (v)
Likelihood Ratio = 41.831 (v)
Linear-by-Linear Association = 10.695 (v)
N of Valid Cases = 225

Pearson Chi-Square = .000 Asymp. Sig. (2-sided)
Likelihood Ratio = .000 Asymp. Sig. (2-sided)
Linear-by-Linear Association = .001 Asymp. Sig. (2-sided)
a. 12 cells (48.0%) have expected count less than 5. The minimum expected count is .15.

From the above chi-square tests, it is observed that, value $p = .000$ is less than significant value $\alpha = 0.05$ there is significant relationship between annual turnover of company and evaluation of general administration projects. Therefore, the test is accepted.

15) Capital budgeting technique do you mostly use to evaluate general administration projects on the basis of volume of capital budget.

The results depicts through chi-square tests:
Pearson Chi-Square = 41.463 $^a$ (v)
Likelihood Ratio = 41.831 (v)
Linear-by-Linear Association = 38.298 (v)
N of Valid Cases = 225

Pearson Chi-Square = .000  Asymp. Sig. (2-sided)
Likelihood Ratio = .001  Asymp. Sig. (2-sided)
Linear-by-Linear Association = .000  Asymp. Sig. (2-sided)
a. 13 cells (52.0%) have expected count less than 5. The minimum expected count is .15.

The chi-square tests depicts the above results and it is observed that, probability value $p = .000$ is less than significant value $\alpha = 0.05$ there is significant relationship between volume of capital budget and evaluation of general administration projects. Therefore, the test is accepted.

**Conclusion:** The above tests show the association between the factors and capital budgeting as an effective tool in evaluation of profitability of manufacturing firm. On the basis of age of company, annual turnover of company and volume of capital budget to understand the efficiency of Expansion in existing operating activities, Expansion in new segment, foreign projects, capital investment plan and general administration projects to measure the profitability of the manufacturing firm. On the basis of above tables, conclusions and its interpretation the data reveals that the hypotheses “Capital budgeting is the most effective tool in evaluating the profitability of manufacturing firm.” In the study area is “Accepted”.

**5.2.2 HYPOTHESES No. 2** - Modern method of capital budgeting Net Present Value (NPV) is considered to be more approachable technique of evaluating the performance of manufacturing firm.

The above hypothesis is determined by the three factors i.e. age of the company, annual turnover of the company and volume of capital budget. The study here is made to understand the influences on capital budgeting techniques. To test the above hypotheses, chi-square table is obtained and presented as follows:
1) Capital budgeting technique(s) used by your company for the evaluation of major investments on the basis of Age of company.

The test shows that Pearson chi-square tests:

Chi-square = 88.157

Df = 20

Sig. = .000^*,b,c

The Chi-square statistic at the level of .05 is significant.

b. Chi-square results may be invalid because it’s more than 20% of cells in this sub table have expected cell counts less than 5.

c. The minimum expected cell count in this sub table is less than one. Chi-square results may be invalid.

It is observed from the analysis, that value p = .000 is less than significant value α = 0.05 there is significant association between the capital budgeting techniques and age of the company as far as the evaluation of major investments. Therefore, the test is accepted.

2) Capital budgeting technique(s) used by your company for the evaluation of major investments on the basis of Annual turnover of company.

The test shows that Pearson chi-square tests:

Chi-square = 125.484

Df = 20

Sig. = .000^*,b,c

The Chi-square statistic is significant at the .05 level.

b. Chi-square results may be invalid. More than 20% of cells in this sub table have expected cell counts less than 5. Chi-square results may be invalid.

c. Chi-square results may be invalid. The minimum expected cell count in this sub table is less than one.

It can be viewed through the analysis that, value p = .000 is less than significant value α = 0.05 there is significant relationship between the capital budgeting techniques and the annual turnover of the company. Therefore, the test is accepted.
3) Capital budgeting technique(s) used by your company for the evaluation of major investments on the basis of volume of capital budget.

The test shows that Pearson chi-square tests:

\[
\text{Chi-square} = 127.116 \\
\text{Df} = 20 \\
\text{Sig.} = .000^{*,b,c}
\]

At the .05 level, the Chi-square statistic is significant

b. Chi-square results may be invalid because more than 20% of cells in this sub table have expected cell counts less than 5. c. The minimum expected cell count in this sub table is less than one therefore Chi-square results may be invalid.

It is observed from the analysis, value \( p = .000 \) is less than significant value \( \alpha = 0.05 \) there is significant relationship between the capital budgeting techniques and the annual turnover of the company. Therefore, the test is **accepted**.

4) Net Present value on the basis of age of company and frequency used to evaluate the performance of manufacturing firm.

The results depicts through chi-square tests:

\[
\begin{align*}
\text{Pearson Chi-Square} &= 46.907^a \ (v) \\
\text{Likelihood Ratio} &= 41.714 \ (v) \\
\text{Linear-by-Linear Association} &= 20.896 \ (v) \\
\text{N of Valid Cases} &= 225 \\
\text{Pearson Chi-Square} &= .000 \ \text{Asymp. Sig. (2-sided)} \\
\text{Likelihood Ratio} &= .000 \ \text{Asymp. Sig. (2-sided)} \\
\text{Linear-by-Linear Association} &= .000 \ \text{Asymp. Sig. (2-sided)}
\end{align*}
\]

a. 18 cells (72.0%) have expected count less than 5. The minimum expected count is .07.

From the above tests of chi-square, It is observed from the above table, the value \( p = .000 \) is less than significant value \( \alpha = 0.05 \) there is significant relationship between age of company and the use of Net Present value. Hence, from the above tests it is proved that test is positive and therefore, the test is **accepted**.
5) Net Present value on the basis of annual turnover of company and frequency used to evaluate the performance of manufacturing firm.

The results depicts through chi-square tests:

Pearson Chi-Square = \(71.692^a\) (v)
Likelihood Ratio = 56.056 (v)
Linear-by-Linear Association = 21.445 (v)
N of Valid Cases = 225

Pearson Chi-Square = .000 Asymp. Sig. (2-sided)
Likelihood Ratio = .000 Asymp. Sig. (2-sided)
Linear-by-Linear Association = .000 Asymp. Sig. (2-sided)
a. 17 cells (68.0%) have expected count less than 5. The minimum expected count is .11.

The test is made to prove the hypothesis by applying chi-square test and therefore it is observed from the above table, the value \(p = .000\) is less than significant value \(\alpha = 0.05\) there is significant relationship between annual turnover of company and the use of Net Present value. Therefore, the test is accepted.

6) Net Present value on the basis of volume of capital budget and frequency used to evaluate the performance of manufacturing firm.

The results depicts through chi-square tests:

Pearson Chi-Square = \(64.727^a\) (v)
Likelihood Ratio = 56.056 (v)
Linear-by-Linear Association = 21.166 (v)
N of Valid Cases = 225

Pearson Chi-Square = .000 Asymp. Sig. (2-sided)
Likelihood Ratio = .000 Asymp. Sig. (2-sided)
Linear-by-Linear Association = .000 Asymp. Sig. (2-sided)
a. 17 cells (68.0%) have expected count less than 5. The minimum expected count is .11.
From the above chi-square tests, it is observed from the above table, the value $p = .000$ is less than significant value $\alpha = 0.05$ there is significant relationship between volume of capital budget and the use of Net Present value. Therefore, the test is accepted.

**Conclusion:** The above tests proves that the hypothesis “Modern method of capital budgeting Net Present Value (NPV) is considered to be more approachable technique of evaluating the performance of manufacturing firm.” In the study area is “Accepted”, because it shows the association between the factors and net present value, which is considered to be more approachable technique for evaluation of profitability of manufacturing firm.

5.2.3 **HYPOTHESES No. 3** – For evaluating the financial performance of the manufacturing firm, modern method of capital budgeting Profitability Index (PI) is more approachable.

The above table depicts the hypothesis, which is determined by three factors i.e. age of the company, annual turnover of the company and volume of capital budget. The study here is made to understand the influences on capital budgeting techniques. To test the above hypotheses, chi-square table is obtained and presented as follows:

1) Capital budgeting technique(s) used by your company for the evaluation of major investments on the basis of Age of company.

   The test shows that Pearson chi-square tests:

   \[
   \text{Chi-square} = 88.157 \\
   \text{Df} = 20 \\
   \text{Sig.} = .000^{*,b,c}
   \]

   At the .05 level the Chi-square statistic is significant

   b. More than 20% of cells in this sub table have expected cell counts less than 5 hence Chi-square results may be invalid.

   c. The minimum expected cell count in this sub table is less than one therefore Chi-square results may be invalid due to this reason.
The observation is made through the analysis, that value p = .000 is less than significant value α = 0.05 there is significant association between the capital budgeting techniques and age of the company as far as the evaluation of major investments. There are significant differences between two percentages at a time. In case of item a & item b there is no difference between the different age group of companies, but in case of item (c) the company aged 11-20 years (B) and aged 21-30 years (C) has a higher percentage than companies with age up to 10 years (A).

In other words, modern techniques i.e. Profitability Index method was most preferred tools with the age group of 11 – 20 Years, 21- 30 years and 31-40 years of age of company. It is observed from the above table that there is positive relation between profitability index method and age of the company for the study. Therefore, the test is accepted.

2) Capital budgeting technique (s) used by your company for the evaluation of major investments on the basis of Annual turnover of company.

The test shows that Pearson chi-square tests:

| Chi-square | 125.484 |
| Df =       | 20      |
| Sig. =     | .000*,b,c |

The Chi-square statistic is significant because at the .05 level significant result is found.

b. More than 20% of cells in this sub table have expected cell counts less than .05 therefore Chi-square results may be invalid.

c. Chi-square results may be invalid, because the minimum expected cell count in this sub table is less than one.

It is observed from that, value p = .000 is less than significant value α = 0.05 there is significant association between the capital budgeting techniques and annual turnover of the company as far as the evaluation of major investments. The analysis shows that here is a significant difference between two percentages at a time in the study. In case of a and b all there is no difference between the different volume of capital budget group of companies.
The above table depicts that Profitability Index method was mostly used by the highest annual turnover of the companies and the other methods were used by the lower amount of turnover of the company in the study area. Therefore, the test is accepted.

3) Capital budgeting technique(s) used by your company for the evaluation of major investments on the basis of volume of capital budget.

The test shows that Pearson chi-square tests:

\[
\text{Chi-square} = 127.116
\]
\[
\text{Df} = 20
\]
\[
\text{Sig.} = .000^{\text{b,c}}
\]

At the .05 level, the Chi-square statistic is significant

b. More than 20% of cells in this sub table have expected cell counts less than 5 hence Chi-square results may be invalid.

c. The minimum expected cell count in this sub table is less than one as a result Chi-square results may be invalid.

It is observed from the above table, value \( p = .000 \) is less than significant value \( \alpha = 0.05 \) there is significant association between the capital budgeting techniques and Volume of Capital Budget as far as the evaluation of major investments. The analysis shows that there is a significant difference between two percentages at a time in the study. In case of a and b all there is no difference between the different volume of capital budget group of companies. But in case of item NPV, PI and IRR (A) the company volume of capital budget 2-5 crores (B) and volume of capital budget 6-10 crores (C) has a higher percentage than companies with volume of capital budget upto 1 crores (A).

In other words, modern techniques i.e. PI method was most adopted tool with the volume of capital budget of 2-5 crores, 6-10 crores and 11-50 crores of volume of capital budget of company. It is clearly observed from the study, that there is positive relation between the PI and annual turnover of the company. Therefore, the test is accepted.
4) Profitability Index on the basis of age of company and frequency used for the evaluation of the performance of manufacturing firm.

The results depicts through chi-square tests:

- Pearson Chi-Square = 27.089\(^a\) (v)
- Likelihood Ratio = 30.041 (v)
- Linear-by-Linear Association = 17.871 (v)
- N of Valid Cases = 225

Pearson Chi-Square = .041 Asymp. Sig. (2-sided)
Likelihood Ratio = .018 Asymp. Sig. (2-sided)
Linear-by-Linear Association = .000 Asymp. Sig. (2-sided)
a. 10 cells (40.0%) have expected count less than 5. The minimum expected count is .18.

It is observed from the above table, the value p = .041 is less than the significant value \(\alpha = 0.05\) there is significant relationship between the age of company and the use of profitability index. Hence the test is prove positive and therefore, the test is accepted.

5) Profitability Index on the basis of annual turnover of company and frequency used for the evaluation of the performance of manufacturing firm.

The results depicts through chi-square tests:

- Pearson Chi-Square = 44.938\(^a\) (v)
- Likelihood Ratio = 44.278 (v)
- Linear-by-Linear Association = 24.285 (v)
- N of Valid Cases = 225

Pearson Chi-Square = .000 Asymp. Sig. (2-sided)
Likelihood Ratio = .000 Asymp. Sig. (2-sided)
Linear-by-Linear Association = .000 Asymp. Sig. (2-sided)
a. 9 cells (36.0%) have expected count less than 5. The minimum expected count is .27.
It is observed from the above table, the value \( p = .000 \) is less than significant value \( \alpha = 0.05 \) there is significant relationship between annual turnover of company and the use of profitability index. The test shows the positive relationship between the variables and hence, the test is **accepted**.

6) Profitability Index on the basis of volume of capital budget and frequency used for the evaluation of the performance of manufacturing firm.

The results depicts through chi-square tests:

- Pearson Chi-Square = \( 42.220^a \) (v)
- Likelihood Ratio = \( 40.265 \) (v)
- Linear-by-Linear Association = \( 27.465 \) (v)
- N of Valid Cases = 225

Pearson Chi-Square = \( .000 \) Asymp. Sig. (2-sided)
Likelihood Ratio = \( .001 \) Asymp. Sig. (2-sided)
Linear-by-Linear Association = \( .000 \) Asymp. Sig. (2-sided)

a. 10 cells (40.0%) have expected count less than 5. The minimum expected count is .27.

It is observed from the above table, the value \( p = .000 \) is less than significant value \( \alpha = 0.05 \) there is significant relationship between volume of capital budget and the use of profitability index. Therefore, the test is **accepted**.

**Conclusion:** the data reveals that the hypotheses “for evaluating the financial performance of the manufacturing firm, the modern method of capital budgeting Profitability Index (PI) is considered to be more approachable. In the study area is “Accepted” as above tests show the association between the factors and profitability index.

**5.3 FINDINGS AND DISCUSSIONS:**

This part of the chapter deals with findings and discussions. The following are the conclusion drawn from the above study:
1) **Age of Company:** The researcher found 46.2 percent of the respondents belong to 11-20 years of age of the company. 23.1 percent of the respondents said that they belong to 21-30 years of the age of company. 22.2 percent of the respondent was belonging to upto 10 years of the age of company. 7.6 percent of the respondent said that the company age was between 31-40 years. Mere 0.9 percent of the respondents belong to more than 40 years of the age of the company.

2) **Annual turnover of the Company:** In the study, it is observed that 38.7 percent of the respondents said that their company turnover was between Rs.1 to Rs. 10 crores. 28.9 percent of the respondents were saying that they belong to Rs. 11 to Rs. 20 crores of annual turnovers of the company. 22.7 percent of the respondents were having less than Rs. 1 crores annual turnover of the company. 8.4 percent of the respondents were having Rs. 21 to Rs. 30 crores of Annual turnovers of the company and 1.3 percent of the respondents said that they have more than Rs. 30 crores of the annual turnovers of the company in the study area.

3) **Volume of Capital budget:** In the study, researcher found that 37.5 percent of the respondents having Rs. 2 to Rs. 5 crores as volume of capital budget. 32.4 percent of the respondents were having Rs. 6 to Rs. 10 crores of volume of capital budget. 20.4 percent of the respondents were having upto Rs. 1 crore as volume of capital budget. 8.4 percent of the respondents were having Rs. 11 to Rs. 50 crores of volume of capital budget. 1.3 percent of the respondents were having more than Rs. 50 crores of volume of capital budget in the study area.

4) **Value of Total Assets:** According to study, it is observed that 36 percent of the respondents were having a value of total assets of Rs. 10 to Rs. 25 crores. 32 percent of the respondents were having Rs. 26 to Rs 50 crores of value of total assets of their company. 22.2 percent of the respondents were having less than of Rs. 10 crores as value of total assets. 8.4 percent of the respondents were having Rs. 51 to Rs. 100 crores of value of total assets of the company and 1.3 percent of the respondents were having more than Rs. 100 crores of the value of total assets of their company in the study area.
5) **Techniques used by the company:** As per the study it is clear that the following analysis is made to understand that how capital budgeting techniques are used in the company.

a) **Payback Period (PBP):** From the study it is observed that 51.6 percent of the respondents were using payback period method for the evaluation of investment projects in their company, whereas 48.4 percent of the respondents says that they were not keen to adopt payback period method in their company for the evaluation of the investments proposal. It is also seen from the analysis that payback period is mostly used by the company whose age is between 1-20 years and as the age increases the use of payback period decreases and so in the case with annual turnover and volume of capital budget for the evaluation of the investment projects in the organisation.

b) **Accounting rate of return (ARR):** Accounting rate of return is also one of the traditional methods of capital budgeting technique. This method also depict that’s that accounting rate of return is used in the company. 69.8 percent of the company’s respondents say that they were using accounting rate of return method for the evaluation of the investment proposal whereas 30.2 percent of the respondents were not using it for the evaluation purpose in their organisation.

Accounting rate of return is also one of the major tools of capital budgeting traditional method, but in the organisation with more age, annual turnover and volume of capital budget, it is least of use. As there is increase in these three factors, the use of accounting rate of returns decreases for the evaluation of the projects in the company/firm.

c) **Net Present Value (NPV):** This is one of the modern methods called net present value technique, which is used for the evaluation of the assets. It is clearly visible from the data majority of the company were using excess present value method for the measurement and evaluation of the investment proposals. Approx 83.6 percent of the respondents say that they use excess present value method for the evaluation of their investment projects for their company appraisal. And 16. 4 percent of the respondents were not using net present
value method. In the study, it is quite noticeable that net present value is most used and applied method amongst the other methods of capital budgeting. In all the cases the net present value is most adopted tool for the evaluation of investment project in the organisation.

d) **Profitability Index (PI):** The study reveals that only 40 percent of the respondents believe in using profitability index for the evaluation of the investment proposals and assets. And 60 percent respondents were not at all using profitability index for the evaluation of the investments project in their organisation.

The study reveals that profitability index is not popular as net present value method. Profitability index is another modern method used by the companies for the evaluation of the investment projects and applied by the organisation but to some extent. It is not as famous as net present value but it is applied if the company needed it.

e) **Internal Rate of Return (IRR):** IRR is one of the modern techniques of capital budgeting method for the evaluation of investment decisions. The study reveals that only 26.2 percent of the company’s financial respondents say that they use internal rate of return technique and 73.8 percent of the respondents say that they don’t use internal rate of return for the evaluation of the projects as they consider this technique as complicated one.

IRR is also popular in modern techniques but in terms of use it is less than net present value. The company chooses when it is only required for the evaluation of the projects by the company.

6) **Level of investments and Techniques used by their company:** As per the study, it can be seen 48 percent of the respondents said that Net Present value (NPV) technique was used by their company for the stated level of investments i.e. Rs. 50 lakhs. 51.1 percent of the respondents were using NPV technique in their company belongs to Rs. 50 Lakhs to Rs. 1 Crores of the stated level of investment. 50.2 percent of the respondents were using NPV technique only by their company belongs to Rs. 2 to 50 crores as stated level of investments. 47.6 percent of the respondents were using the same method for more than Rs. 50
Crores of the level of investments. It is clearly seen from the analysis the net present value method is most of the time applied by the organisation for the evaluation of their projects.

7) **Reasons of using selected techniques:** The researcher observed that 82.7 percent of the respondents said that their organisation wants to check the excess of inflows over outflows by using the concept present value of money. 70.2 percent of the respondents gave the reason of selecting technique is checking the accounting profitability of the investments. 52 percent of the respondents said that their company wants to check the period of investments. 40.4 percent of the respondents said that their company wants to consider the proportion of the inflows and outflows by using present value of money. 27.1 percent of the respondents said that they wants to find out the Break Even Point of inflows and outflows by using present value of money for evaluation of the investments.

8) **Post Audit for Capital investments:** In the study, it is very clear that 38.7 percent of the respondents said their company always conduct post audit for capital investments. 32 percent of the respondents were saying that their company often conduct post audit for capital investments. 12 percent of the respondents said that their company sometimes conduct post audit for capital investments. 10.7 percent of the respondents said that their company rarely conducts post audit for capital investments and 6.7 percent of the respondents said that their company never conduct post audit for capital investments.