After analyzing the secondary data, in this chapter the researcher has dealt with “The relationship between MAS and Employee’s Productivity” and “The relationship between MAS and Profitability” in order to have precise comparison between the banks. Hypotheses have also been tested in this chapter. Some important statistical tools such as, Karl Pearson’s coefficient correlation, Coefficient of Determination and Fisher’s z- transformation have also been applied to make this analysis more scientific.

In this chapter has been divided into two parts.

5.1 Relationship between MAS and Employee’s Productivity.
5.2 Relationship between MAS and Profitability.

In order to have an in-depth study, the researcher has framed the following hypotheses i.e.

Ho₁: The MAS and Employee’s productivity are independent to each other.
Ho₂: The MAS and Profitability are independent to each other.

5.1 Relationship between MAS and Employee’s Productivity

This chapter has also been divided into following sub- parts.

5.1.1 The concept of Employee’s Productivity.
5.1.2 Employee’s Productivity in Banks.
5.1.3 Relationship between MAS and Employee’s Productivity.
5.1.4 Comparison of PNB and HDFC Bank on the basis of Employee’s Productivity.

5.1.1 Concept of Employee’s Productivity

Productivity is one of the most common terms under used of people. Particularly, business community is more concerned about this term. Historically this term never remained out of the dictionary of the human being.
There are many definitions of productivity. But widely it is considered as ratio of output to input. There is a constant change in the generic concept of productivity. There are many concept related to productivity. In different periods, people focused on different facets of productivity. Sometime labor productivity is important and other time resource productivity becomes significant.

In simple words we can define employee productivity as the output per worker or output per hour. With the increase in part-time employment and temporary and contract workers, many businesses use hours worked rather than output per worker to measure productivity.

**Definition**

“Economists define employee productivity as the output per worker or output per hour. With the increase in part-time employment and temporary and contract workers, many businesses use hours worked rather than output per worker to measure productivity.”

“The amount of output per unit of input (labor, equipment, and capital). There are many different ways of measuring productivity. For example, in a factory productivity might be measured based on the number of hours it takes to produce a good, while in the services sector productivity might be measured based on the revenue generated by an employee divided by his/her salary.”

**According to economist Paul Krugman-**

“Businesses live and die by productivity. A productive company has lower operating costs and can sell its products or services at lower prices, bringing increased volume and profits. Employee productivity is key to organizational success and to a country’s economy. Employee productivity must increase if the overall standard of living is to increase.”
Why is Employee’s Productivity Calculated?

Any successful business knows much of its success is due to diligent workers with excellent productivity. Employees who put forth extra effort often make a big difference in company profits. The employees who do only what the job duties require, and no more, can stymie the progress of a company. It is important to motivate all employees to reach their full potential and maximal level of productivity. Companies that recognize and encourage increased productivity are likely to be more successful than their counterparts.

Economists define employee productivity as the output per worker or output per hour. With the increase in part-time employment and temporary and contract workers, many businesses use hours worked rather than output per worker to measure productivity.

Factors Affecting Employees’ Productivity

Employees are more or less productive based on a variety of objective and subjective factors, including the work environment, motivation, workflow processes and technology. Objective data—such as billable hours, number of products sold, items assembled or claims processed—measure employee productivity. Employers also use subjective measures. The important factors are given below:

1. Work Environment

Telecommuting and collaboration have changed the work environment.

Telecommuting, flexible scheduling and staffing and collaboration are changing how, where and when employees work. Regardless of their work environment, having the necessary materials and tools to do their work is vital to employee engagement and productivity.²
2. Employee Motivation

Workers take pride in their contributions to success.
Open and honest communication, positive feedback and shared performance expectations all affect productivity. Being able to see a project through to its completion or having a clear understanding of their role in the work motivates employees better than top-down management approaches.

3. Work Processes

Look for improvement opportunities in work processes.
All work is a process—a series of actions that bring about a result. Frequently, workers develop processes over time with little or no formal planning. Work-flow processes affect employee productivity, and managers of productive work groups understand this and champion process improvement.

Alfred Edward Perlman, president of Penn Central Railroad, once said that if a process has been used for two years, it should be re-evaluated for improvement opportunities.

4. Technology

Learning new computer programs affects productivity.
Technology has improved productivity in areas such as supply-chain management and financial transactions. Technology can also reduce productivity, at least in the initial phases of implementation. Often, employees are expected to learn a new technology while doing their daily work. This reduces their immediate productivity and lengthens the learning curve for the new technology, which, in turn, delays the anticipated productivity associated with the new technology.

A lag is created between technology implementation and increased employee productivity. Technology requires that employers revise their definition of employee productivity. When employees complain about the amount of time they must spend writing and responding to e-mails, they're viewing this as
CHAPTER -5 Relationship of MAS with Employee’s Productivity and Profitability

nonproductive time. But in the information economy, sharing information via e-mails is part of the work and a component of productivity.

5.1.2 Employee’s Productivity - PNB & HDFC Bank

Table no. 5.1 shows Employee’s Productivity - PNB & HDFC Bank

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MAS</td>
<td>PNB</td>
<td>HDFC</td>
<td>PNB</td>
<td>HDFC</td>
<td>PNB</td>
</tr>
<tr>
<td>76.6</td>
<td>58.6</td>
<td>76.9</td>
<td>58.7</td>
<td>72.8</td>
<td>59.3</td>
</tr>
<tr>
<td>Employee’s Productivity</td>
<td>3.69</td>
<td>8.42</td>
<td>3.96</td>
<td>7.63</td>
<td>6.25</td>
</tr>
</tbody>
</table>

Source: Computed from the Annual reports, MAS (Scores), Employee’s productivity (Profit per rupees per employee), Total no. of employee’s includes: officers, clerks and sub-staff.

In the above mentioned table, the researcher has calculated Correlation between MAS and Employee’s Productivity. Where (X) represent the total scores of MAS of five years and (Y) represent Employee’s Productivity. Moreover, this is also helpful in testing the most important hypothesis of the study i.e.

\[ H_0: \text{The MAS and Employee’s productivity are independent to each other.} \]

5.1.3 Relationship between MAS and Employee’s productivity- PNB and HDFC Bank

Here the researcher has measured the relationship between MAS on Employee’s Productivity of both the banks. For this, first of all the employee’s productivity has been computed by dividing the Profit before tax by Total no. of Employees.
CHAPTER -5 Relationship of MAS with Employee’s Productivity and Profitability

Table no. 5.2 Computation of Employee’s Productivity of both the banks.

<table>
<thead>
<tr>
<th>Years</th>
<th>PNB</th>
<th>HDFC Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PBT</td>
<td>Tot. no. of empl.</td>
</tr>
<tr>
<td>2005-06</td>
<td>2140.5</td>
<td>58047</td>
</tr>
<tr>
<td>2006-07</td>
<td>2268.8</td>
<td>57316</td>
</tr>
<tr>
<td>2007-08</td>
<td>3500</td>
<td>56025</td>
</tr>
<tr>
<td>2008-09</td>
<td>4917</td>
<td>58205</td>
</tr>
<tr>
<td>2009-10</td>
<td>6042.7</td>
<td>56928</td>
</tr>
</tbody>
</table>

(Rs in crore)

Source: Computed from the Annual reports, Employee’s Productivity = profit per Rs. per employee.

On the basis of the above table, the correlation between MAS and Employee’s Productivity of two banks is shown in table below:

Table no. 5.3

<table>
<thead>
<tr>
<th>Parameters</th>
<th>PNB</th>
<th>HDFC Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation</td>
<td>r</td>
<td>r²</td>
</tr>
<tr>
<td>MAS &amp; Employee's Productivity</td>
<td>0.64</td>
<td>0.40</td>
</tr>
</tbody>
</table>

Source: Annual reports
The above table reveals that correlation value of PNB in the case of MAS and Employee’s Productivity is 0.64 which is positive high degree of correlation and for HDFC is -0.83, which is negative moderate high degree of correlation. The conclusion arrive that implementation of MAS increasing the employee’s productivity at a positive high rate in PNB, but in case of HDFC it is negative moderate high rate.

So, in PNB the employee’s productivity increases with the high score of MAS. Though, the employee's productivity which is 40% depends on MAS. Here, it is clear that the PNB is far better position than HDFC.

### 5.1.3 Comparison of PNB and HDFC Bank on the basis of Employee’s Productivity

In order to test the hypothesis the above table no. 5.4 shows the coefficient of correlation of PNB and HDFC and their z-test values, standard error and Z-value for both the banks.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>PNB</th>
<th>HDFC</th>
<th>PNB</th>
<th>HDFC</th>
<th>( \sigma Z_i )</th>
<th>( Z )-value</th>
<th>Ho(&lt;1.96)</th>
</tr>
</thead>
<tbody>
<tr>
<td>r_1</td>
<td>0.64</td>
<td>-0.83</td>
<td>0.76</td>
<td>-1.19</td>
<td>1</td>
<td>1.95</td>
<td>A</td>
</tr>
</tbody>
</table>
The null hypothesis stated that the **MAS and Employee’s productivity are independent to each other.** Since, the computed value of $z = 1.95$ is less than the table value of $z = 1.96$ at 0.05 level of significance; therefore, the null hypothesis is accepted. Hence it can be safely said that there is no significant difference in the MAS and employees’ productivity. So, it can be concluded that the MAS and Employee’s productivity are independent to each other.

But employee’s productivity is a positive aspect which no company would like to be negative. Here, the correlation between MAS and Employee’s Productivity in HDFC Bank is negative -0.83, whereas in PNB it is positive 0.64. Therefore, it can be concluded that employee’s productivity in PNB is better than HDFC Bank.

### 5.2 Relationship between MAS and Profitability

This chapter has also been divided into following sub-sections.

- **5.2.1** The concept of profitability.
- **5.2.2** Profitability in Banks.
- **5.2.3** Relationship between MAS and Profitability.
- **5.2.4** Comparison of PNB and HDFC Bank on the basis of Profitability.

#### 5.2.1 Meaning and Concept of Profitability

Profitability means ability to make profit from all the business activities of an organization, company, firm, or an enterprise. It shows how efficiently the management can make profit by using all the resources available in the market.

**According to Harward & Upton,** “profitability is the ‘the ability of a given investment to earn a return from its use.’” However, the term ‘Profitability’ is not synonymous to the term ‘Efficiency’. Profitability is an index of efficiency; and is regarded as a measure of efficiency and management guide to greater efficiency. Though, profitability is an important yardstick for measuring the efficiency, the extent of profitability cannot be taken as a final proof of efficiency. Sometimes
satisfactory profits can mark inefficiency and conversely, a proper degree of efficiency can be accompanied by an absence of profit. The net profit figure simply reveals a satisfactory balance between the values receive and value given. The change in operational efficiency is merely one of the factors on which profitability of an enterprise largely depends. Moreover, there are many other factors besides efficiency, which affect the profitability.

**Definitions**

"Each business unit works to earn maximum profits. The existence, continuance and expansion of the business depends on its capacity to earn a good amount of the business depends on its capacity to earn a good amount of profits every year. The ability to earn profits is called profitability. The profitability of a business concern is the net result of a large number of decisions and policies."

Dr. A.K. Garg

"Earnings are now the focus as results will be an indication of companies' future profitability. Banks will benefit from increasing capital spending and their stocks are still cheap."

Tomokatsu Mori

R. S. Kulshrestha has rightly stated, “Profit in two separate business concern may be identical, yet, many a times, it usually happens that their profitability varies when measured in terms of size of investment”.

As Weston and Brigham rightly notes, “to the financial management profit is the test of efficiency and a measure of control, to the owners a measure of the worth of their investment, to the creditors the margin of safety, to the government a measure of taxable capacity and a basis of legislative action and to the country profit is an index of economic progress, national income generated and the rise in the standard of living”, while profitability is an outcome of profit. In other words, no profit drives towards profitability.
Reasons for Computing Profitability

Whether you are recording profitability for the past period or projecting profitability for the coming period, measuring profitability is the most important measure of the success of the business. A business that is not profitable cannot survive. Conversely, a business that is highly profitable has the ability to reward its owners with a large return on their investment. Increasing profitability is one of the most important tasks of the business managers. Managers constantly look for ways to change the business to improve profitability. These potential changes can be analyzed with a pro forma income statement or a Partial Budget. Partial budgeting allows you to assess the impact on profitability of a small or incremental change in the business before it is implemented.
For the purpose to achieve the objectives, researcher has computed the most important ratios i.e. net profit ratio, return on total assets ratio, return on investment ratio and overall profitability ratio.

### 5.2.2 Profitability - PNB & HDFC Bank

Table no. 5.5 shows Profitability - PNB & HDFC Bank

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PNB</td>
<td>HDFC</td>
<td>PNB</td>
<td>HDFC</td>
<td>PNB</td>
</tr>
<tr>
<td>MAS</td>
<td>76.6</td>
<td>58.6</td>
<td>76.9</td>
<td>58.7</td>
<td>72.8</td>
</tr>
<tr>
<td>ROIR</td>
<td>15.06</td>
<td>12.89</td>
<td>14.47</td>
<td>13.64</td>
<td>16.63</td>
</tr>
<tr>
<td>ROTAR</td>
<td>0.99</td>
<td>1.18</td>
<td>0.95</td>
<td>1.25</td>
<td>1.03</td>
</tr>
<tr>
<td>OPR</td>
<td>1.18</td>
<td>1.19</td>
<td>1.42</td>
<td>2.11</td>
<td>1.79</td>
</tr>
</tbody>
</table>

*Source: Computed from the Annual reports, Figures in brackets (%), MAS (Scores)*

In the above mentioned table, the researcher has calculated Correlation among the various parameters i.e. net profit ratio, return on investment ratio, return on total assets ratio and overall profitability ratio. Where \(X\) represent the total scores of MAS of five years and \(Y\) represent net profit ratio, return on investment ratio, return on total assets ratio and overall profitability ratio. More so, this is also helpful in testing the most important hypothesis of the study i.e.

**Ho₂: The MAS and Profitability are independent to each other.**
5.2.3 Relationship between MAS and Profitability of PNB and HDFC Bank

Here, the researcher has measured the impact of MAS on Profitability of both the banks. For this, the profitability has been computed by calculated net profit ratio, return on investment ratio, return on total assets ratio and overall profitability ratio. The net profit ratio is calculated by dividing profit after tax by net revenue.

Table no.5.6 shows Computation of Net Profit Ratio of both the banks.

(Rs in crore)

<table>
<thead>
<tr>
<th>Computation of Net Profit Ratio - PNB and HDFC Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>PAT</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>2005-06</td>
</tr>
<tr>
<td>2006-07</td>
</tr>
<tr>
<td>2007-08</td>
</tr>
<tr>
<td>2008-09</td>
</tr>
<tr>
<td>2009-10</td>
</tr>
</tbody>
</table>

Source: Computed from the Annual reports, MAS (Scores)
On the basis of the above table, the correlation between MAS and Profitability of the two banks is shown in table below:

<table>
<thead>
<tr>
<th>Table no.5.7</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Computation Karl Pearson’s Correlation Coefficient of PNB and HDFC Bank on the basis of Net Profit Ratio</strong></td>
</tr>
<tr>
<td>Parameter</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>Correlation</td>
</tr>
<tr>
<td>MAS &amp; Net profit ratio</td>
</tr>
</tbody>
</table>

The above table reveals that correlation value of PNB in the case of MAS and net profit ratio is 0.86 which is positive moderate high degree of correlation and for HDFC is -0.69, which shows negative high degree of correlation. The result reveals that implementation of MAS increasing the net profit ratio is moderate high in PNB and negative high degree in HDFC.

So, in PNB the profitability increases with the high score of MAS. Though the profitability is 74% it depends on MAS. Here, it is clear that the PNB is far better than HDFC.
The return on investment ratio is computed by profit after tax and interest divided by net worth.

Table no.5.8 shows Computation of Return on Investment of both the banks.

(Rs in crore)

<table>
<thead>
<tr>
<th>Years</th>
<th>PNB</th>
<th>HDFC Bank</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PAT</td>
<td>NW</td>
<td>(%)</td>
<td>ROI</td>
<td>MAS</td>
<td>PAT</td>
<td>NW</td>
<td>(%)</td>
</tr>
<tr>
<td>2005-06</td>
<td>14493109</td>
<td>95598487</td>
<td>15.06</td>
<td>76.6</td>
<td>870.8</td>
<td>6754.55</td>
<td>12.89</td>
<td>58.6</td>
</tr>
<tr>
<td>2006-07</td>
<td>15400842</td>
<td>104509772</td>
<td>14.74</td>
<td>76.9</td>
<td>1141.50</td>
<td>8365.18</td>
<td>13.64</td>
<td>58.7</td>
</tr>
<tr>
<td>2007-08</td>
<td>20487631</td>
<td>123183464</td>
<td>16.63</td>
<td>72.8</td>
<td>1590.20</td>
<td>14071.83</td>
<td>11.30</td>
<td>59.3</td>
</tr>
<tr>
<td>2008-09</td>
<td>30908809</td>
<td>149912709</td>
<td>21.08</td>
<td>76.5</td>
<td>22449392</td>
<td>1590-20</td>
<td>14071.83</td>
<td>11.30</td>
</tr>
<tr>
<td>2009-10</td>
<td>39035775</td>
<td>177292185</td>
<td>22.04</td>
<td>84.9</td>
<td>2947009</td>
<td>215200335</td>
<td>13.70</td>
<td>58.9</td>
</tr>
</tbody>
</table>

Source: Computed from the Annual reports, MAS (Scores)
On the basis of the above table the correlation between MAS and Profitability of two banks is shown in table below:

### Table no.5.9

<table>
<thead>
<tr>
<th>Parameters</th>
<th>PNB</th>
<th>HDFC Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation</td>
<td>$r$</td>
<td>$r^2$</td>
</tr>
<tr>
<td>MAS &amp; return on investment ratio</td>
<td>0.62</td>
<td>0.38</td>
</tr>
<tr>
<td></td>
<td>-0.34</td>
<td>0.12</td>
</tr>
</tbody>
</table>

The above table reveals that correlation value of PNB in the case of MAS and return on investment ratio is 0.62 which is positive high degree of correlation and for HDFC is -0.34, which shows negative moderate degree of correlation. The result reveals that implementation of MAS increasing the return on investment ratio is high in PNB and negative moderate degree in HDFC.

So, in PNB the profitability increases with the high score of MAS. Though the profitability is 38% it depends on MAS. Here, it is clear that the PNB is far better than HDFC.
The return on total assets ratio is computed by net profit after tax divided by total assets.

Table 5.10 shows Computation Return on Total Assets of both the banks.

<table>
<thead>
<tr>
<th>Years</th>
<th>PNB</th>
<th>HDFC Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PAT</td>
<td>TA</td>
</tr>
<tr>
<td>2005-06</td>
<td>14493109</td>
<td>1452673644</td>
</tr>
<tr>
<td>2006-07</td>
<td>15400842</td>
<td>162424965</td>
</tr>
<tr>
<td>2007-08</td>
<td>20487631</td>
<td>1999203606</td>
</tr>
<tr>
<td>2008-09</td>
<td>30908809</td>
<td>2469186473</td>
</tr>
<tr>
<td>2009-10</td>
<td>39053575</td>
<td>2966327772</td>
</tr>
</tbody>
</table>

Source: Computed from the Annual reports, MAS (Scores)
On the basis of the above table the correlation between MAS and Profitability of two banks is shown in table below:

Table no. 5.11

<table>
<thead>
<tr>
<th>Parameters</th>
<th>PNB</th>
<th>HDFC Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation</td>
<td>r</td>
<td>r2</td>
</tr>
<tr>
<td>MAS &amp; return on total assets ratio</td>
<td>0.68</td>
<td>0.46</td>
</tr>
</tbody>
</table>

The above table reveals that correlation value of PNB in the case of MAS and return on total assets ratio is 0.68 which is positive high degree of correlation and for HDFC it is -0.09, which shows negative very low degree of correlation. The result reveals that implementation of MAS increasing the return on total assets ratio high in PNB and negative very low degree in HDFC.

So, in PNB the profitability increases with the high score of MAS. Though the profitability is 46% it depends on MAS. Here, it is clear that the PNB is far better than HDFC.
The overall profitability ratio is calculated by dividing profit before tax by capital employed.

**Table no.5.12 shows Computation of Overall Profitability Ratio of both the banks.**

(Rs in crore)

<table>
<thead>
<tr>
<th>Years</th>
<th>PNB</th>
<th>HDFC Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PBT</td>
<td>CE</td>
</tr>
<tr>
<td>2005-06</td>
<td>2140.54</td>
<td>1357261515</td>
</tr>
<tr>
<td>2006-07</td>
<td>2268.80</td>
<td>152249876</td>
</tr>
<tr>
<td>2007-08</td>
<td>3500.63</td>
<td>1842221320</td>
</tr>
<tr>
<td>2008-09</td>
<td>4916.99</td>
<td>2368229373</td>
</tr>
<tr>
<td>2009-10</td>
<td>6042.66</td>
<td>2862137572</td>
</tr>
</tbody>
</table>

Source: Computed from the Annual reports, MAS (Scores)
On the basis of the above table the correlation between MAS and Overall Profitability Ratio of two banks is shown in table below:

**Table no.5.13**

<table>
<thead>
<tr>
<th>Parameters</th>
<th>PNB</th>
<th>HDFC Bank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Correlation</td>
<td>r</td>
<td>r²</td>
</tr>
<tr>
<td>MAS &amp; Overall Profitability Ratio</td>
<td>0.46</td>
<td>0.21</td>
</tr>
</tbody>
</table>

The above table reveals that correlation value of PNB in the case of MAS and overall profitability ratio is 0.46 which is positive moderate degree of correlation and for HDFC is -0.16, which shows negative very low degree of correlation. The result reveals that implementation of MAS increasing the overall profitability ratio moderately in PNB and negative very low degree in HDFC.

So, in PNB the profitability increases with the high score of MAS. Though the profitability is 21% it depends on MAS. Here, it is clear that the PNB is far better than HDFC.

**5.2.5 Comparison of PNB and HDFC Bank on the basis of Profitability**

In order to test the hypothesis the above table **5.14** shows the coefficient of correlation of PNB and HDFC and their z-test values, standard error and Z-value for both the banks.
CHAPTER -5 Relationship of MAS with Employee’s Productivity and Profitability

<table>
<thead>
<tr>
<th>Parameters</th>
<th>PNB</th>
<th>HDFC</th>
<th>PNB</th>
<th>HDFC</th>
<th>( \sigma Z_1 - Z_2 )</th>
<th>Z-value</th>
<th>Ho(&lt;1.96)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPR</td>
<td>0.86</td>
<td>-0.69</td>
<td>1.29</td>
<td>-0.85</td>
<td>1</td>
<td>2.14</td>
<td>R</td>
</tr>
<tr>
<td>ROIR</td>
<td>0.62</td>
<td>-0.34</td>
<td>0.73</td>
<td>-0.35</td>
<td>1</td>
<td>1.08</td>
<td>A</td>
</tr>
<tr>
<td>ROTAR</td>
<td>0.68</td>
<td>-0.09</td>
<td>0.83</td>
<td>-0.09</td>
<td>1</td>
<td>0.92</td>
<td>A</td>
</tr>
<tr>
<td>OPR</td>
<td>0.46</td>
<td>-0.16</td>
<td>0.49</td>
<td>-0.16</td>
<td>1</td>
<td>0.66</td>
<td>A</td>
</tr>
</tbody>
</table>

The null hypothesis stated that the **MAS and profitability are independent to each other**.

In the case of net profit ratio the computed value of \( z \) 2.14 is greater than the table value of \( z \) 1.96 at 0.05 level of significance. Therefore, the null hypothesis is rejected. It can be safely said that there is a significant difference in the MAS and Profitability of the two banks. Here, the correlation between MAS and net profit ratio in HDFC Bank is negative -0.69, whereas in PNB it is positive 0.86. Hence, it can be concluded that PNB is better than HDFC Bank because PNB is showing positive trend.

In the case of return on investment ratio, the computed value of \( z \) 1.08 is less than the table value of \( z \) 1.96 at 0.05 level of significance. Therefore, the null hypothesis is accepted. Hence it can be safely said that there is no significant difference in the MAS and Profitability. Here, the correlation between MAS and return on investment in HDFC Bank is negative -0.34 whereas, in PNB it is positive 0.62. Therefore, the researcher has concluded that return on investment in PNB is better than HDFC Bank.
In the case of return on total assets ratio the computed value of z 0.92 is less than the table value of z 1.96 at 0.05 level of significance. Therefore, the null hypothesis is accepted. Hence it can be safely said that there is insignificant difference in the MAS and Profitability. Here, the correlation between MAS and return on total assets in HDFC Bank is negative -0.09, whereasin PNB it is positive 0.68. Therefore, the researcher has concluded that return on total assets in PNB is better than HDFC Bank.

In the case of overall profitability ratio, the computed value of z 0.66 is less than the table value of z 1.96 at 0.05 level of significance. Therefore, the null hypothesis is accepted. Hence it can be safely said that there is insignificant difference in the MAS and Profitability. Here, the correlation between MAS and overall profitability in HDFC Bank is negative -0.16. However, in PNB it is positive 0.46. Therefore, the researcher has concluded that overall profitability in PNB is better than HDFC Bank.
REFERENCES

2. Annual reports of PNB.
3. Annual reports of HDFC Bank.
5. Gallup: Q12 Employee Engagement Surve².
9. Investor words.com.¹
17. Profitability-Wikipedia.

