<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:1</td>
<td>INTRODUCTION</td>
<td>403</td>
</tr>
<tr>
<td>9:2</td>
<td>A BACKDROP</td>
<td>403</td>
</tr>
<tr>
<td>9:3</td>
<td>EXPENDITURES ON SOCIAL SECURITY MEASURES</td>
<td>404</td>
</tr>
<tr>
<td>9:4</td>
<td>EXPENDITURES ON LABOUR WELFARE MEASURES</td>
<td>406</td>
</tr>
<tr>
<td>9:5</td>
<td>PRODUCTION AND LABOUR PRODUCTIVITY</td>
<td>409</td>
</tr>
<tr>
<td>9:6</td>
<td>IMPACT OF SOCIAL SECURITY MEASURES ON OUTPUT</td>
<td>411</td>
</tr>
<tr>
<td>9:7</td>
<td>IMPACT OF LABOUR WELFARE MEASURES ON OUTPUT</td>
<td>415</td>
</tr>
<tr>
<td>9:8</td>
<td>ABSENTEEISM</td>
<td>417</td>
</tr>
<tr>
<td>9:9</td>
<td>IMPACT OF SOCIAL SECURITY MEASURES ON ABSENTEEISM</td>
<td>419</td>
</tr>
<tr>
<td>9:10</td>
<td>IMPACT OF SOCIAL SECURITY MEASURES ON MANDAYS LOST</td>
<td>421</td>
</tr>
<tr>
<td>9:11</td>
<td>IMPACT OF LABOUR WELFARE MEASURES ON ABSENTEEISM</td>
<td>422</td>
</tr>
</tbody>
</table>
9:1 INTRODUCTION

An attempt has been made in this chapter to present the sharp differences between the two organisations in respect of the expenditures on social security measures, the expenditures on labour welfare measures and their impact on parameters such as production, labour productivity, absenteeism and attitudes of the workers.

9:2 A BACKDROP

At the outset, the Regional Workshops, Hubli and Bangalore are the two automobile centres owned, managed and administered by the Karnataka State Road Transport Corporation. A close study of these organisations has revealed that there are several commonalties in respect of:

1. the administrative set up;
2. the productive activities;
3. the style of functioning; and
4. funding of social security and labour welfare programmes, etc.

In spite of this, there exist certain sharp differences. An attempt has been made, in the following analysis to display a comparative picture of
the impact of social security and labour welfare measures on production, productivity, absenteeism and attitudes of the workers.

9:3 EXPENDITURES ON SOCIAL SECURITY MEASURES

Beyond doubt, there has been perceptible increase in the expenditures on social security measures, during the period under review, in both the organisations. A close examination of these expenditures brings forward following facts:

1. These expenditures are comparatively more in R.W. Hubli than in R.W. Bangalore;

2. In terms of annual compound growth rate, these expenditures are high in R.W. Hubli (16.02 per cent) than in R.W. Bangalore (14.66 per cent);

3. Based on the Consumers’ Price Index for Industrial Workers (1982 = 100), the real expenditures, in respect of R.W. Hubli, have gone up from Rs. 14.5 lakhs in 1980-81 to Rs. 39.8 lakhs in 1995-96. In case of R.W. Bangalore, the increase is from Rs. 10.1 lakhs to Rs. 23.4 lakhs during the period under review;
4. The social security expenditures per worker are more in R.W. Hubli than in R.W. Bangalore. The analysis of data reflects that in case of R.W. Hubli the expenditures have gone up from Rs. 823 in 1980-81 to Rs. 13,024 in 1995-96. In case of R.W. Bangalore, these expenditures are Rs. 681 and Rs. 7,746 for respective years;

5. In real terms (1982 = 100) the expenditures per worker have gone up from Rs. 1,016 in 1980-81 to Rs. 4,161 in 1995-96 in case of R.W. Hubli and Rs. 841 to Rs. 2,475 in respect of R.W. Bangalore, during the period under review.

6. Distinction may also be drawn on the basis of the annual compound growth rate of social security expenditures component-wise. These information have been shown in Table 9.1.

The calculations made in terms of annual compound growth rate, Table 9.1, reflect that the expenditures on social security measures - component-wise, are comparatively more in R.W. Bangalore than in R.W. Hubli except in case of Provident Fund.
TABLE - 9.1
ANNUAL COMPOUND GROWTH RATE OF SOCIAL SECURITY EXPENDITURES (COMPONENT-WISE)

<table>
<thead>
<tr>
<th>Social Security components</th>
<th>Annual compound Growth rate in percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RWH</td>
</tr>
<tr>
<td>Medical Aid</td>
<td>25.26</td>
</tr>
<tr>
<td>Gratitude</td>
<td>22.89</td>
</tr>
<tr>
<td>Provident Fund</td>
<td>24.28</td>
</tr>
<tr>
<td>D.C.R.B.</td>
<td>3.50</td>
</tr>
</tbody>
</table>

7. The social security expenditures viewed from the angle of Co-efficient of Variation reveal that the R.W. Bangalore (CVy = 70.87) is more consistent than the R. W. Hubli (CVx = 75.18).

9:4 EXPENDITURES ON LABOUR WELFARE MEASURES

In the following analysis, distinction is drawn on the basis of the expenditures on labour welfare measures in both the organisations.
1. The annual compound growth rate of expenditures on labour welfare measures is comparatively high in R.W. Bangalore (10.38 per cent) than in R.W. Hubli (10.17 per cent).

2. Based on the Consumers' Price Index for Industrial Workers (1982 = 100), the real expenditures in respect of R.W. Bangalore have gone up from Rs.38.2 lakhs in 1980-81 to Rs.47.9 lakhs in 1995-96. As against this, in case of R.W. Hubli, the real expenditures have increased from Rs.35.9 lakhs to Rs.43.8 lakhs.

3. Per worker expenditures on labour welfare measures are high in R.W. Bangalore than in R.W. Hubli. The analysis of data reveals that during 1980-81 the per worker expenditures were of the order of Rs.2,565 in R.W. Bangalore while in respect of R.W. Hubli, the expenditures totalled Rs.2,075. During 1995-96 these expenditures totalled Rs.15,858 and Rs 14,362 in respective Workshops.

4. In real terms (Base year 1982 = 100) the per worker expenditures on welfare measures in R.W. Bangalore were of the order of Rs.3,167 while in respect of R.W. Hubli the expenditures totalled Rs.2,562 in 1980-81. During 1995-96.
these expenditures are Rs.5,067 and Rs.4,588 in respective Workshops.

5. Distinction may also be drawn on the basis of the annual compound growth rate of expenditures on labour welfare measures (component-wise). These details are presented analytically in Table 9.2.

TABLE - 9.2
ANNUAL COMPOUND GROWTH RATE OF EXPENDITURES ON LABOUR WELFARE MEASURES

<table>
<thead>
<tr>
<th>Labour welfare components</th>
<th>Annual compound Growth rate in percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RWH</td>
</tr>
<tr>
<td>Bonus</td>
<td>0.04</td>
</tr>
<tr>
<td>Festival Advance</td>
<td>8.7</td>
</tr>
<tr>
<td>Provident Fund Advance</td>
<td>12.37</td>
</tr>
</tbody>
</table>

The information shown in Table 9.2 reveal that the annual compound growth rate in respect of all chosen components of labour welfare is comparatively high in R.W. Bangalore than in R.W. Hubli.
6. Viewed from the angle of Co-efficient of Variation, the R.W. Bangalore (CV_y = 46.50) is more consistent in respect of expenditures on labour welfare measures than R.W. Hubli (CV_x = 50.91).

9:5 PRODUCTION AND LABOUR PRODUCTIVITY

During the period under review, there has been phenomenal increase in the value of output of both the organisations. A comparative study of the output performance of these organisations brings-forth following differences.

1. The annual compound growth rate of the value of output is high in R.W. Bangalore (12.64 per cent) than in R.W. Hubli (12.10 per cent).

2. Based on the Transport Equipment and Parts Index Numbers (1981-82 = 100) the increase in real output is comparatively high in R.W. Bangalore than in R.W. Hubli. The analysis of data has shown that the real output in respect of R.W. Bangalore has gone up from Rs.5.34 crores in 1981-82 to Rs.9.42 crores in 1995-96. In case of R.W. Bangalore, it has increased from Rs.6.66 crores to Rs. 8.41 crores during the period under review.
3. The examination of data pertaining to the value of output under the framework of Co-efficient of Variation has shown that R.W. Hubli ($CV_x = 40.53$) is more consistent than R.W. Bangalore ($CV_y = 54.76$).

4. The per worker productivity index, during the period under review, is high in R.W. Bangalore (671.60) than in R.W. Hubli (622.24).

5. The analysis of data has shown that during 1980-81 the value of output per worker in respect of R.W. Bangalore is 4.8 per cent higher than R.W. Hubli. During 1995-96 it is 13.1 per cent more in R.W. Bangalore than R.W. Hubli.

6. The mean productivity per worker is also high in R.W. Bangalore (Rs.1.17 lakhs) than R.W. Hubli (Rs.1.01 lakhs).

7. In percentage terms, the mean productivity per worker in R.W. Bangalore is 15.85 per cent more than its counterpart, i.e., R.W. Hubli.

8. Based on Transport Equipment and Parts Price Index Numbers (1981-82 = 100) the calculation of value of output per worker (labour productivity) in real terms has shown that the
performance of R.W. Bangalore is quite impressive than its counterpart R.W. Hubli. The analysis of data have shown that the labour productivity in respect of R.W. Bangalore has increased from Rs.45,003 in 1981-82 to Rs.99,539 in 1995-96. On the contrary, in case of R.W. Hubli the increase is from Rs.42,170 to Rs.87,997 during the period under review.

9. The computation of data pertaining to the value of output per worker (labour productivity) under the framework of Co-efficient of Variation has shown that R.W. Hubli (CVx = 56.79) is more consistent than R.W. Bangalore (CVy = 63.51).

9:6 IMPACT OF SOCIAL SECURITY MEASURES ON OUTPUT

Distinction may be drawn on the basis of the findings which have emerged as a result of computation of data under the framework of Correlation and Regression Analysis reflecting the effects of social security measures on output.

1. The application of Correlation Analysis has shown that there exist positive and significant Co-efficients of Correlation between the expenditures on social security measures (both aggregate and per worker) and the value of output (both
aggregate and per worker). The comparative study reveals that:

1. The obtained "r" value between social security expenditures (aggregate) and the value of output (aggregate) in respect of R.W. Bangalore \( (r = 0.917) \) is comparatively higher than R.W. Hubli \( (r = 0.905) \); while

2. The obtained "r" value between expenditures on social security measures (per worker) and the value of output (per worker) in respect of R.W. Hubli \( (r = 0.945) \) is comparatively higher than R.W. Bangalore \( (r = 0.922) \).

The results of Correlation analysis have shown that there exist positive and significant Co-efficients of Correlation between per worker expenditures on Medical Aid, Provident Fund, Gratuity, D.C.R.B. and the value of output (per worker). The comparative study reveals that:

1. It is Provident Fund in R.W. Hubli \( (r = 0.935) \) and Gratuity in R.W. Bangalore \( (r = 0.928) \) which are closely correlated with the output.
To find out whether the correlation (r's) obtained for:

1. per worker expenditure on Provident Fund and the value of output per worker in respect of R.W. Hubli (r = 0.935) and R.W. Bangalore (r = 0.833); and

2. per worker expenditures on Gratuity and the value of output per worker in respect of R.W. Bangalore (r = 0.928) and R.W. Hubli (r = 0.898)

differ significantly with each other, the Z values were obtained for the r's. On the basis of Fisher's Z Transformation, it was found that there is no significant difference between coefficients of Correlation of R.W. Hubli and R.W. Bangalore in respect of fore-detailed variables.

However, on the basis of Co-efficient of Correlation (r's), it is Provident Fund in R.W. Hubli and Gratuity in R.W. Bangalore which are closely correlated with output.

The application of Regression analysis has shown that there exist positive regression co-efficients between per worker expenditures on Medical Aid, Provident Fund, Gratuity, D.C.R.B. and the value of output per worker in both the
organisations except Medical Aid in R.W. Hubli. The comparative study reveals that:

1. there exists negative regression co-efficient between per worker expenditures on Medical aid and the value of output per worker in case of R.W. Hubli (-0.2120). On the contrary, regression co-efficient in respect of R.W. Bangalore (0.5382) is not merely positive but also significant. In other words, unlike in R.W. Hubli, the per worker expenditures on Medical Aid in R.W. Bangalore have significant impact on output;

2. beyond doubt, there exist positive regression co-efficients between per worker expenditures on Provident Fund and the value of output in case of R.W. Hubli (0.9048) as also the R.W. Bangalore (0.3654). However, value of regression co-efficient in respect of R.W. Hubli is not merely positive but also significant. It implies that the expenditures on Provident Fund have resulted into comparatively more influence on output in Hubli Workshops than its counterpart in Bangalore.
A close examination of the impact of labour welfare measures on output in both the organisations brings forward following comparisons.

1. The application of Correlation Analysis has shown that there exist positive and significant Co-efficients of Correlation between the expenditures on labour welfare measures (both aggregate and per worker) and the value of output (both aggregate and per worker). A comparative study reveals that:

1. the obtained "r" value between expenditures on labour welfare measures (aggregate) and output in respect of R.W. Bangalore (r = 0.969) is comparatively higher than in respect of its counterpart R.W. Hubli (r = 0.893);

2. the obtained "r" value between per worker expenditures on labour welfare measures and the value of output per worker in respect of R.W. Bangalore (r = 0.976) is comparatively higher than in case of R.W. Hubli (r = 0.944).
3. On the basis of Co-efficient of Correlation (r's) it is evident that these expenditures are closely correlated with output in respect of R.W. Bangalore than in case of R.W. Hubli.

2. Based on the Fisher's Z Transformation it was found that there is no significant difference between the Co-efficients of Correlation of R.W. Bangalore and R.W. Hubli in respect of per worker expenditures on Provident Fund Advance:

\[
\begin{align*}
\text{RWB} & \quad r = 0.969 \\
\text{RWH} & \quad r = 0.934
\end{align*}
\]

as also in respect of Festival Advance:

\[
\begin{align*}
\text{RWB} & \quad r = 0.914 \\
\text{RWH} & \quad r = 0.892
\end{align*}
\]

However, on the basis of Co-efficient of Correlation (r's) it seems that the expenditures on these components are closely correlated with labour productivity in respect of R.W. Bangalore than in R.W. Hubli.

2. Per worker expenditures on Bonus seem to have relatively higher correlation with the value of output (per worker)
in R.W. Hubli ($r = 0.496$) than in R.W. Bangalore ($r = 0.404$).

3. The application of Regression Analysis has shown that there exist positive and significant regression co-efficients between per worker Provident Fund Advance and value of output per worker in both the organisations. However, a comparative analysis shows that:

1. the obtained value of regression co-efficient in respect of R.W. Hubli (0.7457) is comparatively higher than in R.W. Bangalore (0.7196).

In other words, the Provident Fund Advance in R.W. Hubli has relatively more influence on labour productivity than in R.W. Bangalore.

9:8 ABSENTEEISM

An attempt has been made, in the following analysis, to display a comparative picture of the effect of social security and labour welfare measures on absenteeism in the Regional Workshops of Hubli and Bangalore.
1. The rate of absenteeism has continued to remain higher in R.W. Bangalore than in R.W. Hubli during the period under review. The index reveals that during 1980-81 the absenteeism rate in R.W. Bangalore was 23.8 per cent higher than in R.W. Hubli. During 1995-96, it is 12.8 per cent higher than its counterpart in Hubli.

2. The annual compound decline rate being 1.75 per cent in R.W. Hubli, it is 2.32 per cent in R.W. Bangalore.

3. The mean absenteeism rate in R.W. Hubli being 19.06 per cent, it is 23.21 per cent in R.W. Bangalore. However, the application of "t" test has shown that this difference is insignificant ("t" value = 0.53).

4. The application of Co-efficient of Variation exercise has shown that R.W. Hubli (CVx = 8.67) is more consistent than the R.W. Bangalore (CVy = 13.9) in reducing absenteeism rate.

5. The analysis of data indicates that the Hubli Workshops has settled down at 18 per cent rate of absenteeism while, the Bangalore Workshops, at little over 20 per cent. On the basis of these results, it may be concluded that Hubli Workshops is
better performer than its counterpart in Bangalore in arresting the problem of absenteeism.

9:9 IMPACT OF SOCIAL SECURITY MEASURES ON ABSENTEEISM

The application of Correlation Analysis has shown that there exist negative and significant Co-efficients of Correlation between the expenditures on social security measures (both aggregate and per worker) and the rate of absenteeism. A close study of these results reveal that:

1. the obtained “r” value between expenditures on social security measures (aggregate) and the rate of absenteeism is comparatively higher in respect of R.W. Bangalore \( (r = -0.755) \) than R.W. Hubli \( (r = -0.732) \);

2. the obtained “r” value between per worker expenditures on social security and the absenteeism rate in respect of R.W. Bangalore \( (r = -0.669) \) is comparatively higher than R.W. Hubli \( (r = -0.610) \);
3. It is evident from the Co-efficient of Correlation (r's) that these expenditures are strongly correlated with the rate of absenteeism in R.W. Bangalore than in R.W. Hubli.

2. The application of Fisher's Z Transformation Test has revealed that there is no significant difference between Co-efficients of Correlation (r's) of R.W. Bangalore and R.W. Hubli in respect of absenteeism rate and per worker expenditures on:

**Provident Fund**

<table>
<thead>
<tr>
<th></th>
<th>R.W.</th>
<th>R.W.H.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RWB</td>
<td>$r = -0.644$</td>
<td>RWH $r = -0.585$</td>
</tr>
</tbody>
</table>

**Gratuity**

<table>
<thead>
<tr>
<th></th>
<th>R.W.</th>
<th>R.W.H.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RWB</td>
<td>$r = -0.684$</td>
<td>RWH $r = -0.621$</td>
</tr>
</tbody>
</table>

**D.C.R.B.**

<table>
<thead>
<tr>
<th></th>
<th>R.W.</th>
<th>R.W.H.</th>
</tr>
</thead>
<tbody>
<tr>
<td>RWB</td>
<td>$r = -0.610$</td>
<td>RWH $r = -0.544$</td>
</tr>
</tbody>
</table>

However, on the basis of Co-efficient of Correlation (r's) it seems that the magnitude of correlation between these
expenditures and the rate of absenteeism is comparatively high in respect of R.W. Bangalore than in R.W. Hubli.

3. The application of Regression Analysis has displayed that there exists negative regression co-efficient between per worker expenditures on Provident Fund and the rate of absenteeism in respect of R.W. Hubli (-0.296) while the value of regression co-efficient in case of R.W. Bangalore is positive (2.531). It implies that these expenditures have resulted into a decline in absenteeism in R. W. Hubli.

9:10 IMPACT OF SOCIAL SECURITY MEASURES ON MANDAYS LOST

The computation of relevant data under the framework of Correlation Analysis has shown that there exist negative and significant Co-efficients of Correlation between expenditures on social security measures and the mandays lost in both the organisations. A close examination of these results indicate that:

1. the level of significance between these two variables is at 0.05 in respect of R. W. Hubli (r = -0.572) while in respect of R.W. Bangalore (r = -0.472), it is at 0.001 level;
2. These results are indicative of the fact that expenditures on social security measures are comparatively more effective in reducing mandays lost in R.W. Hubli than R.W. Bangalore.

9:11 IMPACT OF LABOUR WELFARE MEASURES ON ABSENTEEISM

The results of Correlation Analysis have displayed that there exist negative and highly significant Co-efficients of Correlation between expenditures on labour welfare measures (both aggregate and per worker) and the rate of absenteeism in both the Workshops. A close examination of these results reveal that:

1. The obtained “r” value between expenditures on labour welfare measures (aggregate) and the rate of absenteeism in respect of R.W. Bangalore (r = -0.755) is comparatively higher than in R.W. Hubli (r = -0.734);

2. Similarly, the obtained “r” value between per worker expenditures on labour welfare measures and the absenteeism rate in case of R.W. Bangalore (r = -0.743) is comparatively higher than R.W. Hubli (r = -0.629);
3. these results indicate that the magnitude of correlation between these two variables is comparatively more in case of R.W. Bangalore.

The application of Correlation Analysis has shown that there exist negative and significant Co-efficients of Correlation between per worker expenditures in Bonus, Provident Fund Advance, Festival Advance and the rate of absenteeism in both the organisations. A close study of these results reveal that:

1. it is Bonus in R.W. Hubli and Festival Advance in R.W Bangalore which are relatively more influencing variables on absenteeism since the “r” values are comparatively more in respective Workshops;

   **Bonus**
   
   RWH $r = -0.598$  
   RWB $r = -0.527$

   **Festival Advance**
   
   RWB $r = -0.726$  
   RWH $r = -0.561$

2. Of the three chosen variables from the realm of labour welfare measures, it is Bonus in R.W. Hubli and Festival Advance in
R.W. Bangalore which are effective in reducing absenteeism in respective Workshops.

The application of Regression Analysis has shown that

1. the value of regression co-efficient in respect of per worker Festival Advance and the rate of absenteeism in R.W Bangalore (-0.305) is negative while in respect of R.W Hubli (0.486), it is positive;

2. these results imply that the Festival Advance has exerted profused impact on reducing absenteeism in R.W. Bangalore

9:12 COMPARISON OF THE R.W. HUBLI AND R.W BANGALORE ON ATTITUDINAL MEASURES

An attempt is made to compare the two organisations on the attitudinal measures towards Organisational Identification, Work Identification, Management Identification, Supervisors Identification and Fellow-workers Identification. For this the Students' "t" test has been worked out and the results are presented analytically in the following tables.
**TABLE - 9.3**

RESULTS OF "t" TEST EXERCISE IN RESPECT OF ORGANISATIONAL IDENTIFICATION

<table>
<thead>
<tr>
<th></th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal Variances</td>
<td>- 0.74</td>
<td>0.4636</td>
</tr>
<tr>
<td>Unequal Variances</td>
<td>- 0.74</td>
<td>0.4636</td>
</tr>
</tbody>
</table>

**TABLE - 9.4**

RESULTS OF "t" TEST EXERCISE IN RESPECT OF WORK IDENTIFICATION

<table>
<thead>
<tr>
<th></th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal Variances</td>
<td>- 1.60</td>
<td>0.1065</td>
</tr>
<tr>
<td>Unequal Variances</td>
<td>- 1.60</td>
<td>0.1065</td>
</tr>
</tbody>
</table>
### TABLE - 9.5

RESULTS OF "t" TEST EXERCISE IN RESPECT OF MANAGERS IDENTIFICATION

<table>
<thead>
<tr>
<th></th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal Variances</td>
<td>-1.37</td>
<td>0.1664</td>
</tr>
<tr>
<td>Unequal Variances</td>
<td>-1.37</td>
<td>0.1664</td>
</tr>
</tbody>
</table>

### TABLE - 9.6

RESULTS OF "t" TEST EXERCISE IN RESPECT OF SUPERVISORS IDENTIFICATION

<table>
<thead>
<tr>
<th></th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal Variances</td>
<td>-1.57</td>
<td>0.1129</td>
</tr>
<tr>
<td>Unequal Variances</td>
<td>-1.57</td>
<td>0.1129</td>
</tr>
</tbody>
</table>
The results presented in Table 9.3 to 9.7 indicate very clearly that the obtained “t” values are not significant at both the levels. This suggests that the two organisations do not differ in the attitudinal components of the workers. It is significant to mention here that these two organisations have shown no significant differences in respect of social security and labour welfare measures. It is, therefore, equally evident that the organisations have no differences in terms of attitudes of the workers although the two organisations are housed in geographically distant areas but due to the creation of similar physical and psychological conditions, the attitudes of the workers have not shown any marked differences.