7.15 **Case Study**

Your directors are interested in comparing three different types of food outlets so the testing which we shall study in the next chapter is more appropriate than the tests studied in this chapter which only consider one or two groups of data.

As there are obviously problems with normality, (results of case study 5.10), they would like you, at this stage, to carry out a Kolmogorov-Smirnov test (SPSS or Minitab) to see which, if any, of the variables listed below are normally distributed. These are the ones we shall explore further in the next case study.

- Gross sales for all outlets together; gross sales for each type of outlet separately
- Market value of all outlets together; market value of each type of outlet separately
- Number of full-time employees for all outlets together; number of full-time employees for each type of outlet separately
- Number of part-time employees for all outlets together; number of part-time employees for each type of outlet separately
- Wages as % of sales for all outlets together; wages as % of sales for each type of outlet separately
- Advertising as % of sales for all outlets together; advertising as % of sales for each type of outlet separately

<table>
<thead>
<tr>
<th>N</th>
<th>Gross sales (£'000)</th>
<th>Market value of business (£'000)</th>
<th>Wages as % of sales</th>
<th>Advertising as % of sales</th>
<th>Number of full-time employees</th>
<th>Number of part-time employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>104</td>
<td>101</td>
<td>99</td>
<td>101</td>
<td>99</td>
<td>106</td>
<td>105</td>
</tr>
</tbody>
</table>

*a. Test distribution is Normal.
*b. Calculated from data.*
The majority of this data is not normal so will need non-parametric testing in the next case study.