Anders Wallgren Britt Wallgren Rolf Persson Ulf Jorner Jan-Aage Haaland

## GRAPHING STATISTICS STATISTICS

## **Greating Better Charts**



**SAGE Publications** International Educational and Professional Publisher Thousand Oaks London New Delhi Contents

1	The power of charts	6
2	Choosing chart types The structure of the data A gallery of charts	10 10 13
3	The building blocks of charts Text in charts Patterns, shading and colour	17 19 22
4	Bar charts – our basic chart Horizontal bar charts Grouped bar charts Stacked bar charts Dot charts	24 25 26 27 29
5	Showing frequencies Histograms Population pyramids Frequency polygons Stem and leaf charts Step function graphs and ogives Pie charts	30 30 32 33 33 34 34
6	Showing development over time Building blocks of time series charts Proportions of time series charts Index charts Semilogaritmic charts Periodical data Accumulated line charts – area charts	36 37 38 40 41 42 44
7	Showing relationship Scatterplots Showing relationship with bar charts Showing relationship with dot charts Showing relationship with barometer charts	46 46 48 49 50
8	Showing variation Boxplots Lorenz charts	51 51 53
9	Showing flows Inflows and outflows only Complete input-output matrices Flows between stocks Geographic flows	54 54 55 56 56

4

10	Showing geographical variation Statistical maps Choropleth maps – showing ratios Square maps Isopleth maps Building blocks of maps Density maps – showing numbers Cartograms	57 58 60 61 62 63
11	Some chart philosophy Subject matter and target group The design and function of charts About perception	64 64 72
12	Charts och layout	74
13	Charts in practice Patterns and order in bar charts Bar chart with extra dimension Bar length – the zero on the y-axis Time series on different levels Periodical data – a chart paradox Situations with many comparisons News graphics – how amusing can you be?	76 76 77 78 80 83 84 86
14	Check-list Before you start When you (think you) have finished	88 88 89
15	Choice of technology for producing charts Index Bibliography	90 92 94

## Reading instructions:

Chapters 4 to 10 deal with different types of charts. If you do not want to start by reading about all the types of charts in one go, you can leave some of these chapters until later. Regardless of what types of chart you want to work with, you should read the following chapters which deal with general concepts and principles:

Chapter 2 *Choosing chart types* and Chapter 3 *The building blocks of charts* Chapter 11 *Some chart philosophy* and Chapter 13 *Charts in practice* 

You should also practice drawing charts with your own data (some data can be found in the book). Use whatever graphics program is available to you. You can then try varying the form and building blocks of the chart for each set of data. Learn by comparing the different charts.