

Spreadsheet Analysis: Using Microsoft Excel

Introduction to Excel

- A **spreadsheet** is an electronic file that contains a grid of columns and rows used to organize related data and display results of calculations, enabling interpretation of quantitative data for decision making.
- A **spreadsheet program** is a computer application, such as Microsoft Excel, that you use to create and modify electronic spreadsheets.
- A **worksheet** is a single spreadsheet that contains descriptive labels, numeric values, formulas, functions, and graphical representations of data.
- A **workbook** is a collection of one or more related worksheets contained within a single file.
- Steps to design a workbook and a worksheet: 1) **State the purpose of the worksheet.** 2) **Decide what input values are needed.** Create an **input area**, a range of cells to enter values for your variables or assumptions. Clearly label an input area so that users know where to change values. 3) **Decide what outputs are needed.** Create an **output area**, a range of cells that contains the results of manipulating values in the input area. As you plan your formulas, avoid constants; instead use references to cells containing numbers. 4) **Assign the worksheet inputs and results into columns and rows, and consider labeling.** Labels at the top of each column represent individual columns of data, such as cost, markup rate, and selling price. 5) **Enter the labels, values and formulas in Excel.** Change the input values to test that your formulas produce correct results. Correct any errors in the formulas to produce correct results regardless of the input values. 6) **Format the numerical values in the worksheet.** Align decimal points in columns of numbers. 7) **Format the descriptive titles and labels attractively but so as not to distract your audience from the purpose of the worksheet.** Include a descriptive title and label for each column. Add bold to headings, increase the font size, and use color to draw attention to important values or trends. 8) **Document the worksheet as thoroughly as possible.** Include the current date, your name as the author of the worksheet, assumptions, and purpose of the worksheet. 9) **Save the completed workbook.** Preview and prepare printouts for distribution in meetings, or send an electronic copy of the workbook to those who need it.
- The **Name Box** is an identifier that displays the address of the cell currently used in the worksheet. You can use it to go to a cell, assign a name to one or more cells, or select a function.
- The **Formula Bar** shows the contents of the active cell. (Text, value, date or formula).
- **Sheet tabs**, located at the bottom-left corner of the Excel window, show the names of the worksheets contained in the workbook. Three sheet tabs are included when you start a new Excel workbook.
- The intersection of a column and row is a **cell**; a total of over 17 billion cells are available in a worksheet. Each cell has a unique **cell address**, identified