

# Microsoft Excel and Power BI



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# Microsoft Excel and Power BI

Excel and Power BI are both robust tools for data analysis and visualization. Numerous skills and functionalities in Excel are directly applicable to Power BI, which can enhance your capability to construct efficient data models and dashboards.

The top five features from Excel that can be beneficial in Power BI:

## 1. Data Modeling and Relationships

### Excel:

- ✚ **Tables and Ranges:** Excel allows you to create tables and name ranges, which help in organizing data and making it easier to reference in formulas.
- ✚ **VLOOKUP/XLOOKUP:** These functions are used to lookup data across different tables.

### Power BI:

- ✚ **Data Modeling:** Power BI's data model allows you to create relationships between different tables, similar to how you might use VLOOKUP in Excel. Understanding how to organize data into tables and how relationships work is crucial.
- ✚ **Relationships View:** You can visually manage relationships between tables, making it easier to understand data connections.

## 2. Power Query (Get & Transform)

### Excel:

- ✚ **Power Query:** Used to import, clean, and transform data from various sources. It's a powerful tool for ETL (Extract, Transform, Load) processes.

### Power BI:

- ✚ **Power Query Editor:** The same functionality as in Excel, used extensively in Power BI for data preparation. Skills in Power Query can directly translate to preparing data in Power BI, making it ready for analysis.

## 3. Pivot Tables and Pivot Charts

### Excel:

- ✚ **Pivot Tables:** Excel's Pivot Tables are used for summarizing, analyzing, exploring, and presenting data.
- ✚ **Pivot Charts:** These allow for dynamic data visualization directly from Pivot Tables.

### Power BI:

- ✚ **Visualizations:** Power BI offers more advanced and interactive visualizations, but the concept is similar. Understanding Pivot Tables helps in grasping how to aggregate and display data in Power BI.
- ✚ **Matrix Visuals:** Similar to Pivot Tables, they allow you to create cross-tabular reports.

## 4. Formulas and DAX (Data Analysis Expressions)

### Excel:

- ✚ **Formulas:** Excel offers a wide range of functions and formulas for data manipulation and calculations.
- ✚ **Array Formulas:** Useful for performing complex calculations across ranges of data.

### Power BI:

- ✚ **DAX:** Data Analysis Expressions (DAX) is a formula language used in Power BI (as well as Power Pivot in Excel) for creating custom calculations. Knowing Excel formulas helps in learning DAX, which is essential for advanced data modeling in Power BI.

## 5. Data Visualization

### Excel:

- ✚ **Charts and Graphs:** Excel provides various chart types for data visualization, helping users to represent data insights visually.
- ✚ **Conditional Formatting:** Used to highlight important data points.

### Power BI:

- ✚ **Advanced Visuals:** Power BI offers a richer set of visualization options, including interactive charts and custom visuals from the marketplace. Experience with Excel charts provides a good foundation for creating compelling visuals in Power BI.
- ✚ **Conditional Formatting:** Available in tables and matrices in Power BI, allowing you to highlight data based on rules.

## Practical Applications in Power BI:

1. **Import Data:** Use Power Query to import and clean data from various sources, just like in Excel.
2. **Create Relationships:** Organize your data into tables and create relationships to build a robust data model.
3. **Build Visualizations:** Use your knowledge of Excel charts to create more advanced and interactive visuals in Power BI.
4. **Use DAX for Calculations:** Apply DAX to perform complex calculations and create new measures and columns.
5. **Design Dashboards:** Leverage your understanding of Pivot Tables and conditional formatting to design dynamic and insightful dashboards.