

DAX is an acronym that can stand for two different things, depending on the context:

- **Data Analysis Expressions:** In the world of business intelligence and data analytics, DAX stands for **Data Analysis Expressions**. It is a formula language used in Microsoft products like **Power BI**, **Power Pivot** in Excel, and **SQL Server Analysis Services** to perform calculations and queries on data. These expressions are used to create custom measures, calculated columns, and tables, enabling users to analyze and derive insights from their data. DAX functions are similar to Excel functions but are designed for use with tabular data models.

- - **Deutscher Aktienindex:** DAX is also the acronym for the **Deutscher Aktienindex** (German Stock Index), a blue-chip stock market index that tracks the performance of 40 major German companies trading on the Frankfurt Stock Exchange. It is a key benchmark for the German economy.

- DAX stands for Data Analysis Expressions, a formula language used in Microsoft's Power BI, Power Pivot, and Analysis Services.

The DAX function `COUNTROWS()` simply counts the number of rows in a specified table or a table expression. It can be used to count all rows in a table or, more commonly, to count the number of rows remaining after a filter has been applied.

Row Context vs. Filter Context

Understanding **row context** and **filter context** is fundamental to writing DAX formulas, as they determine how a formula is evaluated.

Row Context

Row context refers to the "current row" in a calculation. This context is created when DAX iterates through a table, evaluating an expression for each individual row.

- **When it's created:** Row context is automatically created in calculated columns and by iterator functions (functions that end in `X`), such as `SUMX`, `AVERAGEX`, and `COUNTX`.

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What it does: It allows a formula to reference a value from a specific column within the current row being processed. For example, a calculated column for "Total Price" that uses the formula `[Quantity] * [Unit Price]` is evaluated row by row, with the row context providing the specific `Quantity` and `Unit Price` values for each row.

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Filter Context

Filter context refers to the set of filters applied to the data model **before** a calculation is performed. These filters define a subset of data on which the calculation will operate.

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When it's created: Filter context is created by report visuals (like charts, slicers, and filters), rows and columns in a PivotTable or table visual, and by functions like `CALCULATE` and `FILTER`.

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What it does: It filters the entire data model based on the selections and conditions. For example, if you click on "USA" in a slicer, the filter context is applied to all tables in the data model, and any subsequent calculations will only consider data for the USA.

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Key Difference

The main difference is the **scope of the calculation**:

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Row context performs a calculation on a single, individual row. It does not automatically propagate filters to other tables.

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Filter context applies a filter to a dataset and then performs an aggregation on the filtered result. It automatically propagates through relationships in your data model. The `CALCULATE` function is the most powerful tool for manipulating filter context, allowing you to modify or ignore existing filters to get the exact result you need.

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