

Cross-referencing Values from Different Data Set (crossValue)



It is recommended to get familiar with **crossValue**, **memberValue** and **filter** function before proceeding with this tutorial.

CrossValue function is used to access **Indicators** from other **Data Sets**. Since BellaDati 2.9.2, it is also possible to access Attributes by using function such as `lastValue()` or `firstValue()`.

It receives two parameters:

1. Cube name
2. Indicator name

Following example returns **Students** count from **Results** data set.



Access cross reference function from **Formulas help** to predefine **Cube name**.

Cross Reference with and without Drill-down

When cross-referencing values, BellaDati **does** take in consideration applied drill-downs. That means both data sets need to have the same attribute (same code) and same members.

To display value without drill-down, use the cross value in combination with the function `withoutDrillDown`. That will display same value for each member.

The same also applies to date and time drill-downs and function `withoutDateTime`.

The screenshot shows the BellaDati software interface. On the left, there is a tree view of countries under the 'Country' attribute. The main area displays a table with the following data:

Country	CrossValue withoutDrillDown
Afghanistan	2,189,900
Albania	2,189,900
Algeria	2,189,900
American Samoa	2,189,900
Andorra	2,189,900
Angola	2,189,900
Anguilla	2,189,900
Antigua & Barbuda	2,189,900
Argentina	2,189,900
Armenia	2,189,900
Aruba	2,189,900
Australia	2,189,900
Austria	2,189,900
Azerbaijan	2,189,900
Bahamas, The	2,189,900
Bahrain	2,189,900

An 'Indicator setting' dialog box is open, showing the configuration for the 'CrossValue withoutDrillDown' indicator. The dialog has three tabs: 'Basic settings', 'Advanced settings', and 'Export settings'. The 'Basic settings' tab is active, showing the indicator name 'CrossValue withoutDrillDown', unit, format, and rounding options. Below the settings, there is a 'Show help' button and a list of function categories. The 'Cross reference' category is selected, showing the following formula:

```
1 withoutDrillDown() {  
2 crossValue('CROSSVALUETEST2.CROSSVALUETEST2', 'M_GDP')  
}
```

In some cases the members might be the same but the attribute code might be different. In that case you need to explicitly tell BellaDati, which attribute from the referenced data set should be used.

You can achieve this by specifying **memberIdentifier** as second parameter of **crossValue** functions. You need to construct you own string with **memberValue**.

In this example `L_COUNTRY_REF` is the code of attribute in referenced data set and `memberValue` is value of current member (name of country).

The screenshot shows the BellaDati software interface. On the left, there is a list of countries with their corresponding values. On the right, a dialog box titled "'CrossValue with different attribute' - Indicator setting" is open, showing various settings for the indicator.

Country	Value
Afghanistan	700
Albania	4,500
Algeria	6,000
American Samoa	8,000
Andorra	19,000
Angola	1,900
Anguilla	8,600
Antigua & Barbuda	11,000
Argentina	11,200
Armenia	3,500
Aruba	28,000
Australia	29,000
Austria	30,000
Azerbaijan	3,400
Bahamas, The	
Bahrain	16,900

The dialog box shows the following settings:

- Indicator: CrossValue with different attribute
- Unit: (empty)
- Format: (empty)
- Rounding: Classic (half up)
- Math functions: (empty)
- Indicator: (empty)
- Aggregation suffix: (empty)
- Date variables: (empty)
- Count: (empty)
- Statistical functions: (empty)
- Context change: (empty)
- Attributes codes: (empty)
- Cross reference: (empty)
- String functions: (empty)
- Other functions: (empty)
- Existing report formulas: (empty)

The formula editor shows the following formula:

```
1 crossValue('CROSSVALUETEST2.CROSSVALUETEST2', '[L_COUNTRY_REF="+memberValue()+"]',
2
```

This will also automatically handle drill-down paths.

Cross Reference with Filter

BellaDati also does not take in consideration filters applied through view settings. Therefore, you need to explicitly tell BellaDati in formula definition which filters and how do you want to use them.

Filter can be defined also directly inside the crossValue function:

Multiple conditions can be combined by using the plus sign:

Please note that the value of the filter has to be String, even when it is a numerical value.
Example: `crossValue('dataset','[L_MONTH="'+month(minus(date(contextDay()),months,1)).toString()+"]','M_INDICATOR')`

Cross Reference with Date

When filtering date, date attribute must be in format 'yyyy-MM-dd'.

filtered date can also defined inside the crossValue function:

You can find more about **filters** and their combinations in [Filtering in Formulas](#).

Cross-Referencing attributes

Since BellaDati 2.9.2, it is also possible to access Attributes by using operators such as LASTVALUE or FIRSTVALUE.