

Question

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BI (DeepSee) - calculate on pivot variable value

Is there a way to add/subtract from a pivot variable?

I have this MDX:

```
SELECT
  NON EMPTY [DateOfSale].[Actual].[YearSold].&[$variable.Year] ON 0,
  NON EMPTY [Product].[P1].[Product Name].Members ON 1
FROM [HOLEFOODS]
```

And with pivot variable Year equal to, say, 2016 it works:

The screenshot shows a BI tool interface. On the left, there is a pivot table with a 'Year' filter set to '2016'. The table lists various food items and their sales in 2016. On the right, there is an 'MDX Query' window showing the MDX query used to generate the data. The query is the same as the one provided in the text above. Below the query window, there is a checkbox labeled 'Manual mode: Use this query for the pivot' which is checked.

	2016
Bagels (dozen)	20
Bundt Cake	6
Calamari (frozen)	17
Cheerios (box)	13
Donuts (dozen)	4
Free-range Donuts (dozen)	6
Fruit Loops (box)	17
Lifesavers (roll)	15
Onion ring	12
Onion ring	3
Penne (box)	9
Pineapple Rings (can)	18
Pretzels (bag)	15
Swiss Cheese (sliced)	12
Tortellini (frozen)	6
Unsalted Pretzels (bag)	6
Ziti (box)	20

Now I want to add previous year first with one pivot variable and one explicit reference. It also works:

```
SELECT
  NON EMPTY
  {
    [DateOfSale].[Actual].[YearSold].&[$variable.Year],
    [DateOfSale].[Actual].[YearSold].&[2015]
  } ON 0,
  NON EMPTY [Product].[P1].[Product Name].Members ON 1
FROM [HOLEFOODS]
```

The screenshot shows the InterSystems MDX Query Analyzer interface. On the left, a pivot table displays sales data for the year 2016. The table has columns for 'Year' (set to 2016), '2016', and '2015'. The rows list various products such as Bagels, Bundt Cake, Calamari, etc. On the right, the MDX Query window is open, showing the following query:

```

SELECT
  NON EMPTY
  {
    [DateOfSale].[Actual].[YearSold].&[$variable.Year],
    [DateOfSale].[Actual].[YearSold].&2015
  } ON 0,
  NON EMPTY [Product].[P1].[Product Name].Members ON 1
FROM [HOLEFOODS]
    
```

Below the query, the checkbox for 'Manual mode: Use this query for the pivot' is checked.

Finally, I want both values to be taken from a pivot variable:

```

SELECT
  NON EMPTY
  {
    [DateOfSale].[Actual].[YearSold].&[$variable.Year],
    [DateOfSale].[Actual].[YearSold].&[$variable.Year-1]
  } ON 0,
  NON EMPTY [Product].[P1].[Product Name].Members ON 1
FROM [HOLEFOODS]
    
```

The screenshot shows the InterSystems MDX Query Analyzer interface. The pivot table on the left now only displays data for the year 2016. The MDX Query window on the right shows the updated query:

```

SELECT
  NON EMPTY
  {
    [DateOfSale].[Actual].[YearSold].&[$variable.Year],
    [DateOfSale].[Actual].[YearSold].&[$variable.Year-1]
  } ON 0,
  NON EMPTY [Product].[P1].[Product Name].Members ON 1
FROM [HOLEFOODS]
    
```

The 'Manual mode' checkbox remains checked.

However the second set [\$variable.Year-1] is empty. How do I add/subtract from the value of a pivot variable?

[#Analytics](#) [#Analyzer](#) [#InterSystems](#) [IRIS](#)

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