

- Comparison of geographic locations. We might use a quantity index to compare energy consumption in the in the west and east.
- Comparison of population groups. A price index of this type can compare retail prices as they affect single persons versus families.

We will focus on comparison across time periods.

There are three general types of indexes:

- Price indexes: which measure changes in price,
- Quantity indexes: which measure production and output changes,
- Value indexes: which measure changes in the value of various commodities and activities.

❖ Practice problem 1

Data of per capita consumption of Hungarian households are the following

<i>Products</i>	<i>Quantity</i>		<i>Price</i>		<i>Simple indexes</i>		
	<i>1991</i>	<i>1994</i>	<i>1991</i>	<i>1994</i>	<i>i_v</i>	<i>i_q</i>	<i>i_p</i>
<i>Milk</i>	87,2	77,4	20,7	43,6	187,0	88,8	210,6
<i>Egg</i>	233,0	212	4,3	8,2	173,5	91,0	190,7
<i>Pork</i>	19,4	17,2	192,4	359,8	165,8	88,7	187,0
<i>Poultry</i>	18,6	18,4	118,1	207,3	173,6	98,9	175,5
<i>Bread</i>	72,5	70,1	31,0	58,8	183,4	96,7	189,7
<i>Potato</i>	49,4	49,3	18,2	30,1	165,1	99,8	
<i>Sugar</i>	21,1	19,5	43,5	79,8	169,5		
<i>Apple</i>	18,3	16,2	24,9	36,2	128,7		
<i>Tropical fruits</i>	6,2	9,1	97,4	100,7	151,7		

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- How much has the value of consumption changed during these years? (per item and total)
 - How much has the quantity of consumption changed during these years? (per item and total)
 - How much has the price of consumption changed during these years? (per item and in total)

Solution

We can answer these questions by using index numbers. A convenient and traditional way of expressing this comparison is in percentage terms.

We can distinguish between index numbers of a single item and of a group.