

Addendum to Economist Report 2015

The updated child support schedules are based upon 2012-2013 Consumer Expenditure Survey data, the latest available data at the time of analysis (late 2014 to early 2015). The previous child support schedules are based upon 2007-2008 Consumer Expenditure Survey data with the analysis being performed in 2010. Essentially, there was a four year lapse in time between the two schedules. As indicated in the Kansas Child Support Guidelines Survey 2016, the child support schedules have been updated to reflect the increased amount parents are spending on children. This is generally an increase of less than 3.5% across income and age categories, regardless of the number of children in the family.

It may be useful to compare the increase in the child support schedules with the increase in the general price level since 2010. The Consumer Price Index (CPI) is the most commonly used and widely accepted measure of price inflation. The CPI is calculated by the Bureau of Labor Statistics and published by the United States Department of Labor. Essentially, the CPI provides monthly and annual data on changes in the prices paid by urban consumers for a representative basket of goods and services that are purchased by a typical U.S. household. More information about the CPI and how it is calculated can be found at the following link: <http://www.bls.gov/cpi/cpifaq.htm>. The CPI is often used to calculate Cost-of-Living-Adjustments (COLAS) for many government and private contracts as well as for determining benefits such as Social Security. Given the CPI is often used in understanding changes in price levels, potential issues with estimating the CPI is noted by the Bureau of Labor Statistics at the following link: <http://www.bls.gov/opub/btn/volume-1/consumer-price-index-data-quality-how-accurate-is-the-us-cpi.htm>. As noted in the report found at the link, one criticism of the CPI calculation is that it is assumed that a household will purchase a fixed basket of goods. However, in reality, a household may substitute between goods, purchasing relatively less of a good that has become more expensive and relatively more of a less expensive item. There are some categories of goods that might not allow substitution away from a particular product such as shelter, utilities, and medical care. Therefore, some but not all expenses may not be quite as large as the CPI suggests.

The CPI is the most often and widely used index to calculate the inflation rate in the United States. Inflation is calculated by taking the difference in the price index between the two time periods of interest, then dividing by the index in the initial time period. This is then multiplied by 100 to give the percent change in inflation. So if we want to know how much the average price level has changed between 2010 and 2014, the following calculation would be made:

$$\left(\frac{CPI \text{ Value of } 2014 - CPI \text{ Value of } 2010}{CPI \text{ Value of } 2010} \right) * 100$$

A table with historical inflation rates with monthly and annual CPI values, as published by the Bureau of Labor Statistics (BLS) from 1914-2015 can be found at the following link: <http://www.usinflationcalculator.com/inflation/historical-inflation-rates/>

According to the chart, the BLS annual CPI value for 2010 is 218.056 and the annual CPI value for 2014 is 236.736. Using this CPI data and the formula above, we can calculate the estimated change in the price level or inflation in the United States as follows:

$$\left(\frac{CPI\ Value\ of\ 2014 - CPI\ Value\ of\ 2010}{CPI\ Value\ of\ 2010}\right) * 100 = \left(\frac{236.736 - 218.056}{218.056}\right) * 100 = 8.57\%$$

This suggests that the same bundle of goods would cost 8.57% more for urban consumers in the US in 2014 as compared to 2010.

In addition to a CPI for the entire US, the BLS also provides regional CPI values. The Midwest Region CPI values can be found on the Wichita State University's Center for Economic Development and Business Research website at the following link:

http://www.cedbr.org/index.php?option=com_content&view=article&id=849&Itemid=424. Below is an excerpt from a table downloaded from that website.

Consumer Price Index	Jan 2005	Jan 2006	Jan 2007	Jan 2008	Jan 2009	Jan 2010	Jan 2011	Jan 2012	Jan 2013	Jan 2014	Jan 2015	May 2015
United States, City Averages	190.7	198.3	202.416	211.08	211.143	216.687	220.223	226.665	230.28	233.916	233.707	237.805
Midwest, Size Class B/C (50,000-1.5 million)	117.3	121.6	122.861	128.753	128.636	132.417	135.061	138.903	140.784	142.8	142.523	144.577

Source: http://www.cedbr.org/index.php?option=com_content&view=article&id=849&Itemid=424

It is worth noting that the annual CPI is not given here but monthly CPI values are instead provided. If we compare the CPI values from January 2010 to January 2014, the estimated change in the price level for the Midwest Region of the United States is calculated as:

$$\left(\frac{CPI\ Value\ of\ 2014 - CPI\ Value\ of\ 2010}{CPI\ Value\ of\ 2010}\right) * 100 = \left(\frac{142.8 - 132.417}{132.417}\right) * 100 = 7.84\%$$

This suggests that the same bundle of goods would cost 7.84% more for urban consumers in the Midwest Region of the US in January 2014 as compared to January 2010.

In addition to a CPI for the Midwest Region, the BLS provides CPI values for Kansas City. The following table can be found at the BLS link:

http://www.bls.gov/regions/mountain-plains/data/consumerpriceindexhistorical_selectedareas_table.htm

Annual averages U.S., Denver, Kansas City, and St. Louis

Consumer Price Indexes for All Urban Consumers (CPI-U), U.S. city average and selected metropolitan areas, annual average and percent change, 1994–2014 (1982-84=100)

Year	U.S. city average		Denver, CO		Kansas City, MO-KS		St. Louis, MO-IL	
	Annual average	12 month percent change	Annual average	12 month percent change	Annual average	12 month percent change	Annual average	12 month percent change
1994	148.2	2.6	141.8	4.4	141.3	2.3	141.3	2.8
1995	152.4	2.8	147.9	4.3	145.3	2.8	145.2	2.8
1996	156.9	3.0	153.1	3.5	151.6	4.3	149.6	3.0
1997	160.5	2.3	158.1	3.3	155.8	2.8	152.9	2.2
1998	163.0	1.6	161.9	2.4	157.8	1.3	154.5	1.0
1999	166.6	2.2	166.6	2.9	160.1	1.5	157.6	2.0
2000	172.2	3.4	173.2	4.0	166.6	4.1	163.1	3.5
2001	177.1	2.8	181.3	4.7	172.2	3.4	167.3	2.6
2002	179.9	1.6	184.8	1.9	174.0	1.0	169.1	1.1
2003	184.0	2.3	186.8	1.1	177.0	1.7	173.4	2.5
2004	188.9	2.7	187.0	0.1	180.7	2.1	180.3	4.0
2005	195.3	3.4	190.9	2.1	185.3	2.5	186.2	3.3
2006	201.6	3.2	197.7	3.6	190.1	2.6	189.5	1.8
2007	207.342	2.8	202.029	2.2	194.479	2.3	193.231	2.0
2008	215.303	3.8	209.903	3.9	201.150	3.4	198.700	2.8
2009	214.537	-0.4	208.548	-0.6	200.959	-0.1	198.472	-0.1
2010	218.056	1.6	212.447	1.9	205.378	2.2	203.187	2.4
2011	224.939	3.2	220.288	3.7	213.500	4.0	209.776	3.2
2012	229.594	2.1	224.568	1.9	218.502	2.3	214.768	2.4
2013	232.957	1.5	230.791	2.8	221.612	1.4	217.965	1.5
2014	236.736	1.6	237.200	2.8	222.656	0.5	220.217	1.0

$$\left(\frac{\text{CPI Value of 2014} - \text{CPI Value of 2010}}{\text{CPI Value of 2010}} \right) * 100 = \left(\frac{222.656 - 205.378}{205.378} \right) * 100 = 8.41\%$$

Similar to the values for the US and the Midwest Region, the same bundle of goods would cost 8.41% more for consumers in Kansas City 2014 as compared to 2010.

As can be seen from the calculations above, the average price level for a representative basket of goods and services that are purchased by a typical household has increased by approximately 7.85% to 8.57% between 2010 and 2014. The proposed child support schedules for the State of Kansas generally allows for an increase of less than 3.5% across income and age categories, regardless of the number of children in the family.