

4-9-2016

Developing Trend Equations for CPI:As Empirical Analysis 2001-2015

Follow this and additional works at: https://ecommons.udayton.edu/stander_posters

 Part of the [Arts and Humanities Commons](#), [Business Commons](#), [Education Commons](#), [Engineering Commons](#), [Life Sciences Commons](#), [Medicine and Health Sciences Commons](#), [Physical Sciences and Mathematics Commons](#), and the [Social and Behavioral Sciences Commons](#)

Recommended Citation

"Developing Trend Equations for CPI:As Empirical Analysis 2001-2015" (2016). *Stander Symposium Posters*. 729.
https://ecommons.udayton.edu/stander_posters/729

This Book is brought to you for free and open access by the Stander Symposium at eCommons. It has been accepted for inclusion in Stander Symposium Posters by an authorized administrator of eCommons. For more information, please contact frice1@udayton.edu, mschlange1@udayton.edu.

Title: Trends in CPI 2001-2015
Name: Daniel Whitehead

Advisor: Dr. Robert Dean and Dr. Trevor Collier

- **Study Purpose:**

Determine long and intermediate term trends in CPI inflation

- **Research Method:**

Develop linear trend regression equations

- **Models:**

(1) $CPI-1 = a + b(T)$

(2) $CPI-2 = a + b(T)$

Where:

$CPI-1 = CPI\ All$

$CPI-2 = CPI\ Less\ Food\ and\ Energy$

$T = Time$

$a, b = equation\ parameters$

- **Periods of Analysis:**

(1) 2001-2015

(2) 2001-2007

(3) 2009-2015

Trend Equation CPI-All			
	2001-2015	2001-2007	2009-2015
R2	0.9861	0.9853	0.9599
X Variable	4.6347	5.1998	4.0293
t-Stat	30.3174	18.2940	10.9353

- **Data Analysis:**

Table 2

(1) Overall trend in CPI declines from 01-07 to 09-15

Trend Equation CPI-Less Food and Energy			
	2001-2015	2001-2007	2009-2015
R2	0.9978	0.9915	0.9932
X Variable	4.0164	4.0138	3.9626
t-Stat	77.0126	24.0956	27.0381

Data Analysis:

Table 3

(1) CPI Less Food and Energy trend declining from 01-07 to 09-15

Average Yearly CPI Indices		
Year	CPI All	CPI Less Food and Energy
2001	177.067	186.133
2002	179.875	190.450
2003	183.958	193.225
2004	188.883	196.625
2005	195.292	200.892
2006	201.592	205.917
2007	207.342	210.729
2008	215.303	215.572
2009	214.537	219.235
2010	218.056	221.337
2011	224.939	225.008
2012	229.594	229.755
2013	232.957	233.806
2014	236.736	237.897
2015	237.017	242.247

Table 4

Inflation Trend 2013-2015

	CPI All	CPI LFE
2013-2014	1.62%	1.75%
2014-2015	0.12%	1.83%

Data Analysis:

Table 4

(1) Short term inflation rates below target rate of 2%