U.S. Inflation Trends and the 2008 Recession

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

Recommended Citation
https://ecommons.udayton.edu/stander_posters/1122

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, mschlangen1@udayton.edu.
U.S. Inflation Trends and the 2008 Recession

Carmen DeRose

Advisors: Dr. Robert Dean, Dr. Tony Caporale

Study Purpose
The purpose of this study is to determine if the 2008 recession materially alters the long term trend in inflation.

Research Design
Inflation measures:
1. CPI
2. PCE- ALL (PCE-1)
3. PCEX F&E (PCE-2)

Periods of Analysis:
1. 1999-2007 (T1)
2. 2009-2017 (T2)
3. T1 & T2 in Months

Regression Models:
1. CPI = A1 + B1(T1)
2. CPI = A2 + B2(T2)
3. PCE- ALL (PCE-1) = A3 + B3(T1)
4. PCE- ALL (PCE-1) = A4 + B4(T2)
5. PCEX F&E (PCE-2) = A5 + B5(T1)
6. PCEX F&E (PCE-2) = A6 + B6(T2)
7. LN CPI = A7 + B7(T1)
8. LN CPI = A8 + B8(T2)
9. LN PCE- ALL (PCE-1) = A9 + B9(T1)
10. LN PCE- ALL (PCE-1) = A10 + B10(T2)
11. LN PCEX F&E (PCE-2) = A11 + B11(T1)
12. LN PCEX F&E (PCE-2) = A12 + B12(T2)

Model Tests:
1. B1(T1) > B2(T2)
2. B3(T1) > B4(T2)
3. B5(T1) > B6(T2)
4. B7(T1) > B8(T2)
5. B9(T1) > B10(T2)
6. B11(T1) > B12(T2)

Research Design
Inflation measures:
1. CPI
2. PCE- ALL (PCE-1)
3. PCEX F&E (PCE-2)

Periods of Analysis:
1. 1999-2007 (T1)
2. 2009-2017 (T2)
3. T1 & T2 in Months

Regression Models:
1. CPI = A1 + B1(T1)
2. CPI = A2 + B2(T2)
3. PCE- ALL (PCE-1) = A3 + B3(T1)
4. PCE- ALL (PCE-1) = A4 + B4(T2)
5. PCEX F&E (PCE-2) = A5 + B5(T1)
6. PCEX F&E (PCE-2) = A6 + B6(T2)
7. LN CPI = A7 + B7(T1)
8. LN CPI = A8 + B8(T2)
9. LN PCE- ALL (PCE-1) = A9 + B9(T1)
10. LN PCE- ALL (PCE-1) = A10 + B10(T2)
11. LN PCEX F&E (PCE-2) = A11 + B11(T1)
12. LN PCEX F&E (PCE-2) = A12 + B12(T2)

Model Tests:
1. B1(T1) > B2(T2)
2. B3(T1) > B4(T2)
3. B5(T1) > B6(T2)
4. B7(T1) > B8(T2)
5. B9(T1) > B10(T2)
6. B11(T1) > B12(T2)

Conclusions:
Table 1: Post 2008 B coefficients lower for CPI, PCE-All
Table 2: Post 2008 Annualized growth rates lower for all inflation measures
Table 1: Recession effect most pronounced for CPI
Table 2: Recession effect most pronounced for CPI
Fed Target Rate: Given target rate of 2% actual inflation rates below target rate for both pre and post 2008 time periods
Summation: Both types of regression models indicate a noticeable change in the CPI and PCE-All inflation measures post 2008 recession. When F&E is excluded, the recession effect is not as robust.