ONLINE APPENDIX

INFLATION AND ACTIVITY: TWO EXPLORATIONS, AND THEIR MONETARY POLICY IMPLICATIONS

by

OLIVIER BLANCHARD
EUGENIO CERUTTI
LAWRENCE SUMMERS

Background Table: Classification of Analyzed Recessions

Recession Episodes	With Financial Crisis 1/	With Increasing Oil Price 2/	With Increasing Inflation 3/	With Intentional Disinflation 4/
Australia-1971Q3-1972Q1	0	0	1	0
Australia-1975Q2-1975Q4	0	1	0	0
Australia-1977Q2-1977Q4	0	0	0	0
Australia-1981Q3-1983Q2	0	0	1	1
Australia-1985Q3-1986Q2	0	0	1	0
Australia-1990Q2-1991Q2	0	0	0	1
Austria-1974Q4-1975Q2	0	1	0	0
Austria-1977Q3-1978Q1	0	0	0	0
Austria-1980Q2-1981Q1	0	0	1	1
Austria-1983Q4-1984Q2	0	0	1	0
Austria-2000Q4-2001Q3	0	0	1	0
Austria-2008Q1-2009Q2	1	0	1	0
Belgium-1974Q1-1975Q1	0	1	1	0
Belgium-1976Q3-1977Q1	0	0	0	0
Belgium-1980Q2-1981Q1	0	0	1	0
Belgium-1992Q1-1993Q1	0	0	0	0
Belgium-2001Q1-2001Q4	0	0	0	0
Belgium-2008Q2-2009Q1	1	0	1	0
Canada-1980Q1-1980Q3	0	0	0	0
Canada-1981Q2-1982Q4	0	0	1	1
Canada-1990Q1-1991Q1	0	0	1	0
Canada-2008Q3-2009Q2	0	0	0	0
Denmark-1973Q2-1975Q1	0	1	1	0
Denmark-1979Q2-1981Q1	0	0	1	1
Denmark-1987Q1-1988Q1	0	0	1	0
Denmark-1992Q3-1993Q2	0	0	0	0
Denmark-1997Q2-1997Q4	0	0	0	0
Denmark-2006Q2-2007Q2	0	0	1	0
Denmark-2007Q4-2009Q2	1	0	1	0
Finland-1975Q1-1975Q4	0	1	1	0
Finland-1976Q4-1977Q2	0	0	0	0
Finland-1980Q3-1981Q1	0	0	1	1
Finland-1990Q1-1993Q1	1	0	1	1
Finland-2007Q4-2009Q2	0	0	1	0
France-1974Q3-1975Q2	0	1	1	0
France-1980Q1-1980Q4	0	0	1	1
France-1990Q3-1991Q1	0	0	0	0
France-1992Q1-1993Q1	0	0	0	0
France-2008Q1-2009Q2	1	0	1	0
Germany-1974Q1-1975Q2	0	1	1	0
Germany-1980Q1-1980Q4	0	0	1	1
Germany-1982Q1-1982Q3	0	0	0	1
Germany-1992Q1-1993Q1	0	0	1	1
Germany-1995Q3-1996Q1	0	0	0	0
Germany-2001Q2-2002Q1	0	0	1	0
Germany-2002Q3-2005Q1	0	0	1	0
Germany-2008Q1-2009Q1	1	0	1	0
Iceland-1982Q2-1983Q2	0	0	1	1
Iceland-1987Q4-1988Q4	0	0	1	1
Iceland-1991Q1-1992Q4	0	0	0	0
Iceland-1994Q3-1995Q1	0	0	0	0
Iceland-2000Q3-2001Q1	0	0	0	0
Iceland-2007Q4-2010Q2	1	0	1	0
Ireland-1982Q3-1983Q2	0	0	0	1
Ireland-1985Q3-1986Q2	0	0	0	0
Ireland-2007Q4-2009Q4	1	0	0	0
Italy-1974Q3-1975Q2	0	1	1	0
Italy-1977Q1-1977Q3	0	0	0	0
Italy-1981Q4-1982Q4	0	0	1	1
Italy-1992Q1-1993Q3	0	0	1	0
Italy-1996Q1-1996Q4	0	0	0	0
Italy-2001Q1-2001Q4	0	0	0	0
Italy-2002Q4-2003Q2	0	0	0	0
Italy-2008Q1-2009Q2	1	0	1	0

Recession Episodes	With financial crisis 1/	With increasing Oil Price 2/	With increasing inflation 3/	With Intentional Disinflation 4/
Japan-1993Q1-1993Q3	0	0	0	0
Japan-1997Q1-1999Q1	1	0	1	0
Japan-2001Q1-2002Q1	1	0	0	0
Japan-2008Q1-2009Q1	0	0	1	0
Luxembourg-1974Q1-1975Q3	0	1	1	0
Luxembourg-1980Q2-1981Q2	0	0	1	0
Luxembourg-2002Q2-2003Q1	0	0	1	0
Luxembourg-2008Q1-2009Q2	1	0	1	0
Netherlands-1973Q1-1973Q3	0	0	0	0
Netherlands-1974Q3-1975Q1	0	1	0	0
Netherlands-1979Q4-1980Q3	0	1	1	0
Netherlands-1982Q1-1982Q4	0	0	0	1
Netherlands-2008Q1-2009Q2	1	0	1	0
New Zealand-1973Q4-1975Q4	0	1	1	0
New Zealand-1976Q4-1977Q4	0	0	1	0
New Zealand-1979Q2-1979Q4	0	1	1	0
New Zealand-1981Q3-1982Q3	0	0	1	1
New Zealand-1984Q4-1985Q2	0	0	1	0
New Zealand-1989Q2-1991Q4	0	0	1	0
New Zealand-1998Q1-1998Q3	0	0	0	0
New Zealand-2008Q1-2009Q4	0	0	1	0
Norway-1978Q3-1979Q1	0	0	0	0
Norway-1980Q1-1980Q3	0	0	1	0
Norway-1981Q2-1982Q3	0	0	1	1
Norway-1987Q2-1988Q2	0	0	1	0
Norway-1992Q3-1993Q1	1	0	0	0
Norway-2002Q2-2003Q2	0	0	1	0
Norway-2007Q4-2009Q2	0	0	1	0
Portugal-1974Q1-1975Q2	0	1	1	0
Portugal-1982Q4-1984Q2	0	0	1	1
Portugal-1992Q1-1993Q4	0	0	1	1
Portugal-2002Q1-2003Q2	0	0	1	0
Portugal-2008Q1-2009Q1	1	0	1	0
Spain-1974Q4-1975Q2	0	1	0	0
Spain-1978Q2-1979Q1	1	0	0	1
Spain-1980Q4-1981Q2	1	0	0	0
Spain-1992Q1-1993Q2	0	0	1	0
Spain-2008Q3-2010Q1	1	0	0	0
Sweden-1976Q2-1977Q3	0	0	1	0
Sweden-1990Q1-1993Q1	1	0	1	0
Sweden-2007Q4-2009Q3	1	0	1	0
Switzerland-1974Q1-1976Q1	0	1	1	0
Switzerland-1981Q4-1982Q4	0	0	1	1
Switzerland-1990Q2-1991Q3	0	0	1	1
Switzerland-1992Q1-1992Q4	0	0	0	1
Switzerland-1995Q4-1996Q3	0	0	0	0
Switzerland-2002Q2-2003Q2	0	0	1	0
Switzerland-2008Q3-2009Q2	1	0	0	0
United Kingdom-1973Q2-1974Q1	0	0	1	0
United Kingdom-1974Q3-1975Q3	0	1	1	0
United Kingdom-1979Q2-1981Q1	0	0	1	1
United Kingdom-1990Q2-1991Q3	0	0	1	1
United Kingdom-2008Q1-2009Q2	1	0	1	0
United States-1973Q4-1975Q1	0	1	1	0
United States-1980Q1-1980Q3	0	0	0	1
United States-1981Q3-1982Q1	0	0	0	1
United States-1990Q3-1991Q1	0	0	0	0
United States-2007Q4-2009Q2	1	0	1	0
Total Cases	23	18	77	28

Notes: 1/ 1 if recession coincided with financial crisis as defined in Laeven and Valencia (2013); 2/ 1 if recession coincided with 1974 or 1979 oil price increases ; 3/ 1 if the average inflation during the year before the start of the recession was below the average inflation during the recession; and 4/ 1 if recession was followed by important decreases in inflation as well as coincided with important increases of monetary policy rates.

Figure 3A: Australia, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

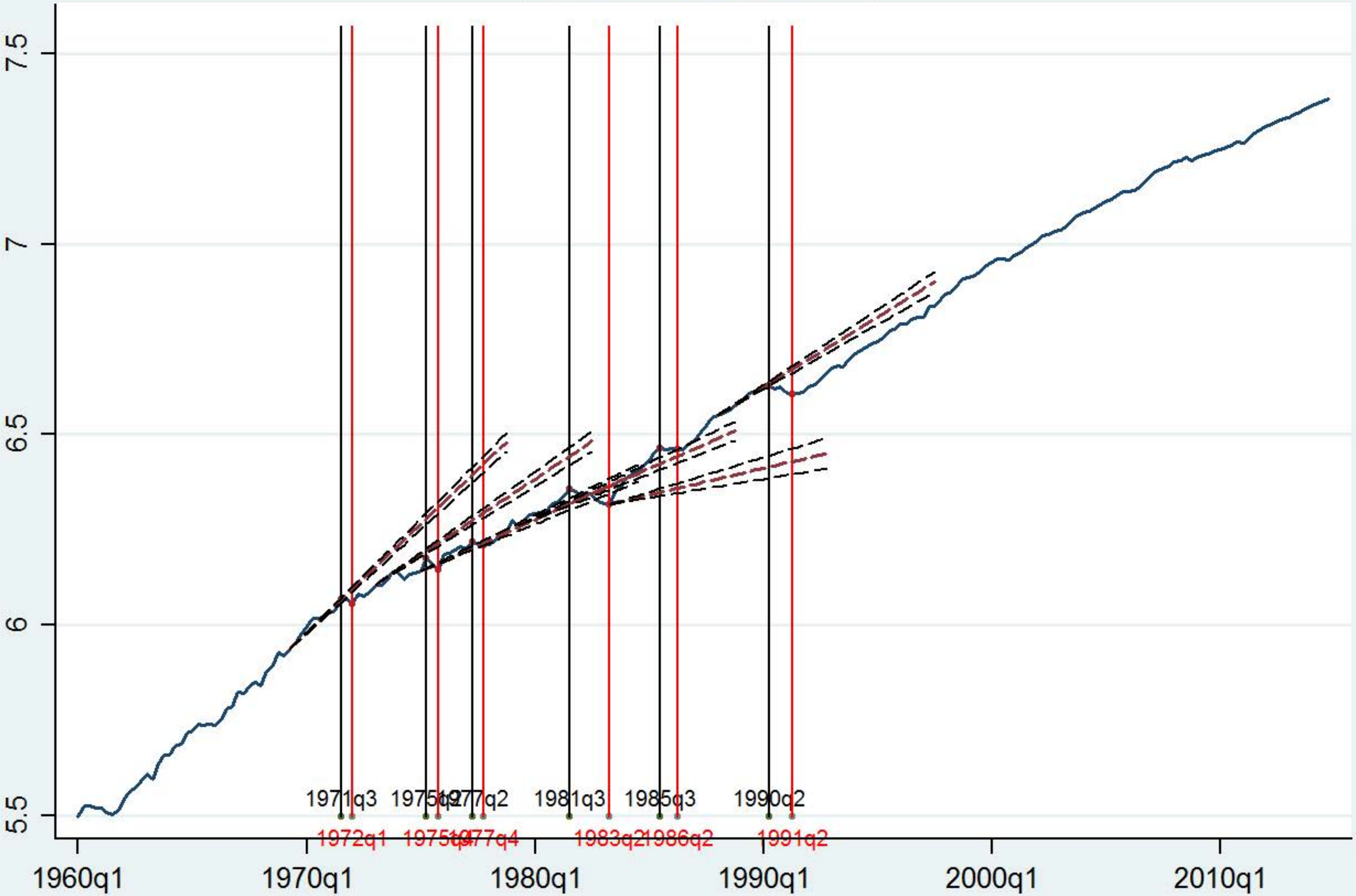

Figure 3A: Austria, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

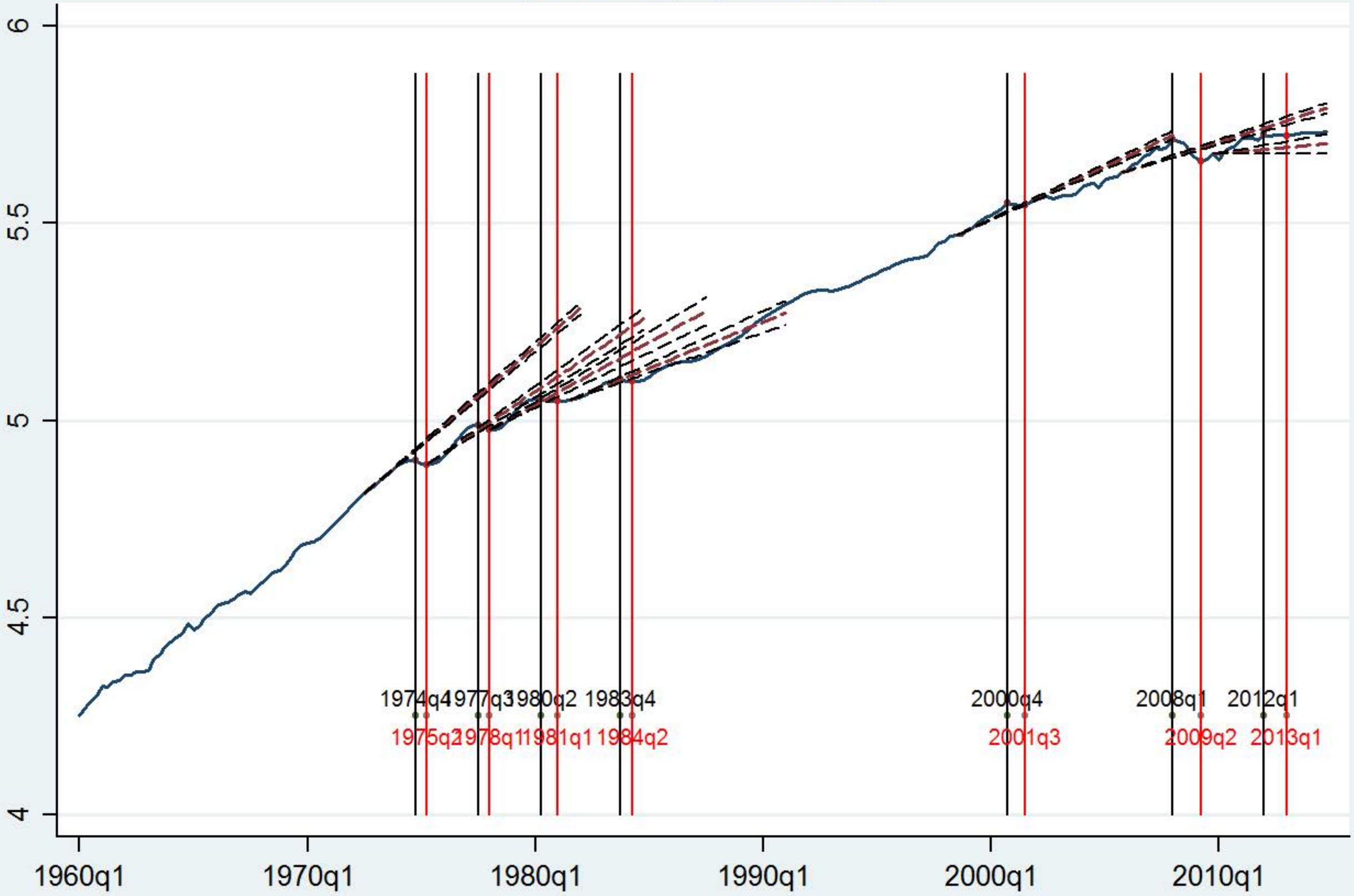

Figure 3A: Belgium, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

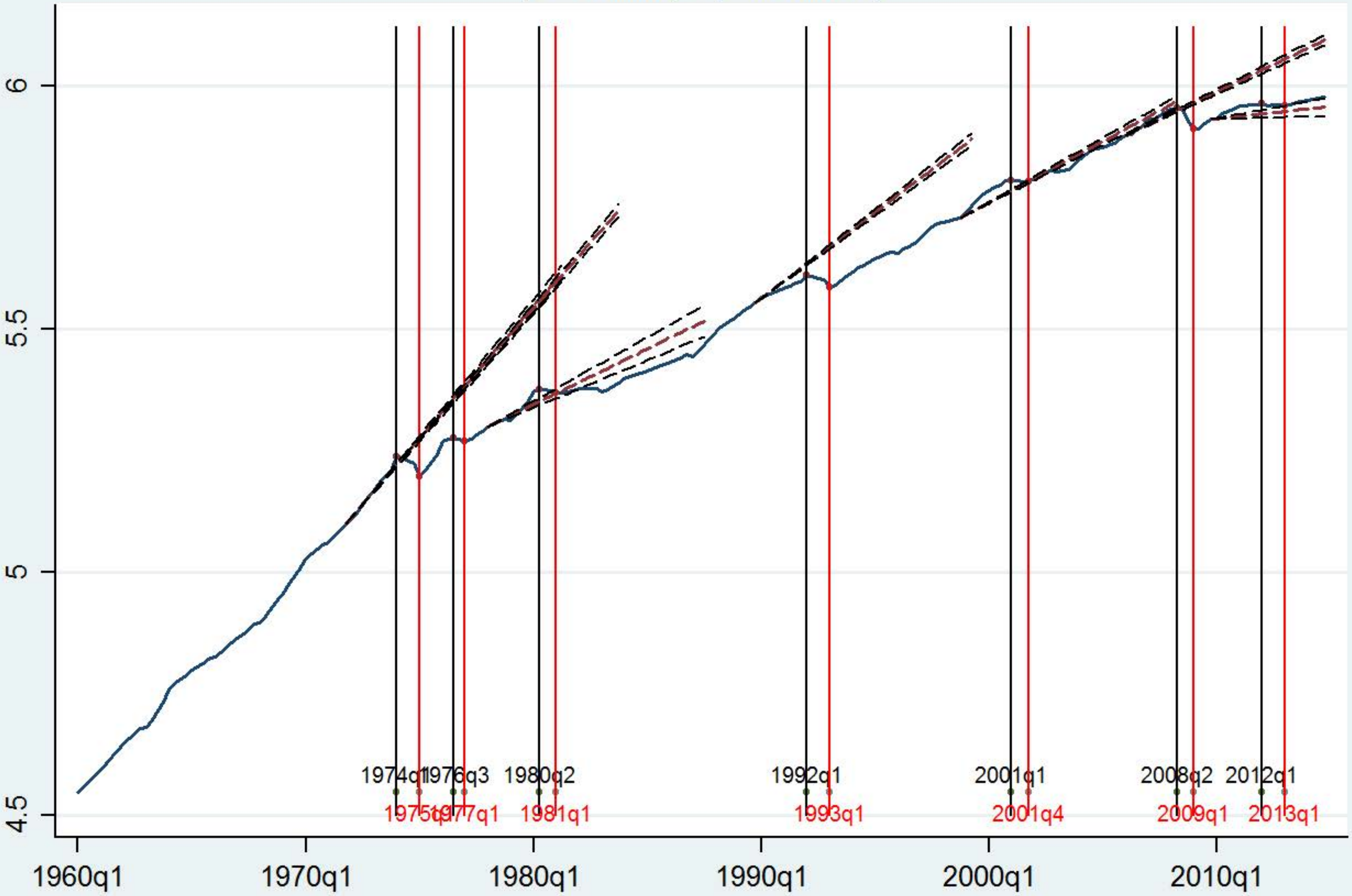

Figure 3A: Canada, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

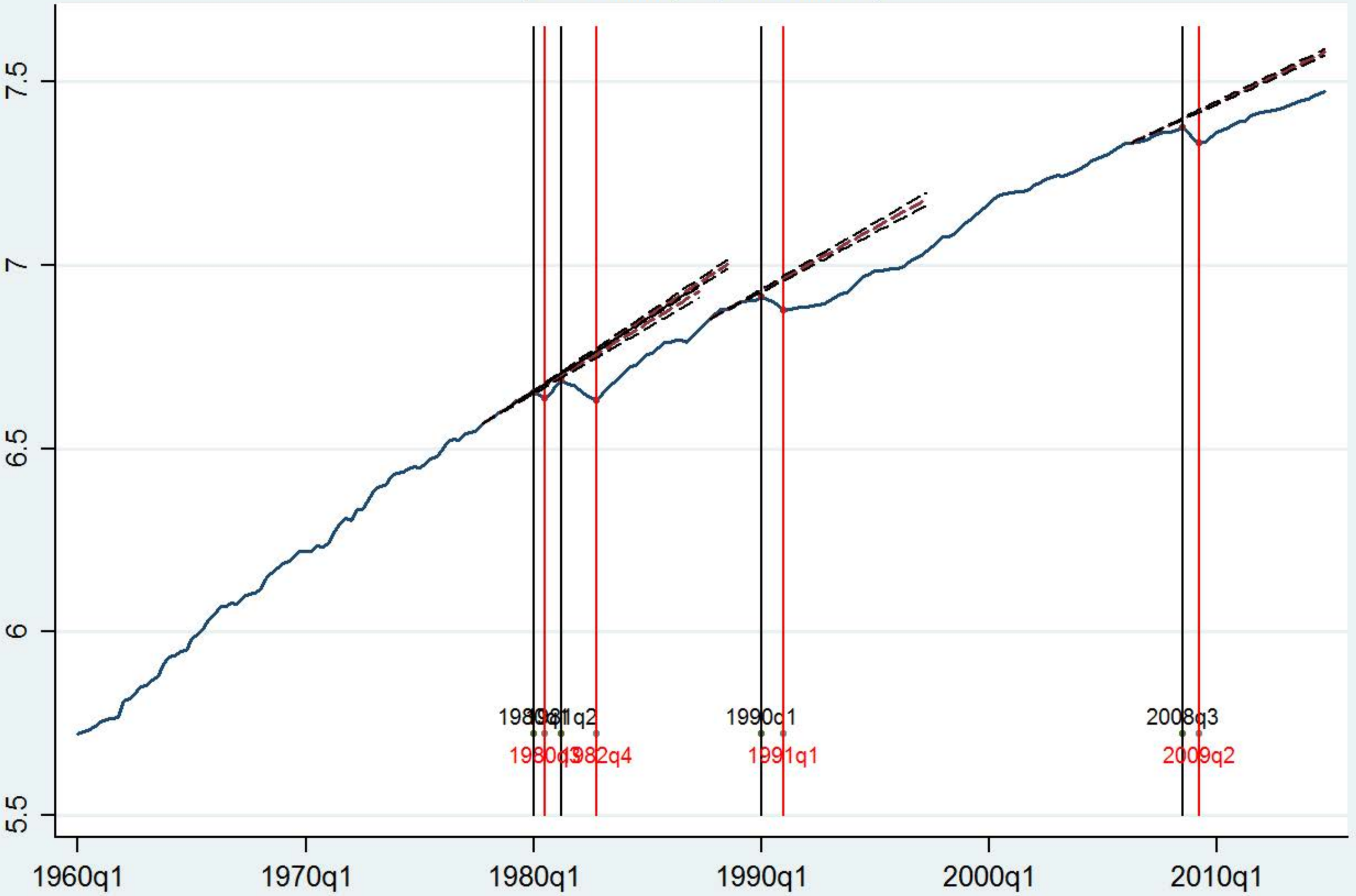

Figure 3A: Denmark, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

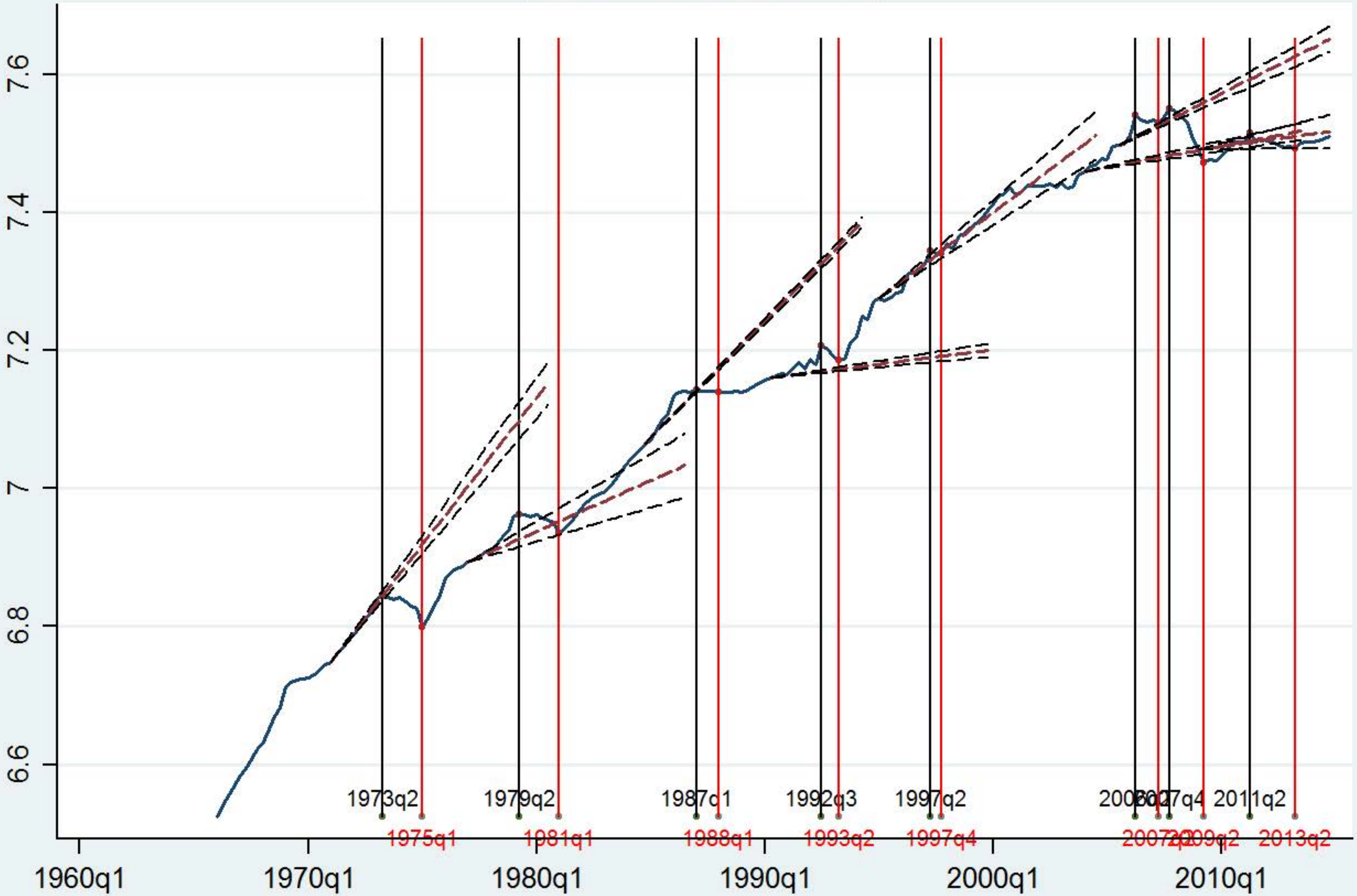

Figure 3A: Finland, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

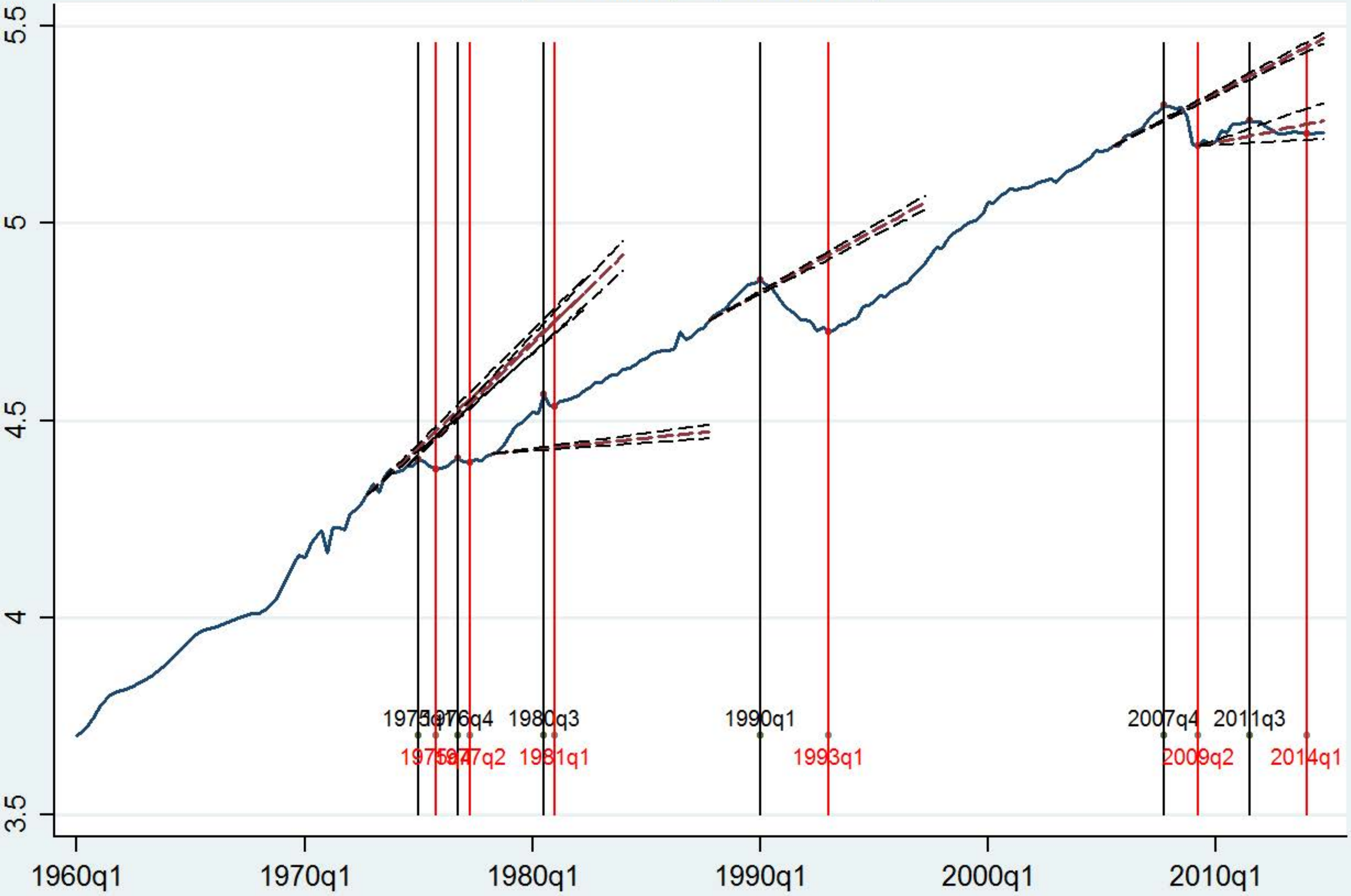

Figure 3A: France, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

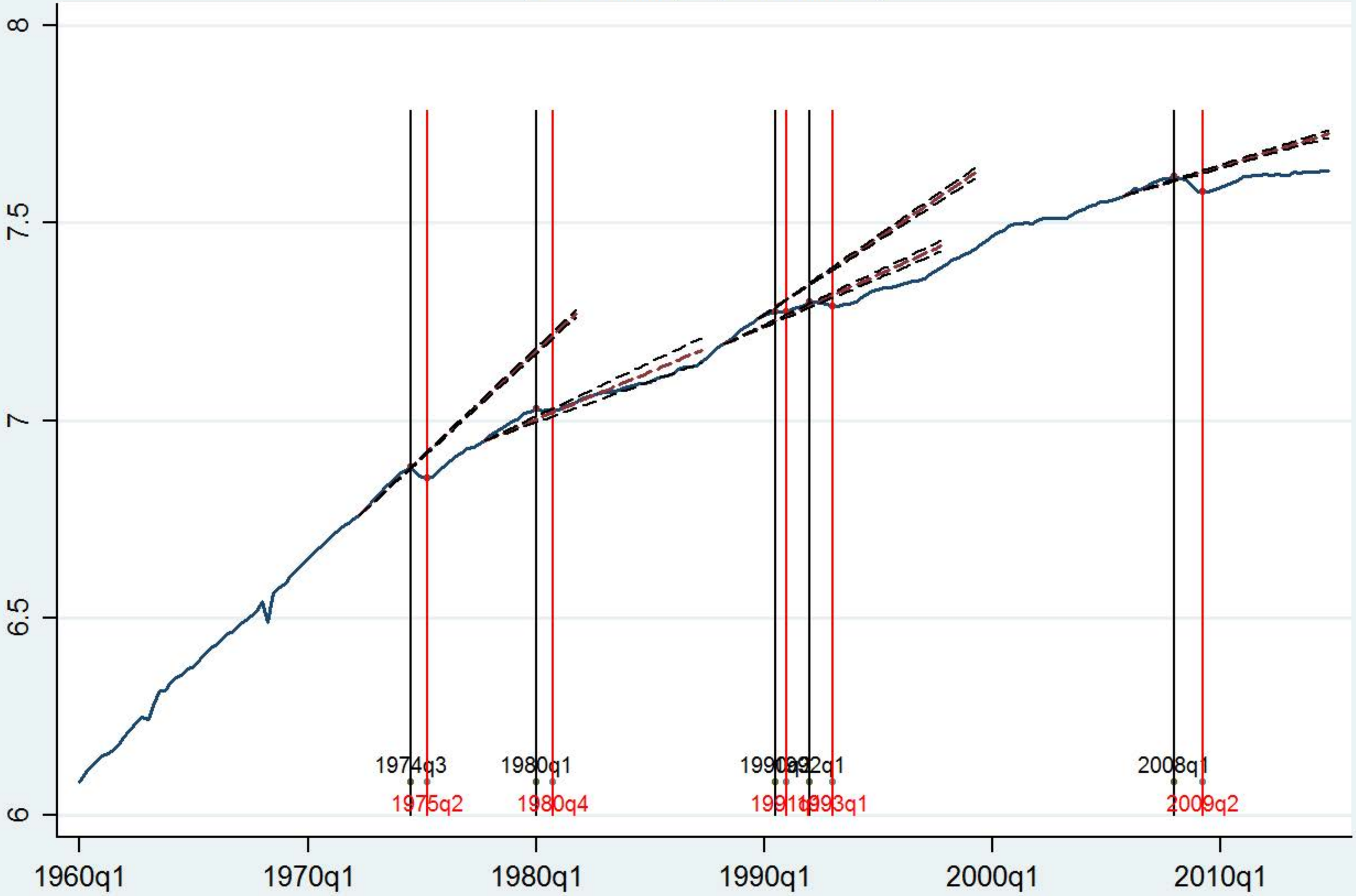

Figure 3A: Germany, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

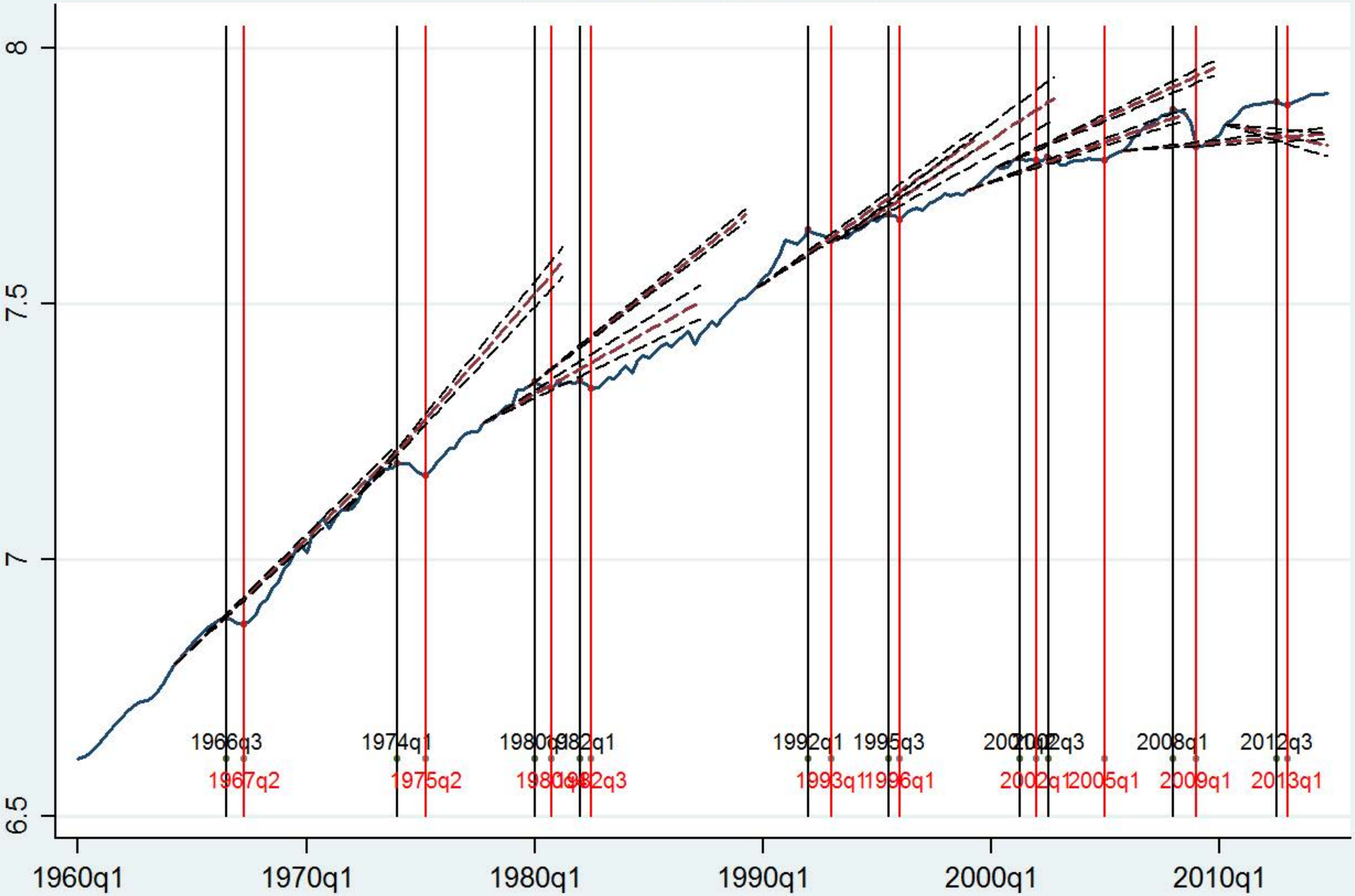

Figure 3A: Iceland, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

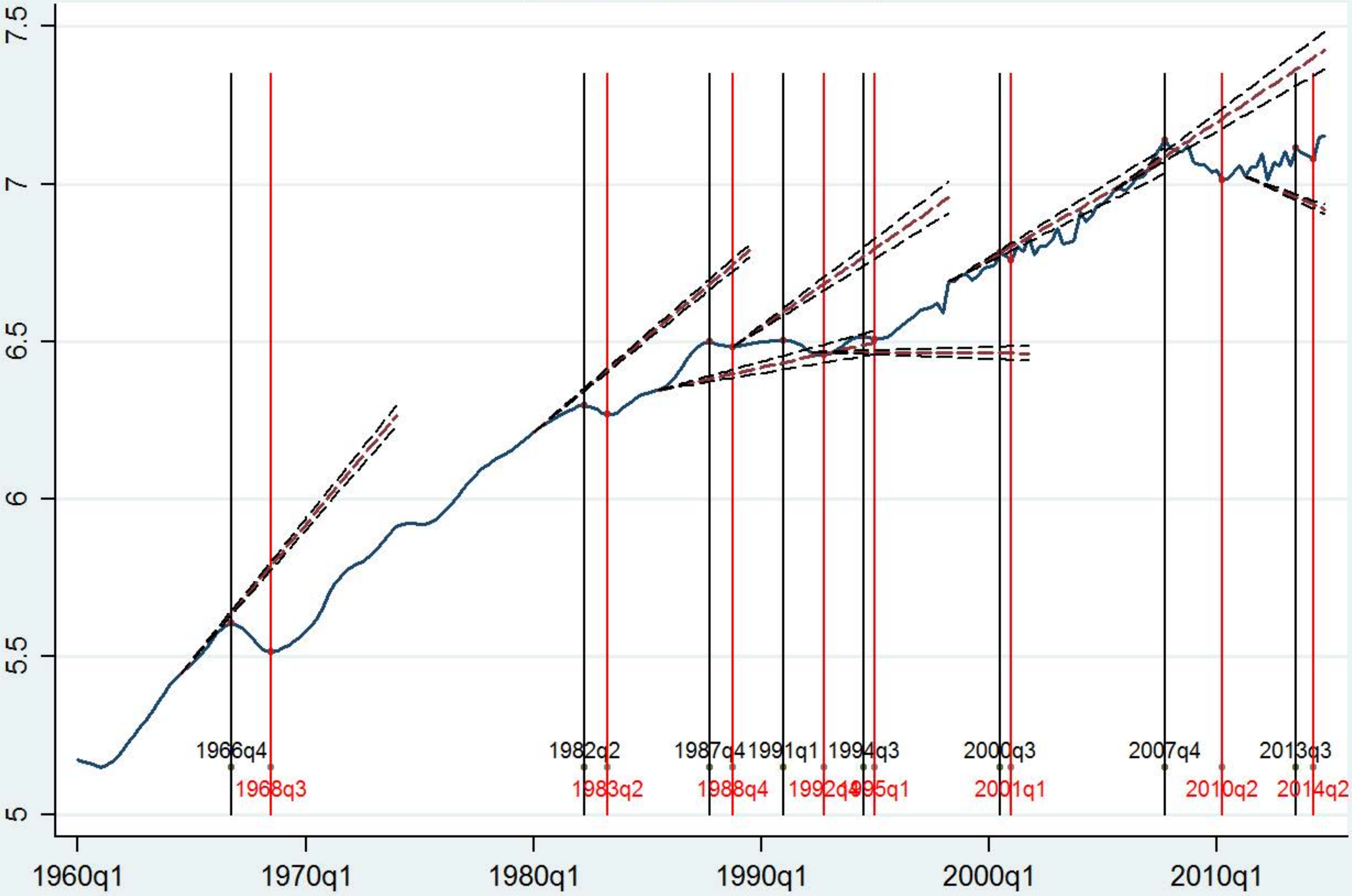

Figure 3A: Ireland, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

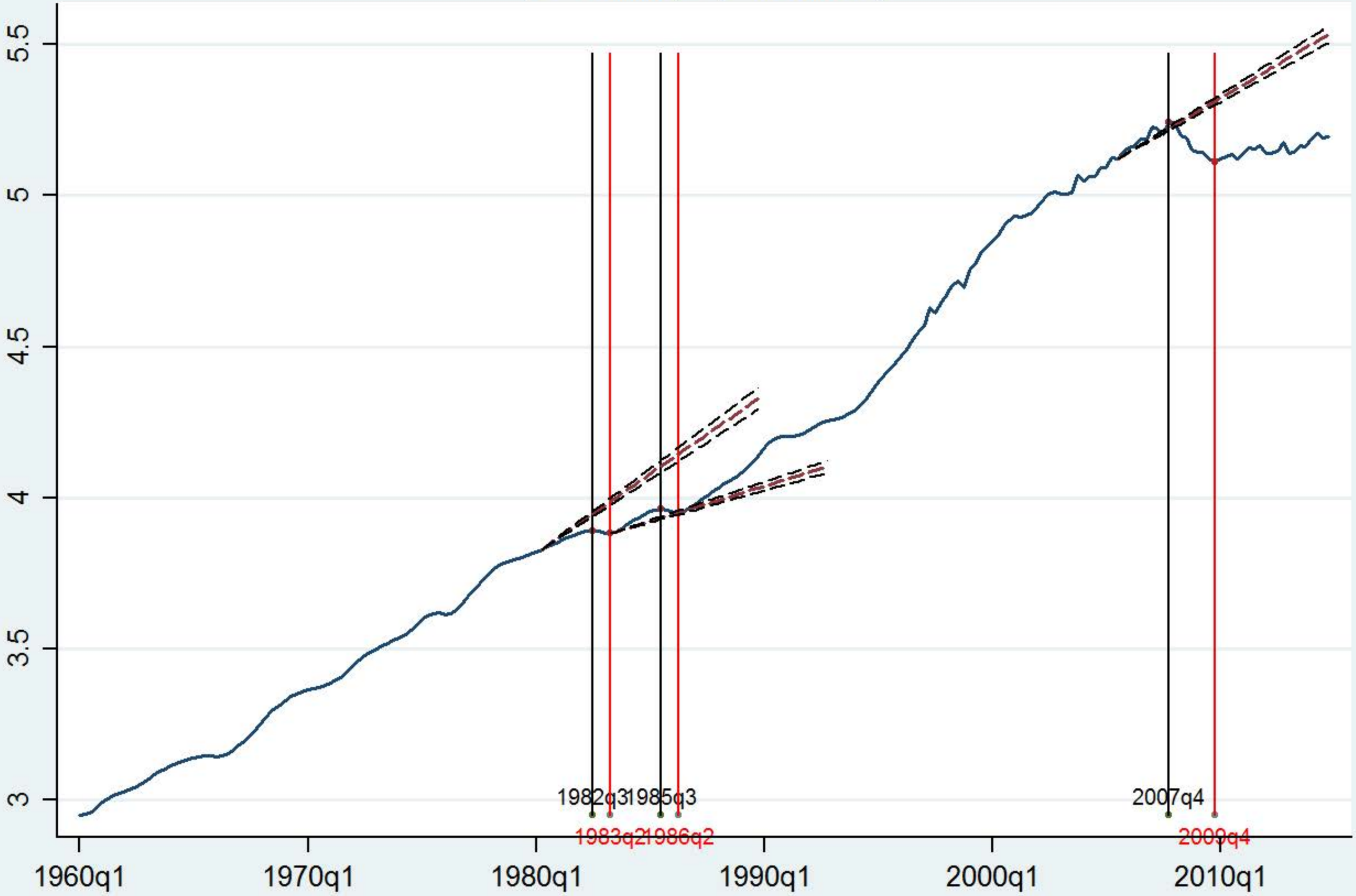

Figure 3A: Italy, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

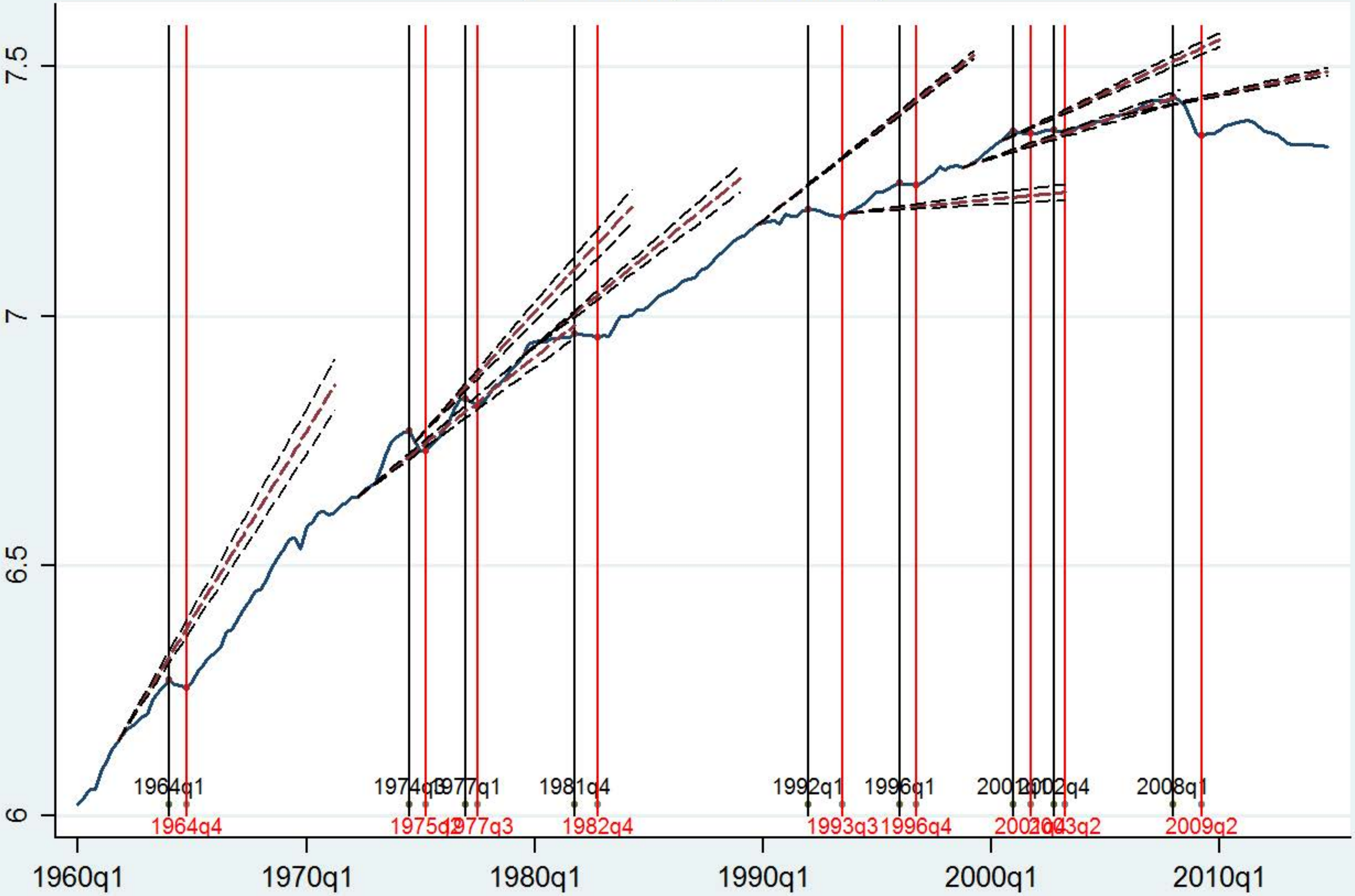

Figure 3A: Japan, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

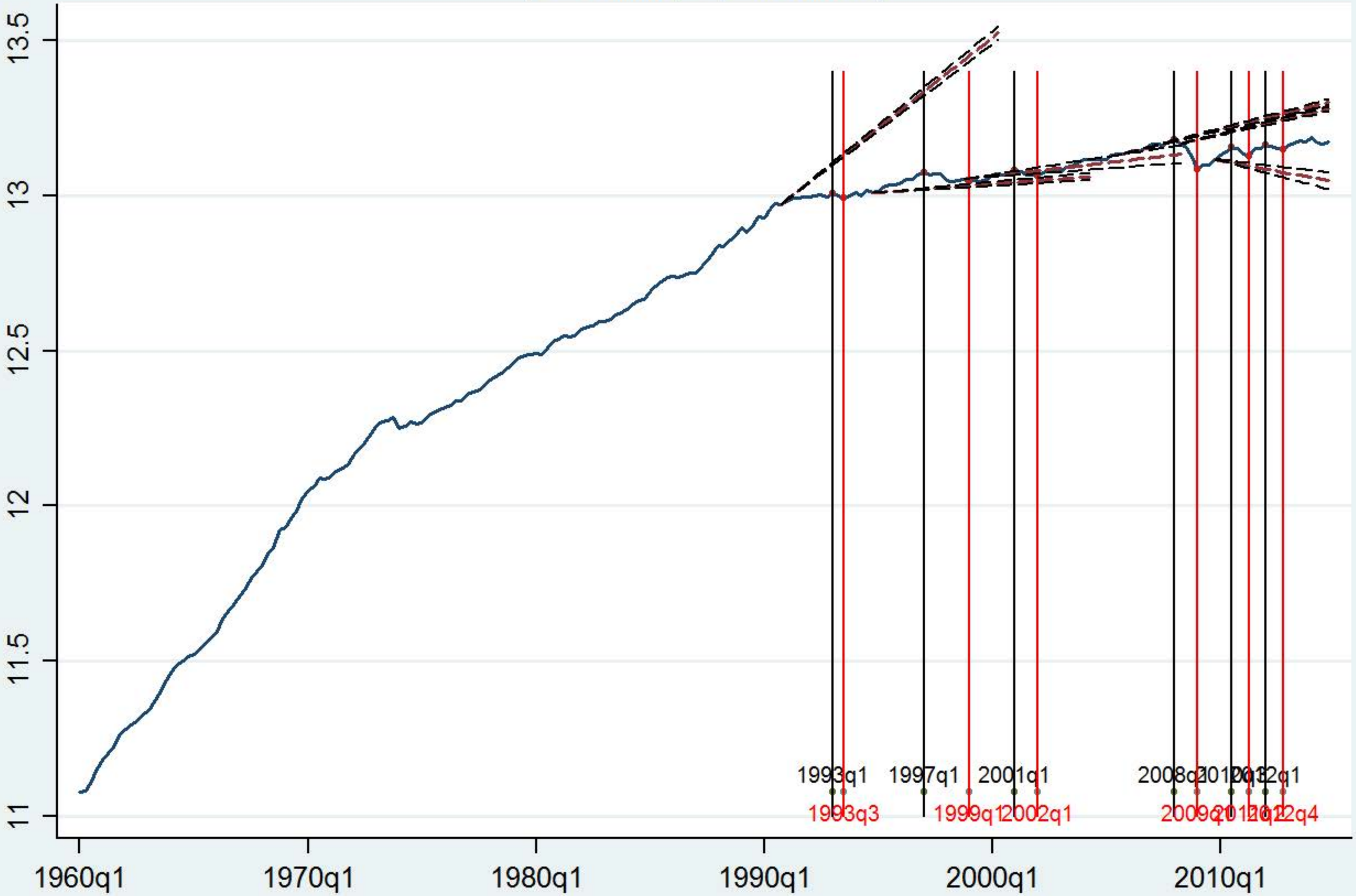

Figure 3A: Luxembourg, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

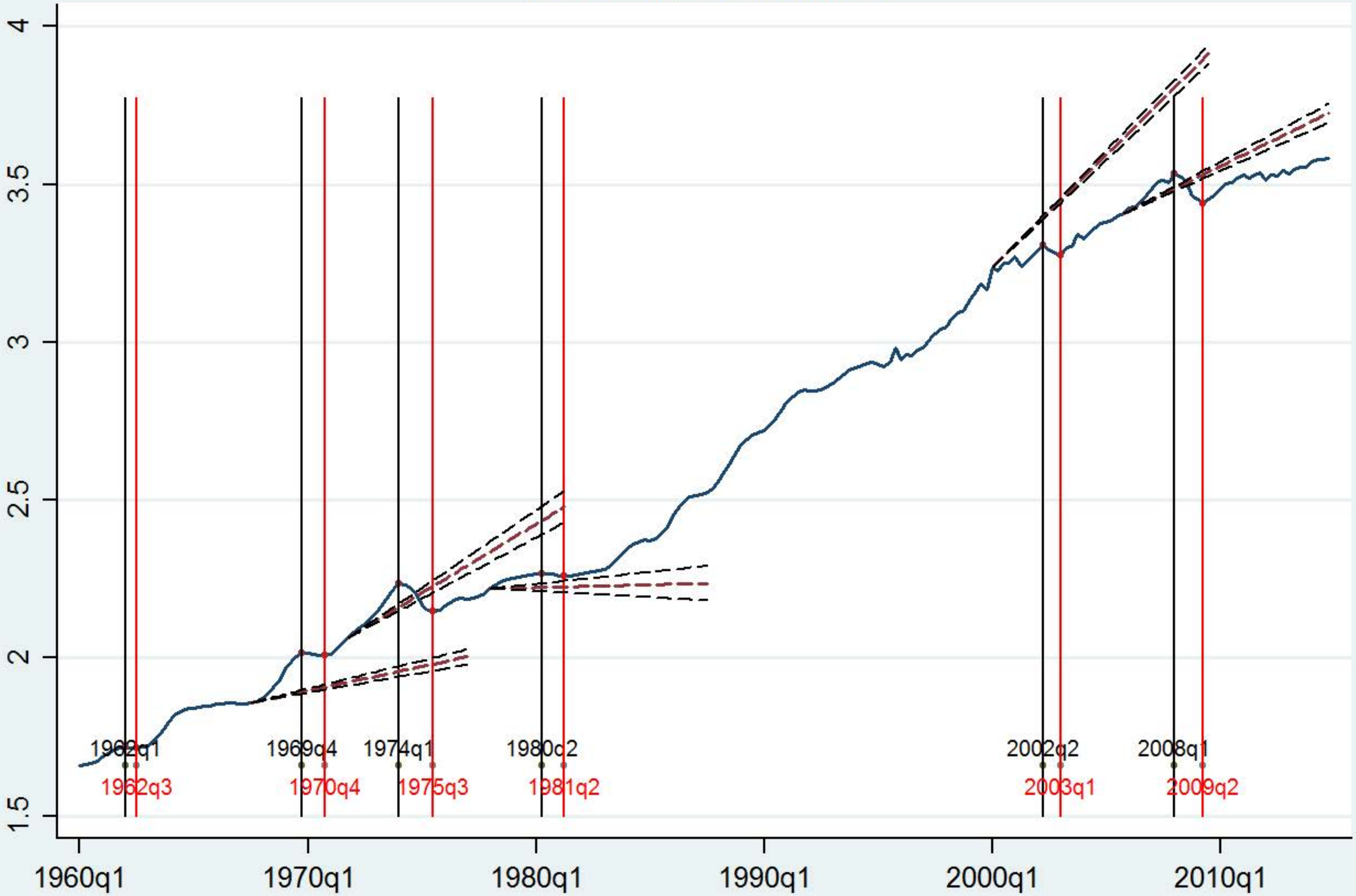

Figure 3A: Netherlands, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

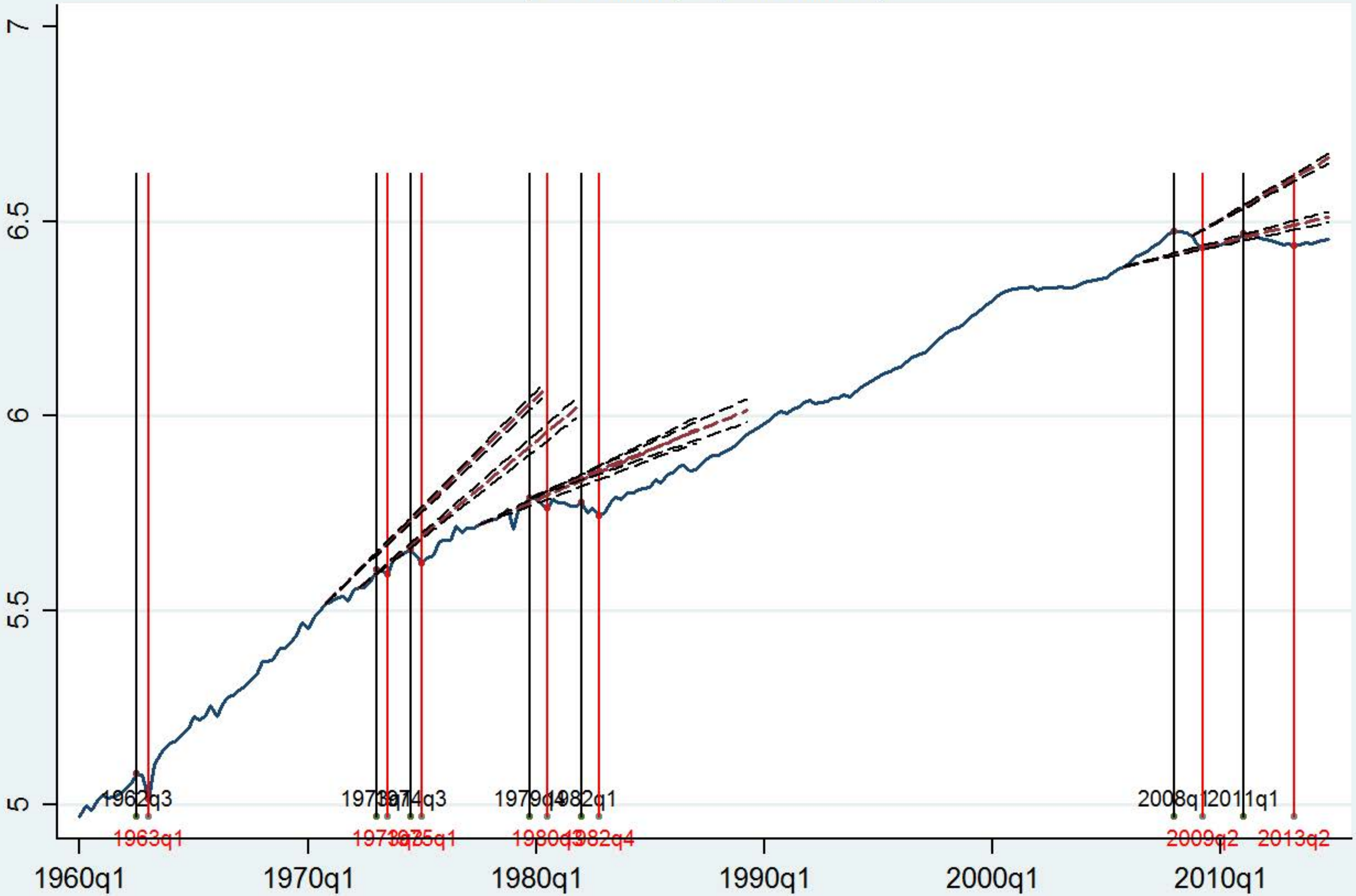

Figure 3A: NewZealand, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

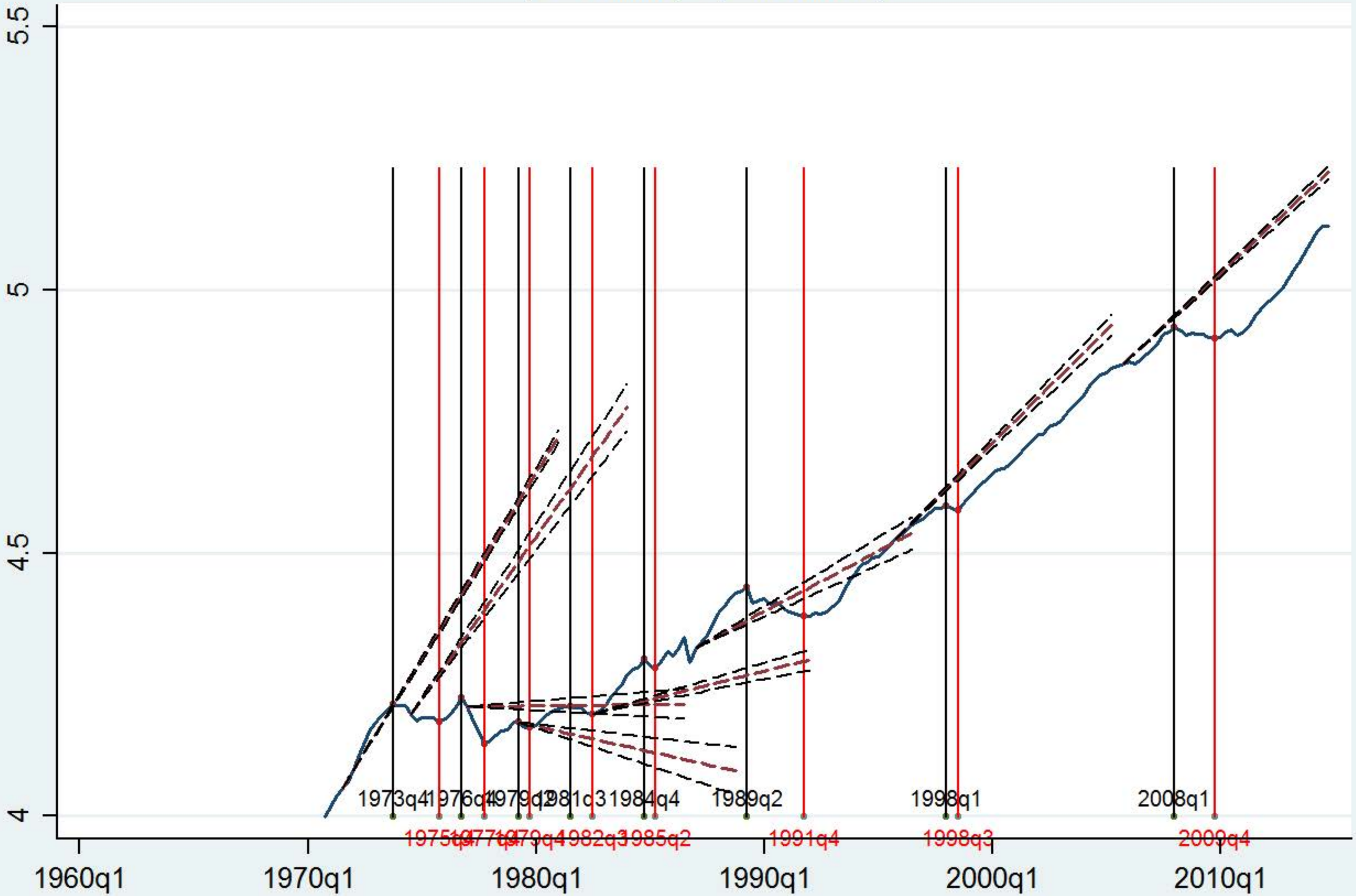

Figure 3A: Norway, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

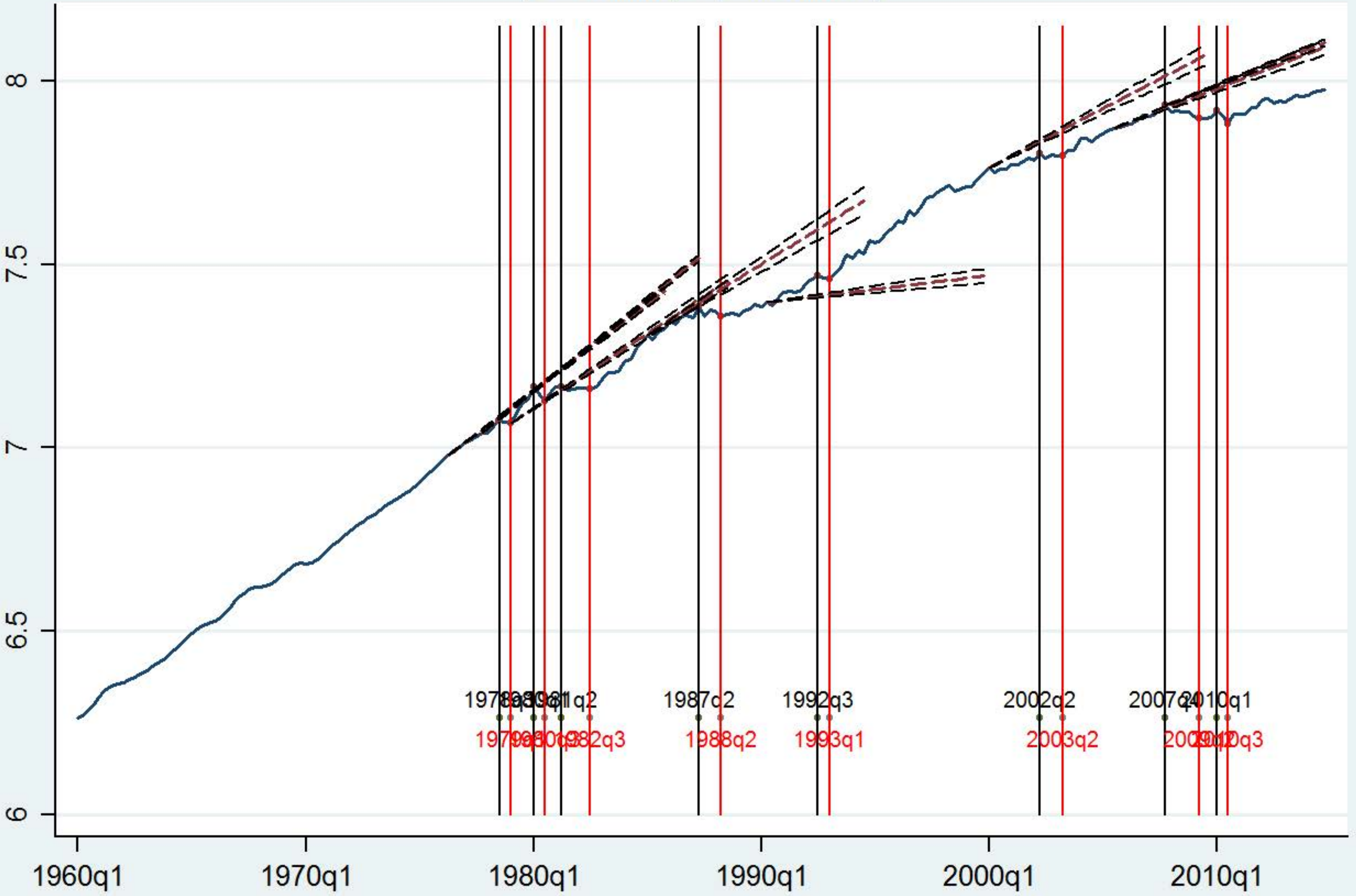

Figure 3A: Portugal, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

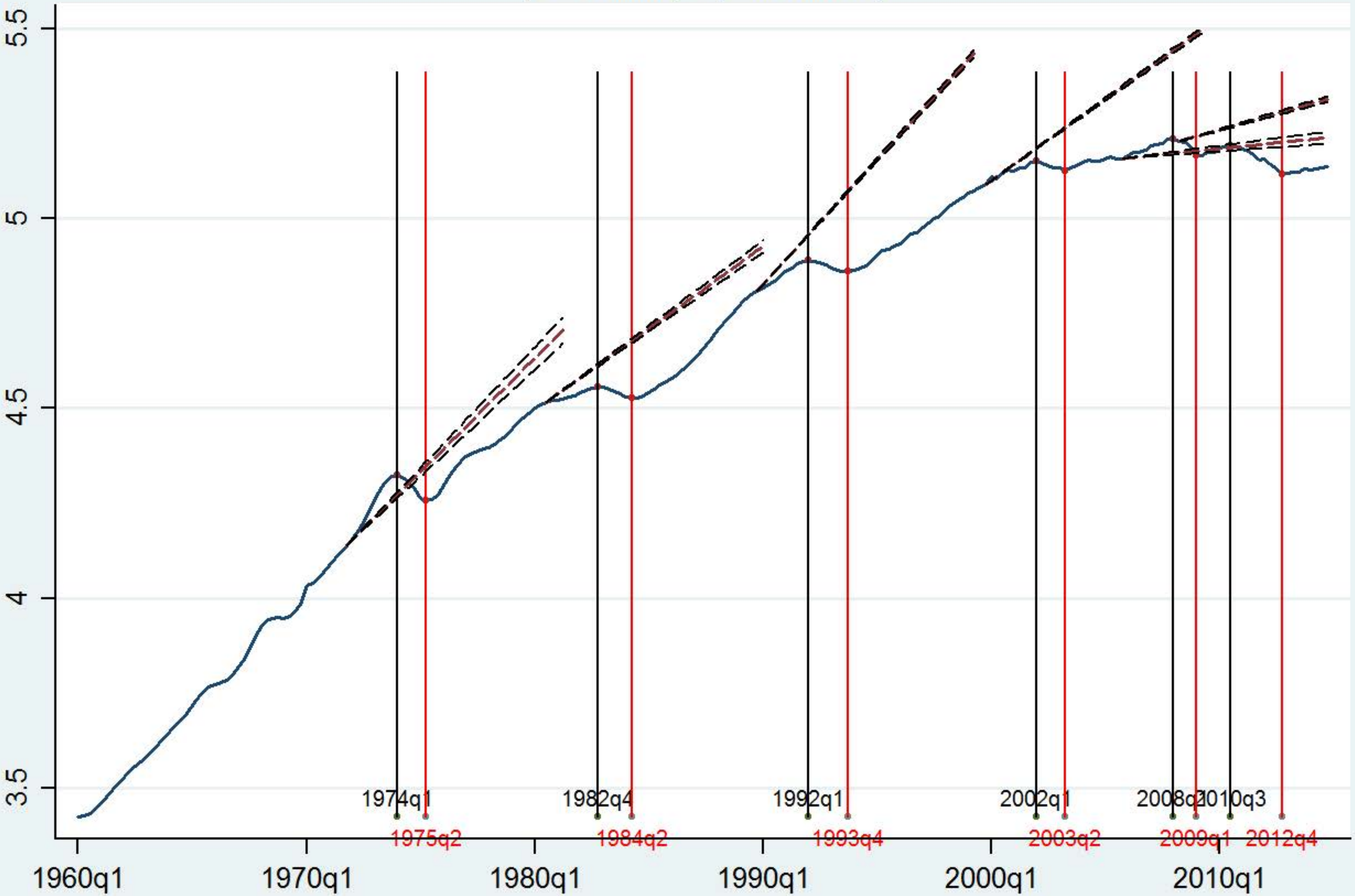

Figure 3A: Spain, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

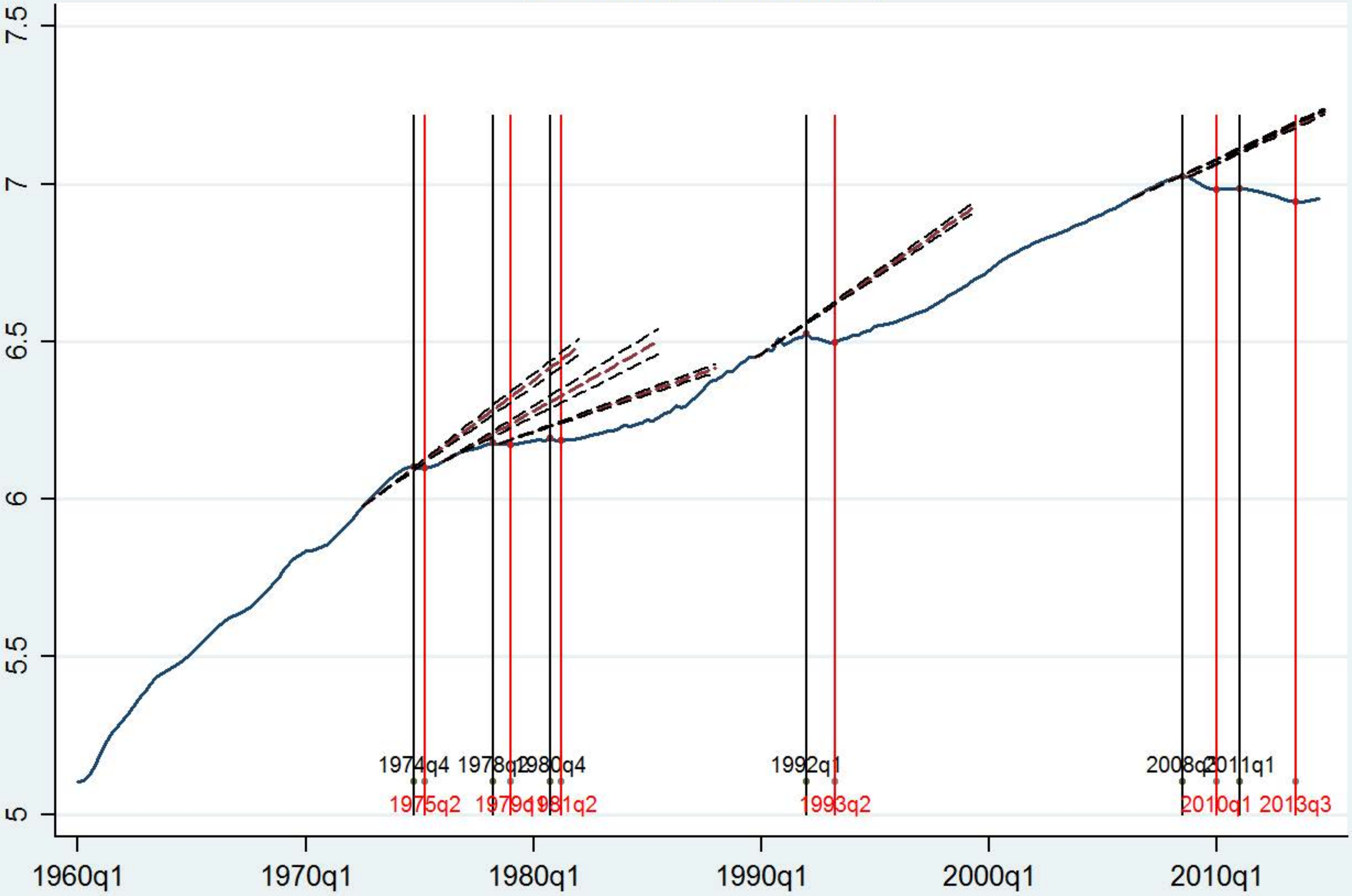

Figure 3A: Sweden, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

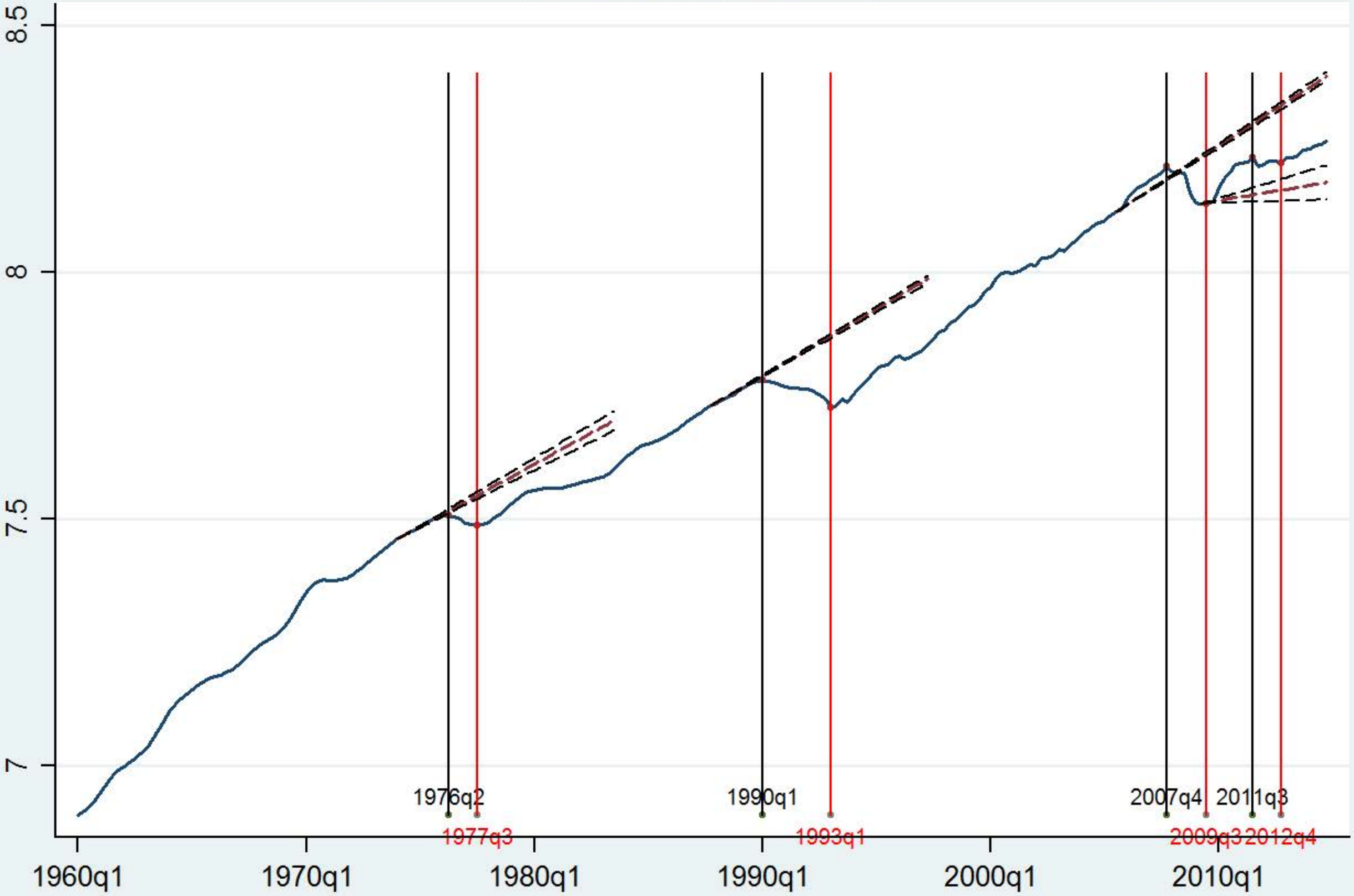

Figure 3A: Switzerland, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

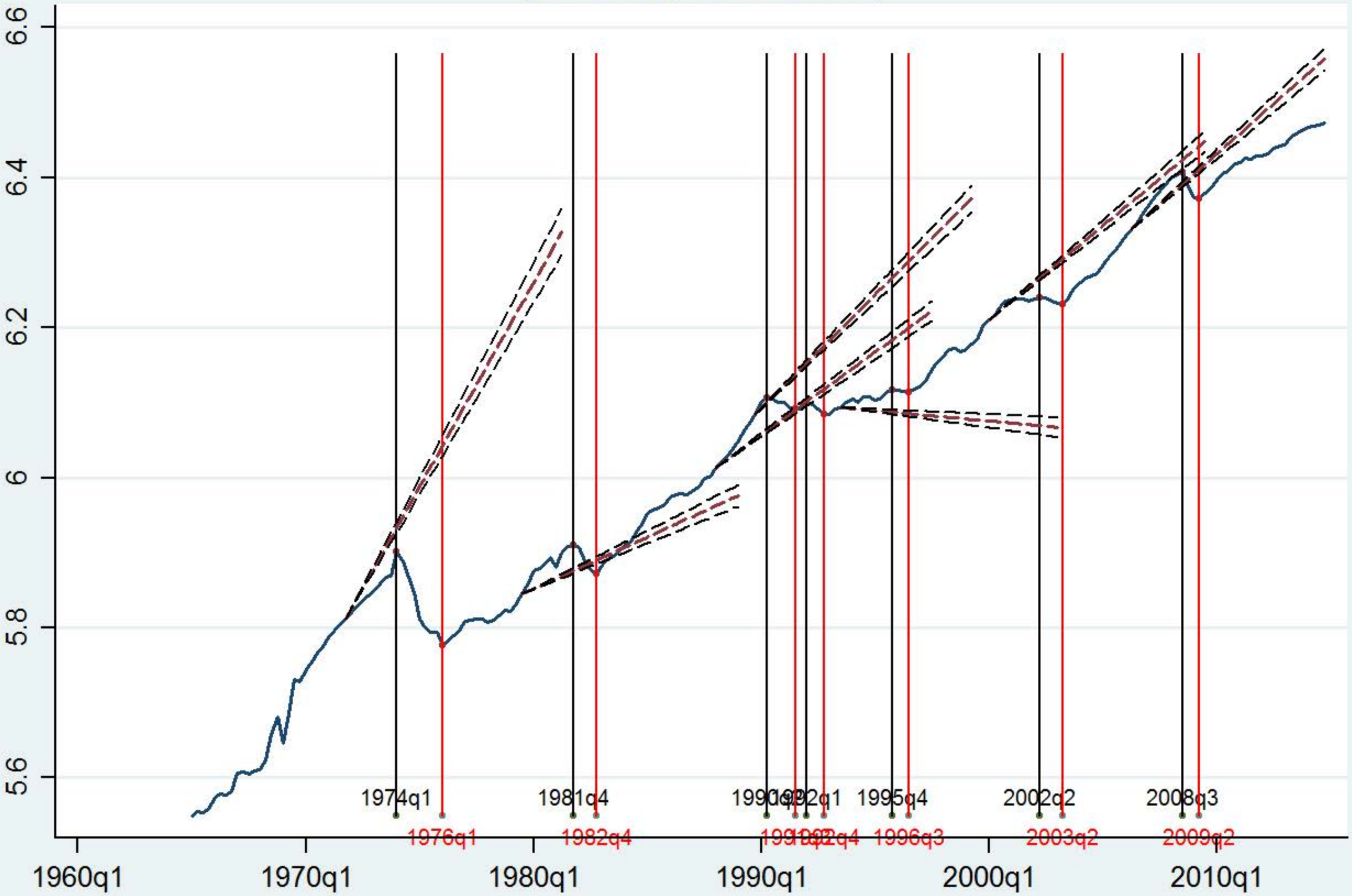

Figure 3A: UnitedKingdom, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

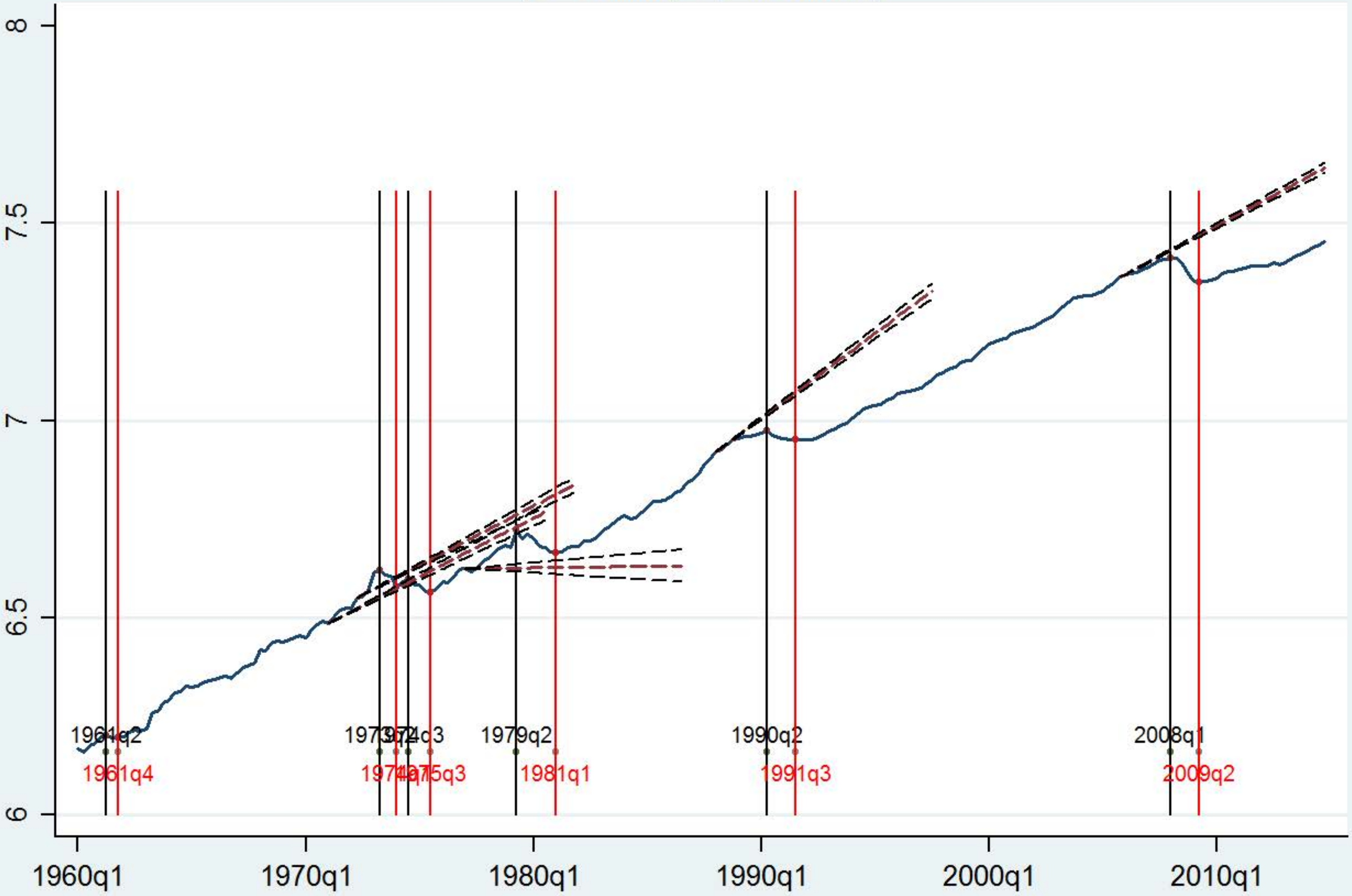

Figure 3A: UnitedStates, Evolution of Log Real GDP and Extrapolated Trends
(Benchmark, 4-year window)

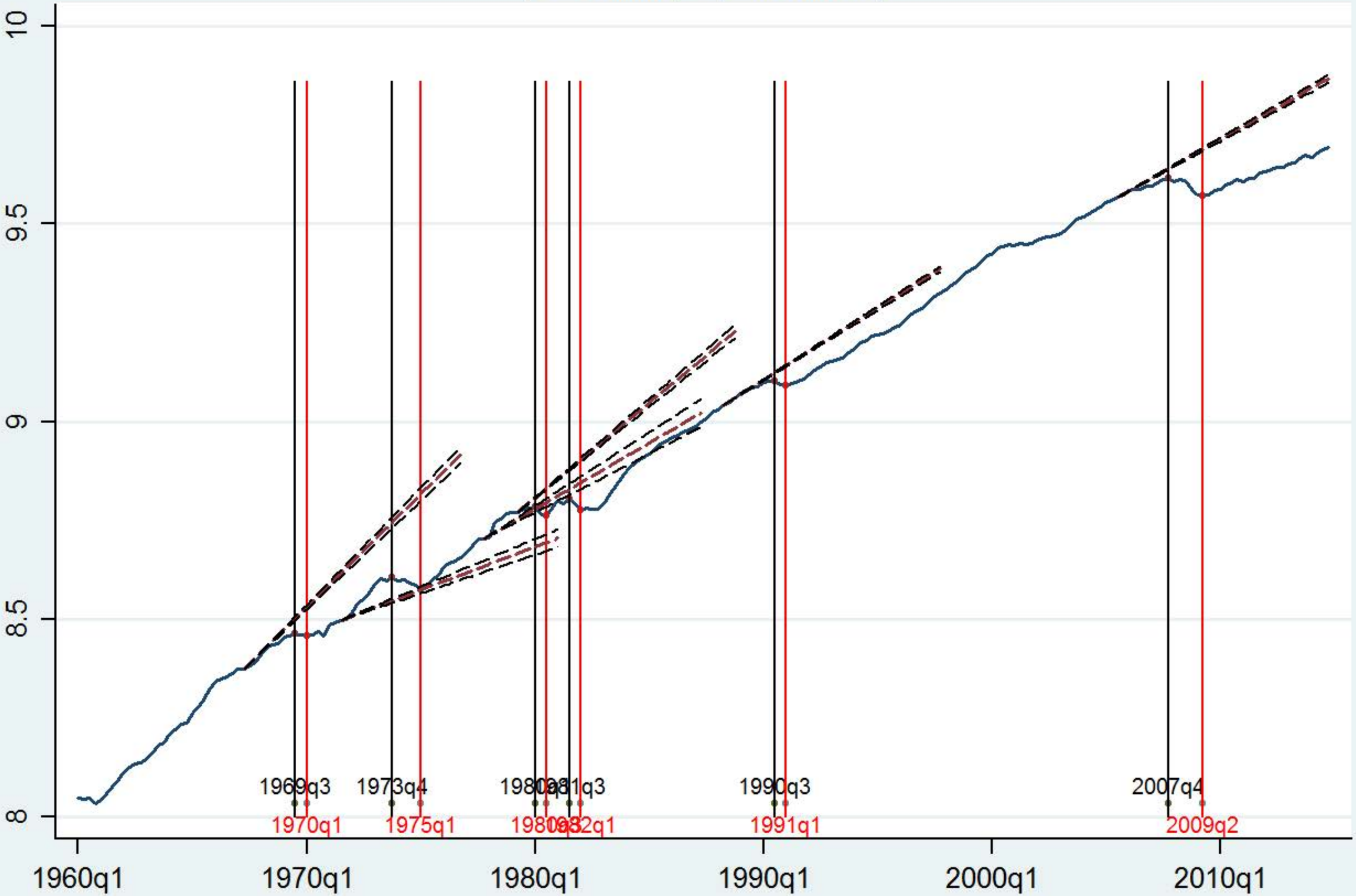

Figure 8

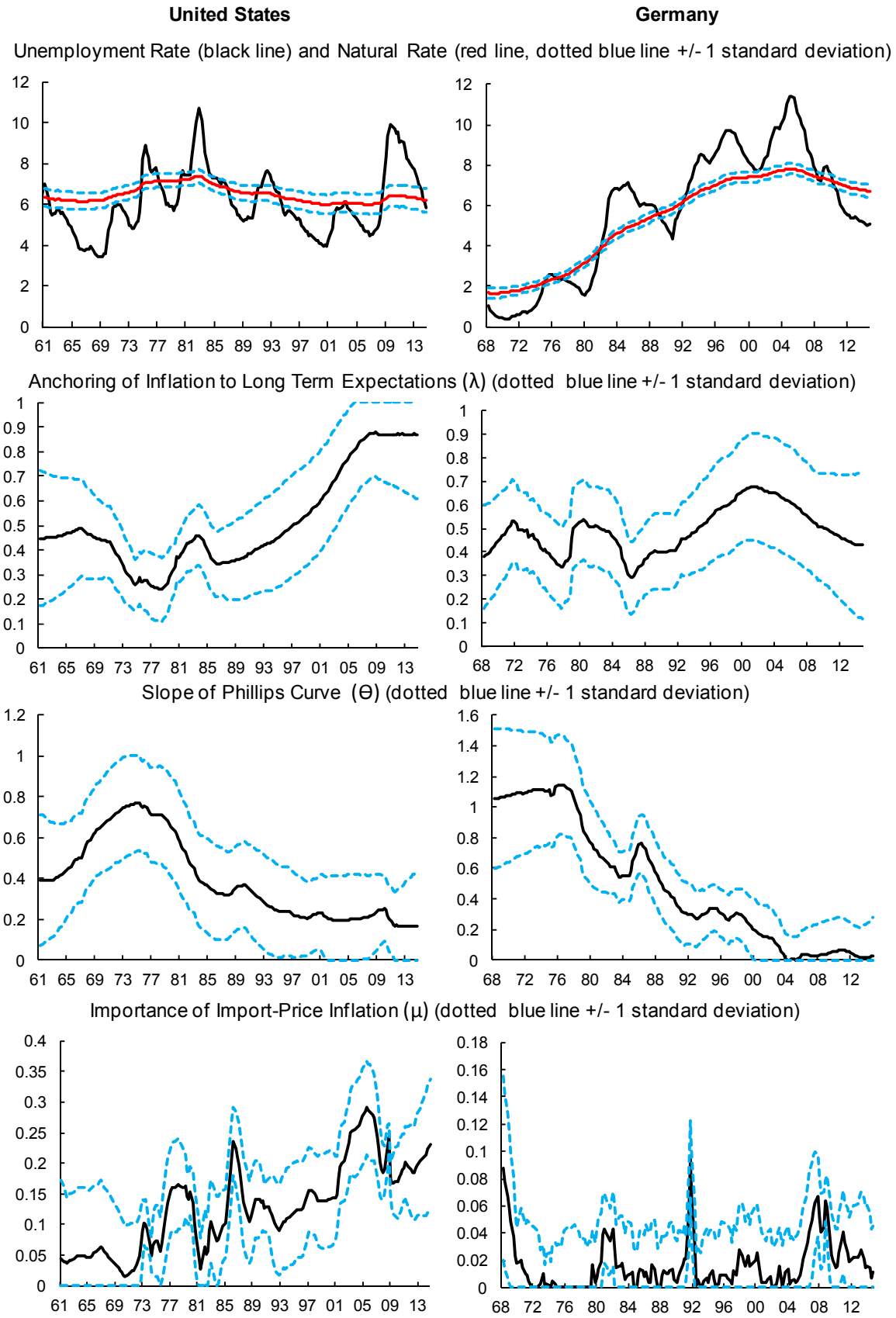
United States
Germany
Unemployment Rate (black line) and Natural Rate (red line, dotted blue line +/- 1 standard deviation)
Anchoring of Inflation to Long Term Expectations (λ) (dotted blue line +/- 1 standard deviation)
Slope of Phillips Curve (Θ) (dotted blue line +/- 1 standard deviation)
Importance of Import-Price Inflation (μ) (dotted blue line +/- 1 standard deviation)

Figure 8A

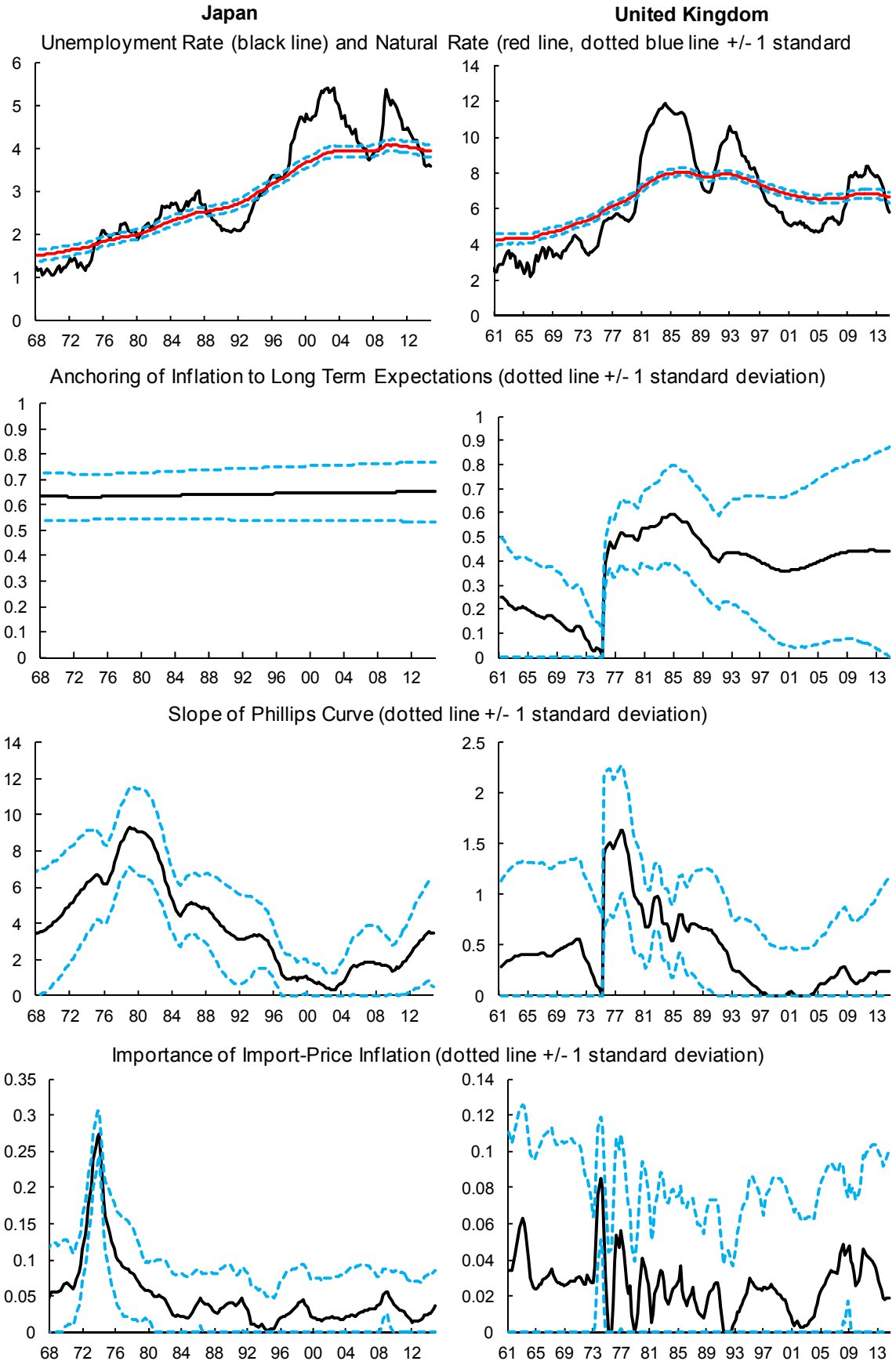
Japan
United Kingdom
Unemployment Rate (black line) and Natural Rate (red line, dotted blue line +/- 1 standard
Anchoring of Inflation to Long Term Expectations (dotted line +/- 1 standard deviation)
Slope of Phillips Curve (dotted line +/- 1 standard deviation)
Importance of Import-Price Inflation (dotted line +/- 1 standard deviation)

Figure 8A

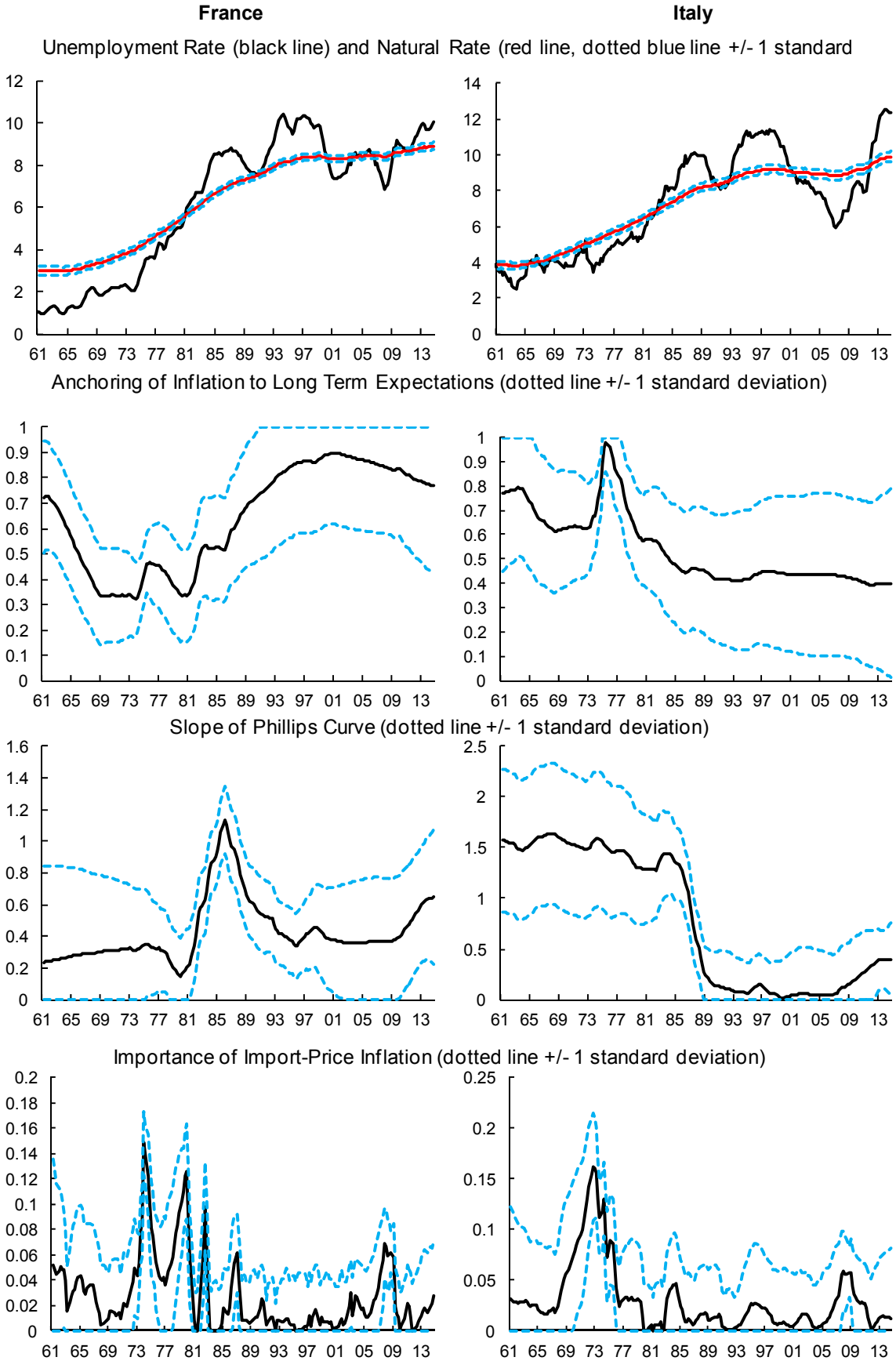
France
Italy
Unemployment Rate (black line) and Natural Rate (red line, dotted blue line +/- 1 standard
Anchoring of Inflation to Long Term Expectations (dotted line +/- 1 standard deviation)
Slope of Phillips Curve (dotted line +/- 1 standard deviation)
Importance of Import-Price Inflation (dotted line +/- 1 standard deviation)
61 65 69 73 77 81 85 89 93 97 01 05 09 13

Figure 8A

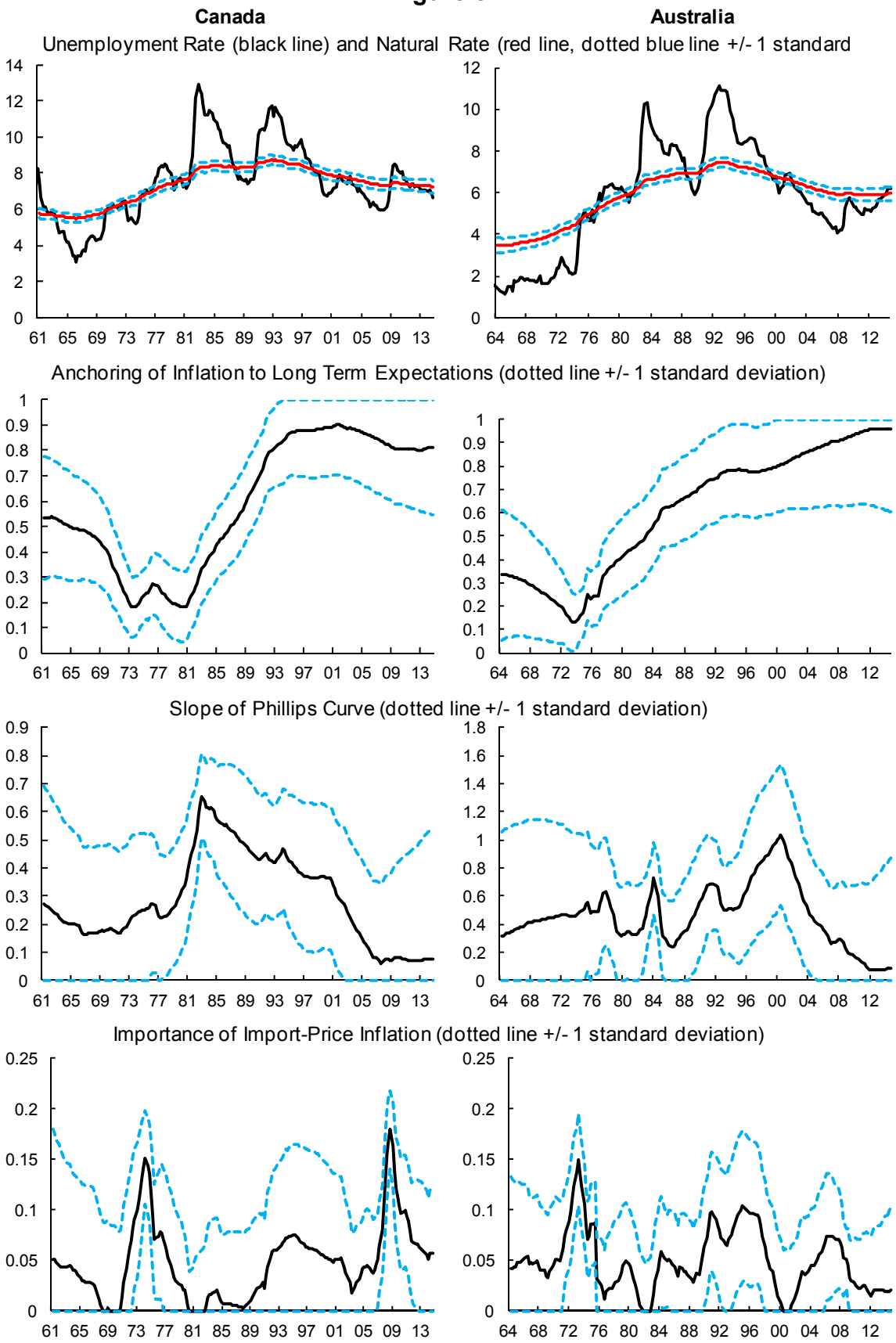
Canada
Australia
Unemployment Rate (black line) and Natural Rate (red line, dotted blue line +/- 1 standard
Anchoring of Inflation to Long Term Expectations (dotted line +/- 1 standard deviation)
Slope of Phillips Curve (dotted line +/- 1 standard deviation)
Importance of Import-Price Inflation (dotted line +/- 1 standard deviation)

Figure 8A

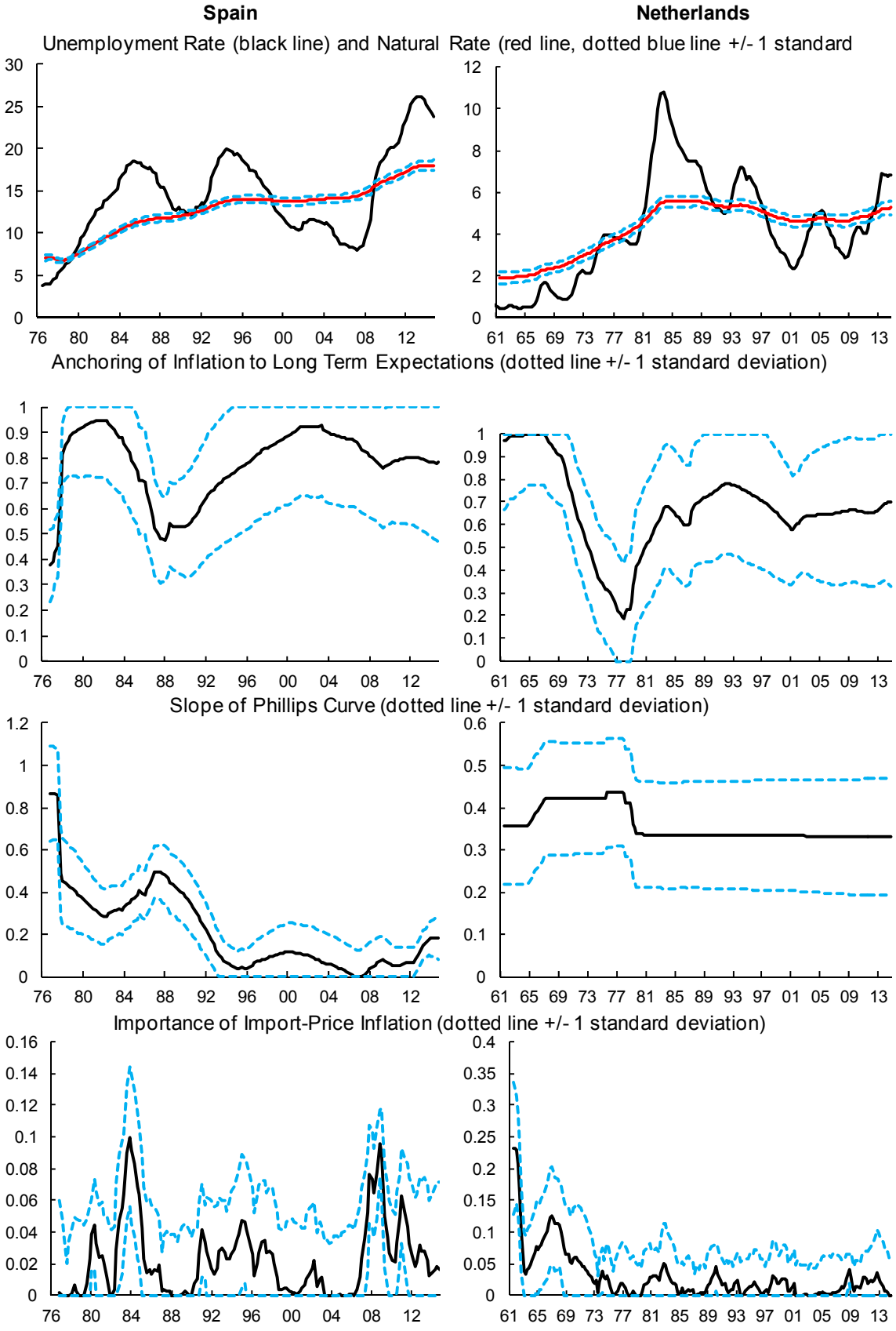
Spain
Netherlands
Unemployment Rate (black line) and Natural Rate (red line, dotted blue line +/- 1 standard
Anchoring of Inflation to Long Term Expectations (dotted line +/- 1 standard deviation)
Slope of Phillips Curve (dotted line +/- 1 standard deviation)
Importance of Import-Price Inflation (dotted line +/- 1 standard deviation)

Figure 8A

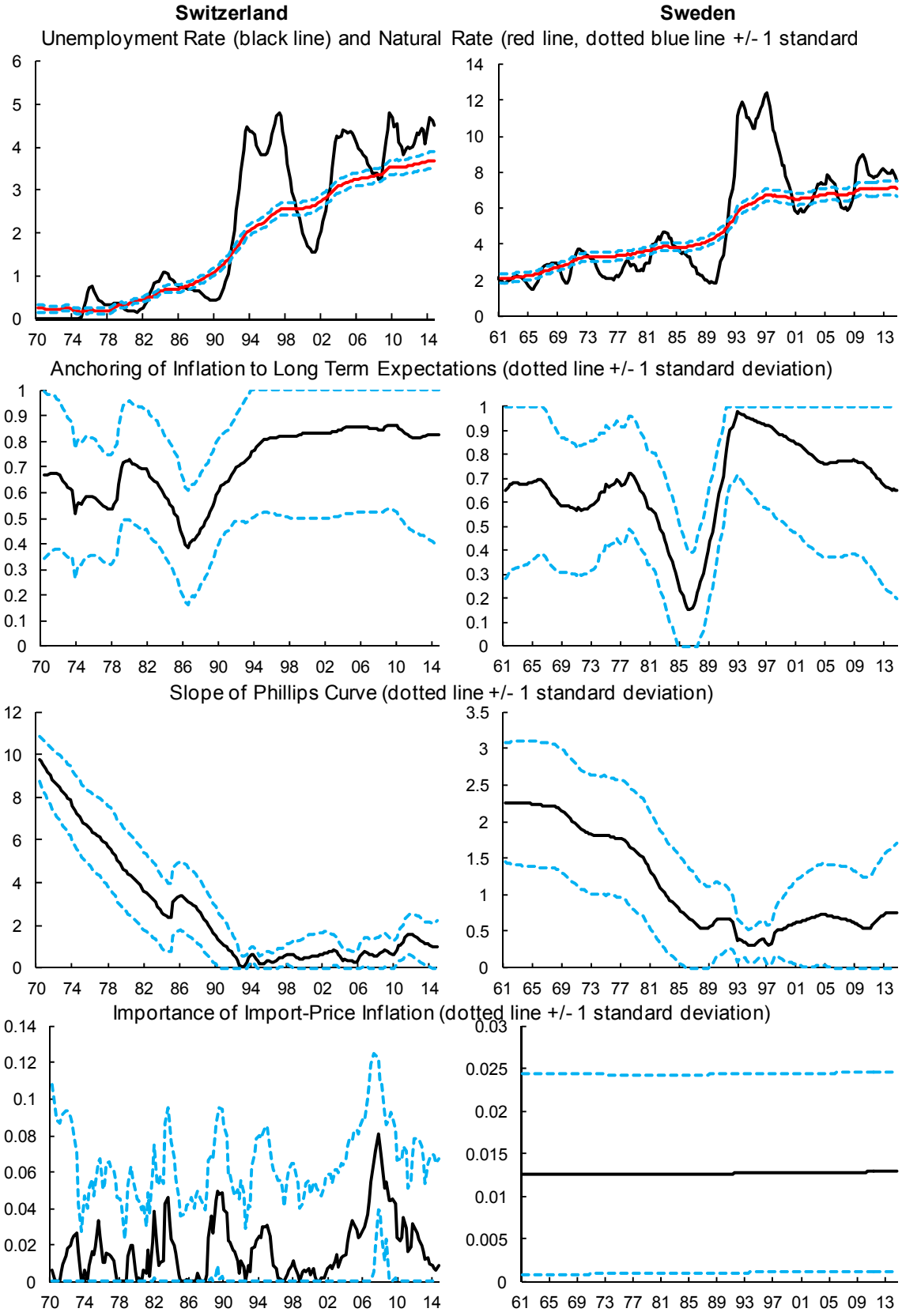
Switzerland
Sweden
Unemployment Rate (black line) and Natural Rate (red line, dotted blue line +/- 1 standard
Anchoring of Inflation to Long Term Expectations (dotted line +/- 1 standard deviation)
Slope of Phillips Curve (dotted line +/- 1 standard deviation)
Importance of Import-Price Inflation (dotted line +/- 1 standard deviation)

Figure 8A

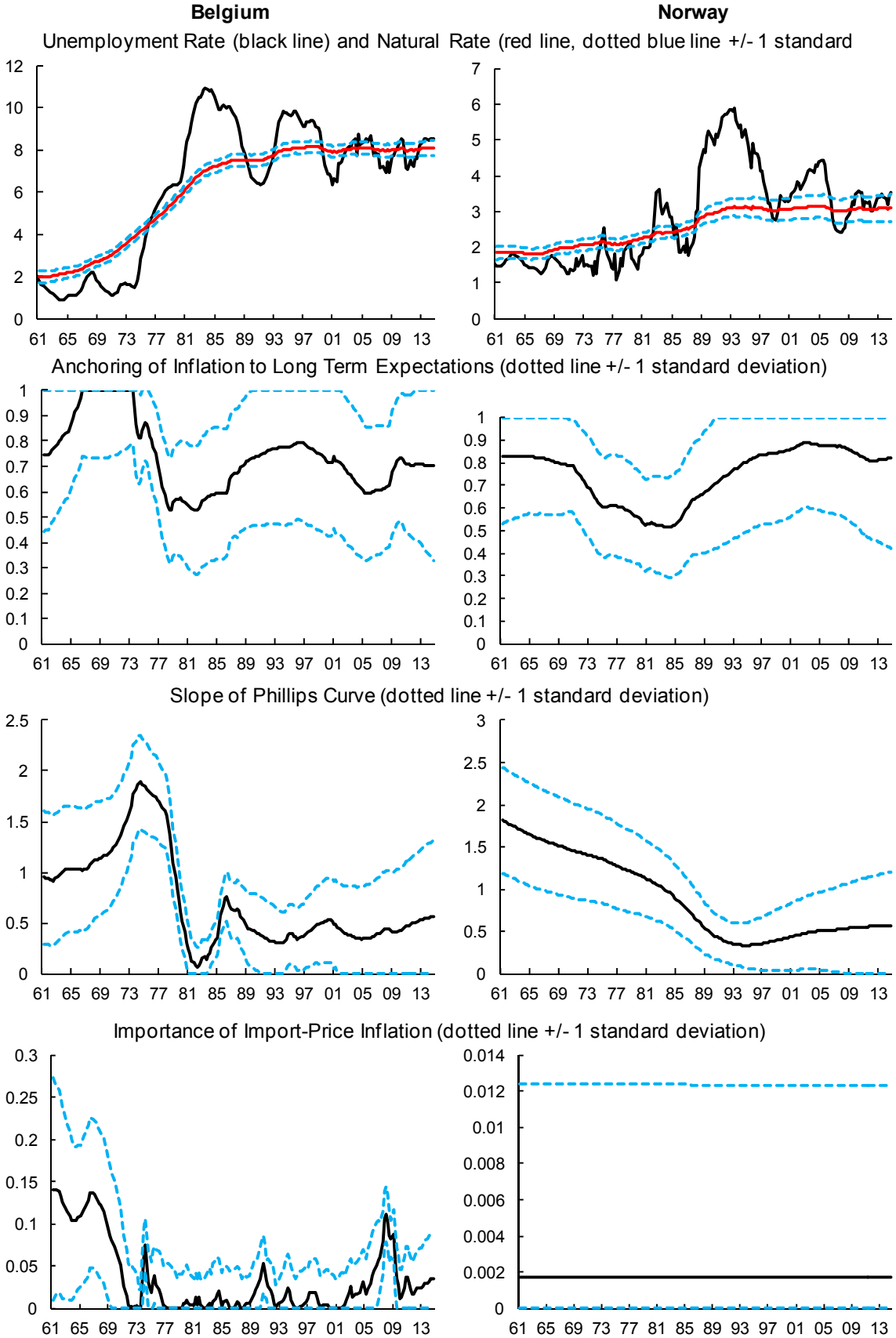
Belgium
Norway
Unemployment Rate (black line) and Natural Rate (red line, dotted blue line +/- 1 standard
Anchoring of Inflation to Long Term Expectations (dotted line +/- 1 standard deviation)
Slope of Phillips Curve (dotted line +/- 1 standard deviation)
Importance of Import-Price Inflation (dotted line +/- 1 standard deviation)
61 65 69 73 77 81 85 89 93 97 01 05 09 13

Figure 8A

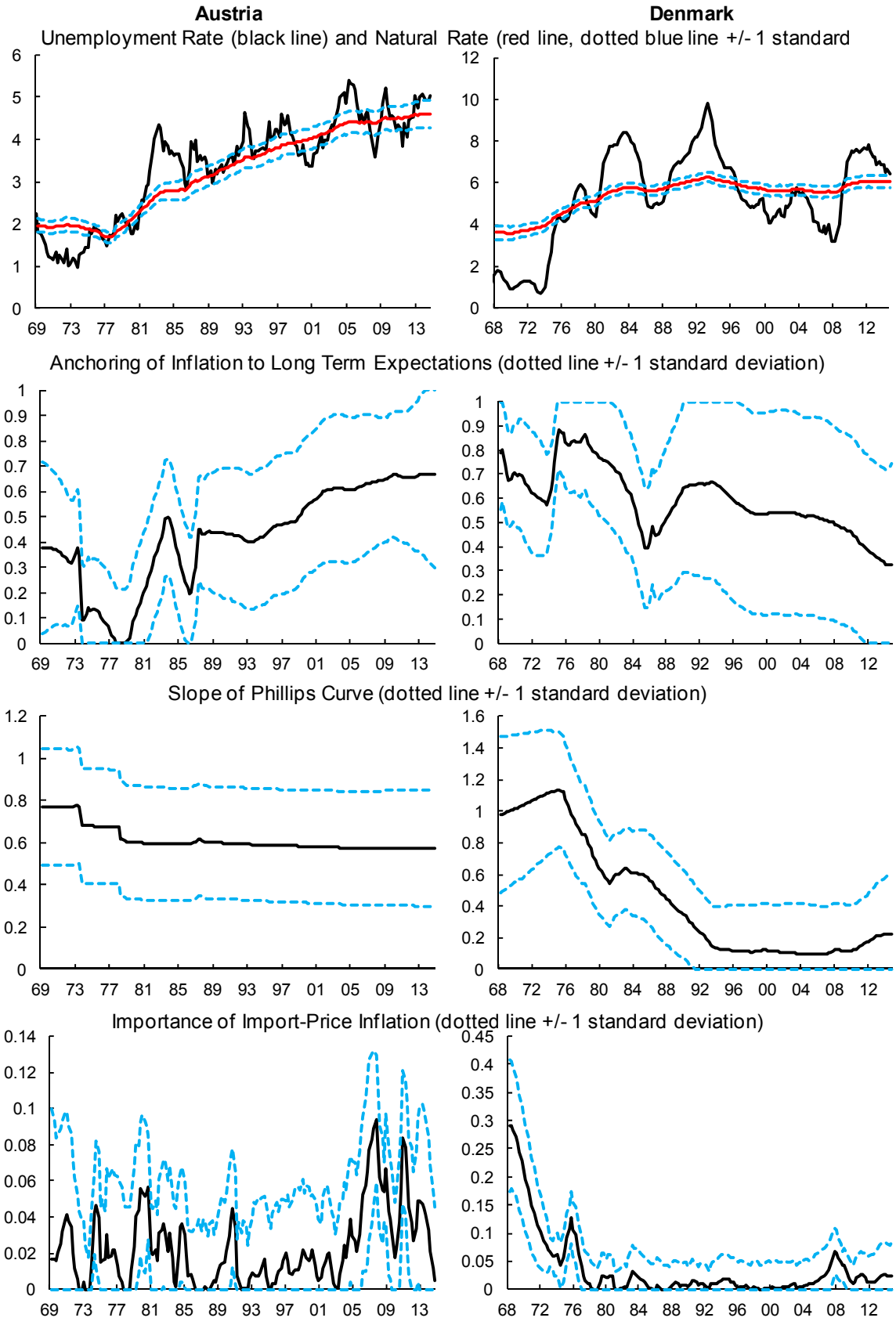
Austria
Denmark
Unemployment Rate (black line) and Natural Rate (red line, dotted blue line +/- 1 standard
Anchoring of Inflation to Long Term Expectations (dotted line +/- 1 standard deviation)
Slope of Phillips Curve (dotted line +/- 1 standard deviation)
Importance of Import-Price Inflation (dotted line +/- 1 standard deviation)

Figure 8A

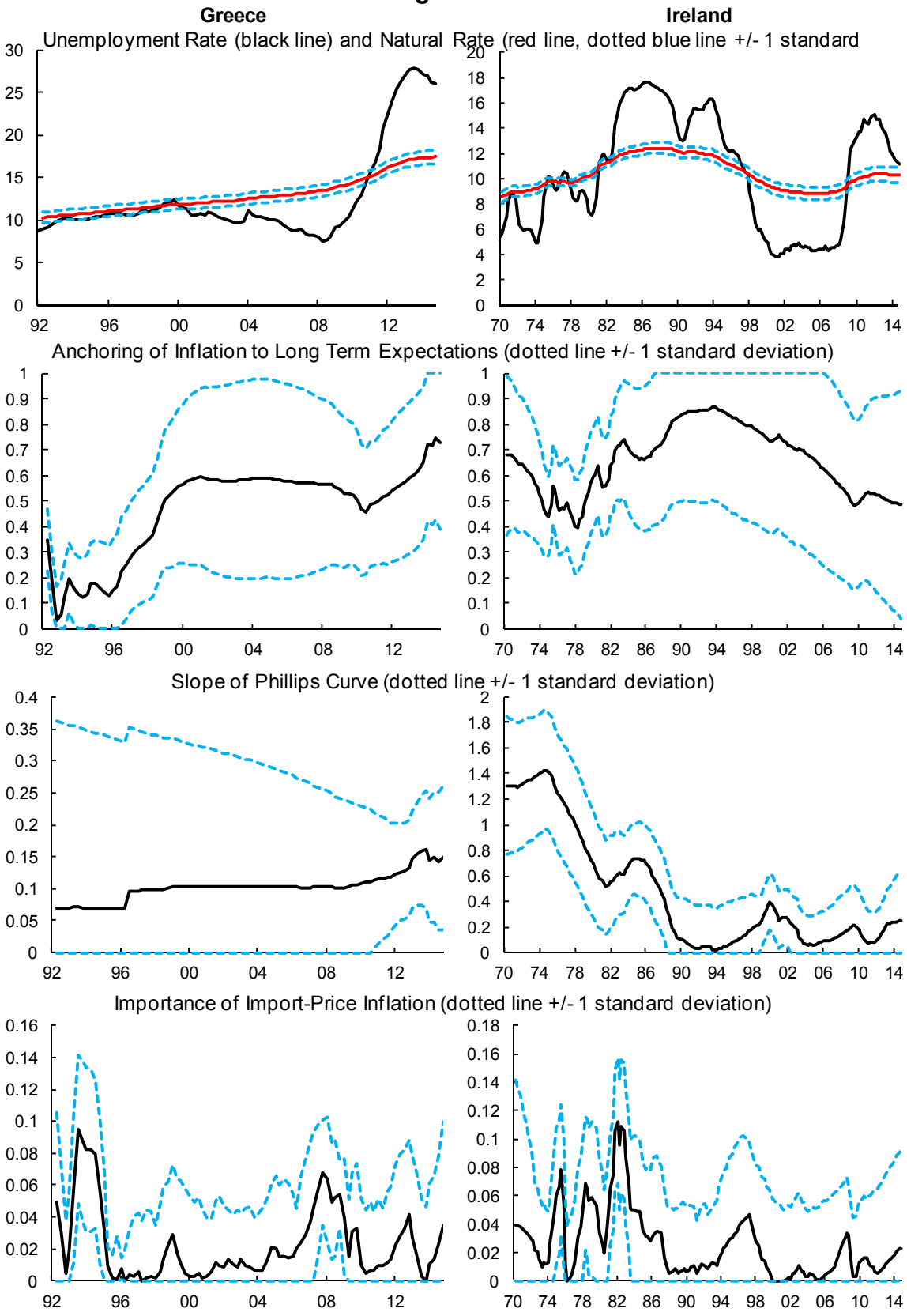
Greece
Ireland
Unemployment Rate (black line) and Natural Rate (red line, dotted blue line +/- 1 standard
Anchoring of Inflation to Long Term Expectations (dotted line +/- 1 standard deviation)
Slope of Phillips Curve (dotted line +/- 1 standard deviation)
Importance of Import-Price Inflation (dotted line +/- 1 standard deviation)

Figure 8A

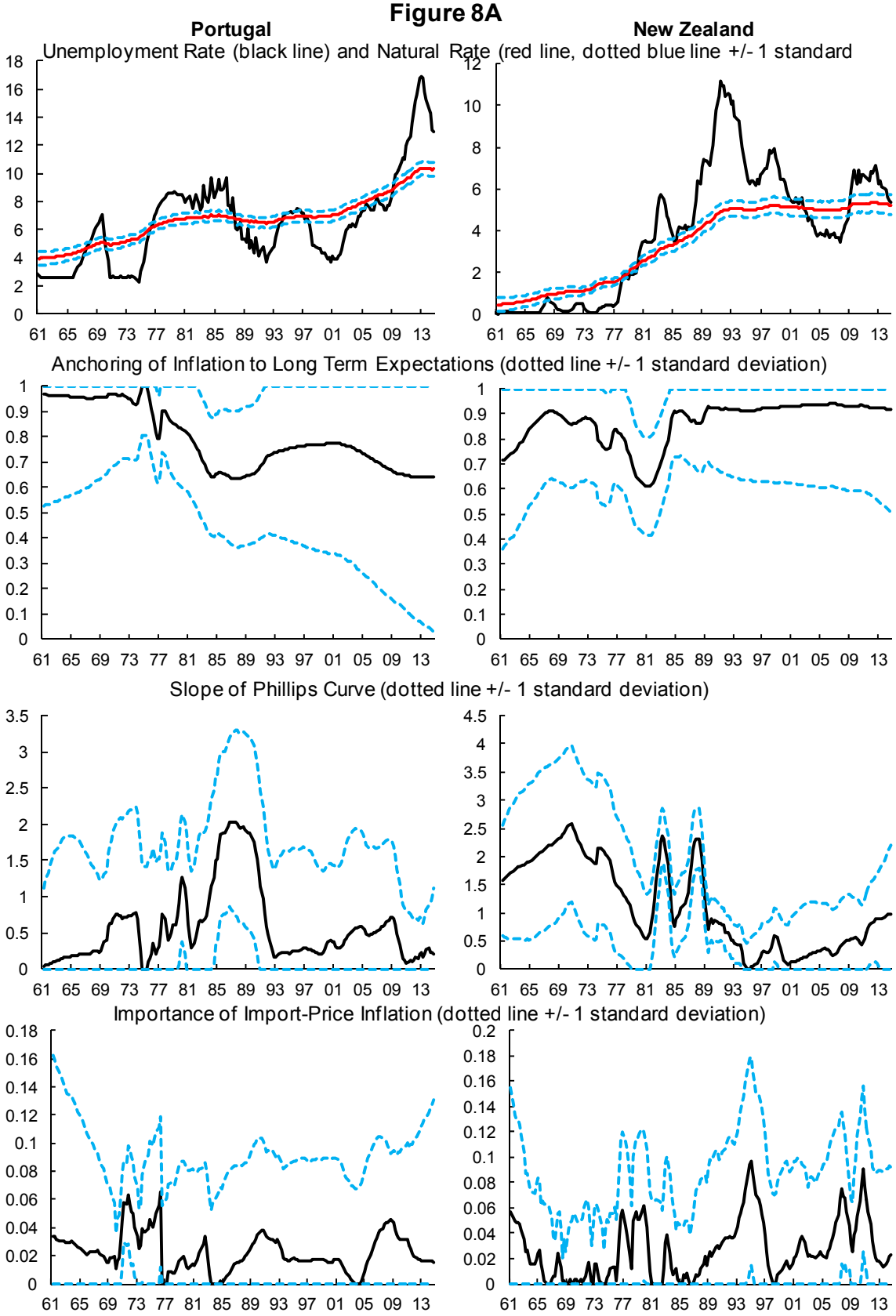
Portugal
New Zealand
Unemployment Rate (black line) and Natural Rate (red line, dotted blue line +/- 1 standard
Anchoring of Inflation to Long Term Expectations (dotted line +/- 1 standard deviation)
Slope of Phillips Curve (dotted line +/- 1 standard deviation)
Importance of Import-Price Inflation (dotted line +/- 1 standard deviation)
61 65 69 73 77 81 85 89 93 97 01 05 09 13

Table 6.A1 - Slope of the Phillips Curve (using u*)

	United States		Japan		Germany		United Kingdom		France	
	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014
VARIABLES	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE
PIE_LTE	0.987***	0.968***	0.649***	1.089**	1.031***	1.024***	0.943***	1.134***	0.981***	0.878***
	(0.0371)	(0.128)	(0.139)	(0.441)	(0.0920)	(0.131)	(0.0745)	(0.131)	(0.0688)	(0.112)
u_gap	-0.285***	-0.264*	-1.086***	-2.373***	-0.111	0.145	0.0438	-0.0389	-0.486***	-0.631***
	(0.0718)	(0.132)	(0.173)	(0.638)	(0.0892)	(0.202)	(0.111)	(0.298)	(0.139)	(0.203)
PIE_M	0.182***	0.196***	0.0164	0.0315***	0.0105	0.0394***	0.00893	0.0307**	0.0109	0.0347**
	(0.0251)	(0.0336)	(0.0102)	(0.0111)	(0.0114)	(0.0113)	(0.0180)	(0.0120)	(0.00906)	(0.0134)
Observations	100	32	100	32	100	32	100	32	100	32
R-squared	0.890	0.884	0.338	0.433	0.672	0.765	0.717	0.790	0.780	0.747
	Italy		Canada		Australia		Spain		Netherlands	
	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014
VARIABLES	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE
PIE_LTE	1.189***	0.906***	0.970***	0.773***	0.937***	0.754***	0.989***	0.892***	0.994***	1.064***
	(0.0421)	(0.135)	(0.0963)	(0.141)	(0.0748)	(0.116)	(0.0424)	(0.164)	(0.0573)	(0.139)
u_gap	-0.124	-0.296***	-0.321**	-0.516	-0.683***	-0.780**	-0.0809**	-0.0917*	-0.402***	0.00873
	(0.0870)	(0.0966)	(0.161)	(0.450)	(0.135)	(0.380)	(0.0360)	(0.0529)	(0.119)	(0.202)
PIE_M	0.0121	0.0320**	0.0429	0.101*	0.0324*	0.0419***	0.0252**	0.0591***	0.00753	0.0154
	(0.00884)	(0.0129)	(0.0486)	(0.0499)	(0.0190)	(0.0114)	(0.0115)	(0.0180)	(0.00831)	(0.0132)
Observations	100	32	100	32	100	32	100	32	100	32
R-squared	0.891	0.724	0.596	0.622	0.670	0.805	0.840	0.671	0.761	0.667
	Switzerland		Sweden		Belgium		Norway		Austria	
	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014
VARIABLES	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE
PIE_LTE	1.354***	0.628	1.126***	1.006***	1.146***	1.087***	0.832***	0.774***	1.107***	1.227***
	(0.132)	(0.591)	(0.138)	(0.163)	(0.0850)	(0.208)	(0.122)	(0.175)	(0.0620)	(0.109)
u_gap	-0.713***	-0.587	-0.549***	-1.206***	-0.621***	-1.134*	-0.0567	-0.797	-0.678***	-1.623***
	(0.151)	(0.794)	(0.115)	(0.323)	(0.195)	(0.617)	(0.204)	(1.518)	(0.251)	(0.420)
PIE_M	0.00685	0.0347**	0.00919	0.0439***	0.0128	0.0465**	-0.00798	-0.0252	0.0180**	0.0466***
	(0.00927)	(0.0132)	(0.0150)	(0.0108)	(0.0116)	(0.0188)	(0.00881)	(0.0200)	(0.00701)	(0.00863)
Observations	100	32	100	32	100	32	100	32	100	32
R-squared	0.627	0.227	0.648	0.602	0.664	0.678	0.512	0.453	0.794	0.840
	Denmark		Ireland		Greece		Portugal		New Zealand	
	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014
VARIABLES	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE
PIE_LTE	0.958***	-0.272	0.940***	0.592***	1.602***	1.021***	1.268***	0.760***	0.929***	1.021***
	(0.0597)	(0.243)	(0.0668)	(0.176)	(0.101)	(0.246)	(0.0955)	(0.215)	(0.0753)	(0.142)
u_gap	-0.169	1.716***	-0.279***	-0.257***	-0.146**	-0.194***	-0.232***	-0.0124	-0.500***	-0.597*
	(0.122)	(0.487)	(0.0437)	(0.0839)	(0.0663)	(0.0579)	(0.0730)	(0.111)	(0.0885)	(0.342)
PIE_M	0.00948	0.0183	-0.00199	0.0132	-0.00565	0.00955	0.0278**	0.0409***	0.0317***	0.0415***
	(0.00748)	(0.0168)	(0.0107)	(0.0186)	(0.00963)	(0.0237)	(0.0135)	(0.0143)	(0.00970)	(0.0102)
Observations	83	15	100	32	91	32	100	32	100	32
R-squared	0.765	0.735	0.702	0.304	0.838	0.526	0.811	0.449	0.624	0.611

Note: regression results corresponding to equation 2 in the text, where PIE is headline CPI inflation (defined as quarterly inflation, annualized), u_gap is the difference between unemployment rate and the natural unemployment rate (Kalman Filter estimated), PIE_LTE is long term inflation expectations (the average of the last four quarterly inflation rates), and PIE_M is import price inflation relative to headline inflation. Robust standard errors are in parentheses, and ***, **, and * denote significance level at 1, 5, and 10 percent, respectively.

Table 6.A2 - Slope of the Phillips Curve (using u_bar)

	United States		Japan		Germany		United Kingdom		France	
	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014
VARIABLES	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE
PIE_LTE	1.000***	0.972***	0.834***	2.619***	1.148***	0.879***	0.939***	1.140***	1.240***	1.568***
	(0.0378)	(0.131)	(0.153)	(0.809)	(0.143)	(0.139)	(0.0750)	(0.159)	(0.122)	(0.282)
u_gap_bar	-0.248***	-0.242*	-0.502***	-1.541***	-0.119	0.112	0.0177	-0.0401	-0.316***	-0.522***
	(0.0652)	(0.122)	(0.0883)	(0.425)	(0.0723)	(0.138)	(0.0975)	(0.279)	(0.0811)	(0.162)
PIE_M	0.181***	0.196***	0.0153	0.0318***	0.0108	0.0393***	0.00881	0.0308**	0.0115	0.0342**
	(0.0253)	(0.0337)	(0.0103)	(0.0102)	(0.0111)	(0.0115)	(0.0179)	(0.0120)	(0.00858)	(0.0136)
Observations	100	32	100	32	100	32	100	32	100	32
R-squared	0.888	0.884	0.312	0.473	0.678	0.766	0.717	0.790	0.767	0.752

	Italy		Canada		Australia		Spain		Netherlands	
	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014
VARIABLES	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE
PIE_LTE	1.288***	1.192***	0.995***	0.737***	1.043***	0.794***	0.979***	0.940***	1.123***	1.064***
	(0.0561)	(0.177)	(0.101)	(0.142)	(0.0855)	(0.102)	(0.0416)	(0.175)	(0.0743)	(0.147)
u_gap_bar	-0.154***	-0.248***	-0.205	-0.495	-0.485***	-0.794**	-0.0650**	-0.0717*	-0.308***	-0.0133
	(0.0582)	(0.0780)	(0.125)	(0.413)	(0.0962)	(0.363)	(0.0289)	(0.0409)	(0.0966)	(0.159)
PIE_M	0.0121	0.0317**	0.0426	0.102**	0.0313	0.0422***	0.0262**	0.0591***	0.00778	0.0152
	(0.00822)	(0.0131)	(0.0488)	(0.0498)	(0.0194)	(0.0114)	(0.0112)	(0.0181)	(0.00831)	(0.0134)
Observations	100	32	100	32	100	32	100	32	100	32
R-squared	0.896	0.727	0.592	0.623	0.658	0.806	0.840	0.671	0.757	0.667

	Switzerland		Sweden		Belgium		Norway		Austria	
	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014
VARIABLES	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE
PIE_LTE	1.508***	1.585	1.260***	2.071***	1.465***	1.915***	0.841***	0.835***	1.099***	1.996***
	(0.101)	(1.308)	(0.157)	(0.365)	(0.177)	(0.321)	(0.134)	(0.263)	(0.0804)	(0.250)
u_gap_bar	-0.643***	-0.645	-0.479***	-1.098***	-0.372***	-0.737**	-0.0667	-0.731	-0.110	-1.264***
	(0.0764)	(0.595)	(0.0934)	(0.262)	(0.138)	(0.300)	(0.203)	(1.407)	(0.140)	(0.359)
PIE_M	0.00954	0.0337**	0.0110	0.0437***	0.0133	0.0472**	-0.00799	-0.0252	0.0182***	0.0456***
	(0.00810)	(0.0131)	(0.0139)	(0.0108)	(0.0114)	(0.0185)	(0.00880)	(0.0200)	(0.00689)	(0.00878)
Observations	100	32	100	32	100	32	100	32	100	32
R-squared	0.716	0.244	0.681	0.628	0.642	0.682	0.513	0.453	0.782	0.831

	Denmark		Ireland		Greece		Portugal		New Zealand	
	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014	1990-2014	2007-2014
VARIABLES	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE	PIE
PIE_LTE	1.006***	-0.893**	1.019***	0.603***	1.746***	1.379***	1.326***	0.792***	0.935***	1.338***
	(0.0640)	(0.407)	(0.0692)	(0.181)	(0.0989)	(0.279)	(0.0970)	(0.274)	(0.114)	(0.211)
u_gap_bar	-0.133	1.529***	-0.210***	-0.215***	-0.140***	-0.111***	-0.168***	-0.0165	-0.325***	-0.576*
	(0.103)	(0.442)	(0.0339)	(0.0717)	(0.0348)	(0.0391)	(0.0529)	(0.0790)	(0.107)	(0.284)
PIE_M	0.00933	0.0197	-0.00262	0.0129	-0.00422	0.0107	0.0295**	0.0408***	0.0341***	0.0412***
	(0.00743)	(0.0181)	(0.0111)	(0.0188)	(0.00874)	(0.0231)	(0.0132)	(0.0144)	(0.0105)	(0.0101)
Observations	83	15	100	32	91	32	100	32	100	32
R-squared	0.764	0.728	0.687	0.294	0.854	0.485	0.815	0.449	0.578	0.617

Note: Regression results corresponding to equation 2 in the text, where PIE is headline CPI inflation (defined as quarterly inflation, annualized), U_gap_bar is the difference between the unemployment rate and the natural unemployment rate (estimated as the average unemployment during 1990-2014), PIE_LTE is long term inflation expectations (the average of the last four quarterly inflation rates), and PIE_M is import price inflation relative to headline inflation. Robust standard errors are in parentheses, and ***, **, and * denote significance level at 1, 5, and 10 percent, respectively.