

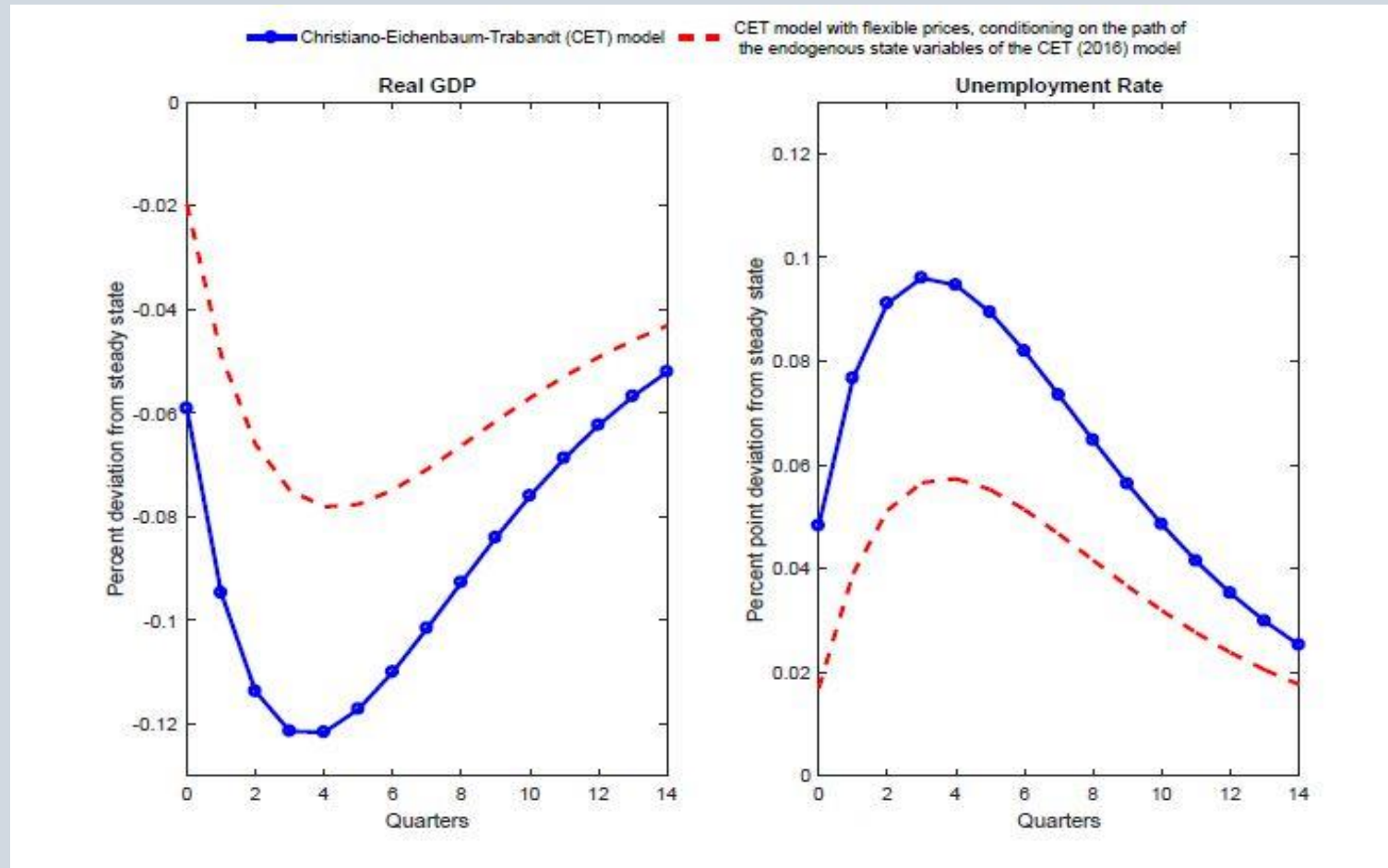
Should we reject the natural rate hypothesis?

OLIVIER BLANCHARD, 2017

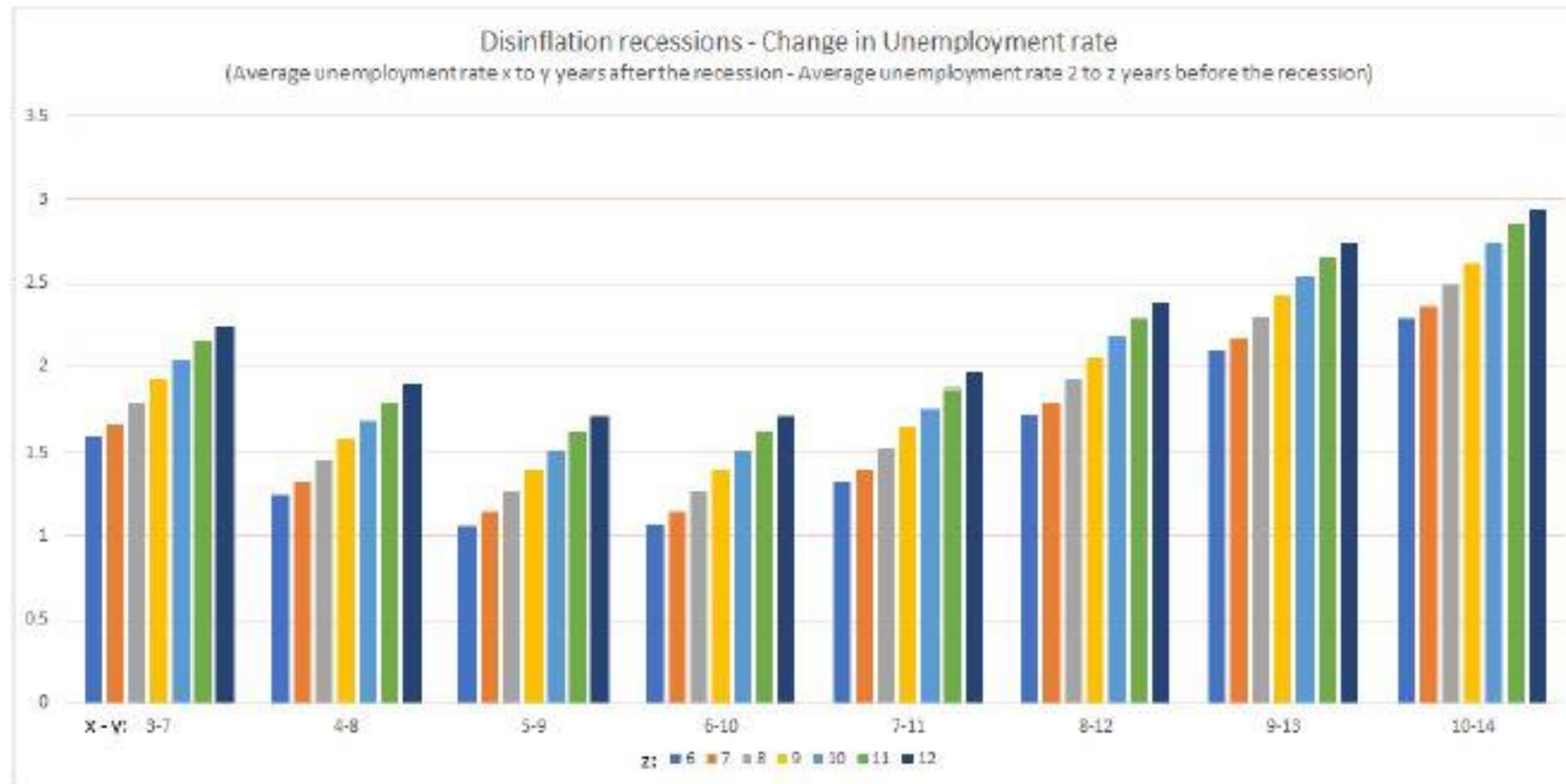
The natural rate hypothesis:

- The natural rate of unemployment is independent of monetary policy.
- There is no long run trade-off between the deviation of unemployment from the natural rate and inflation.

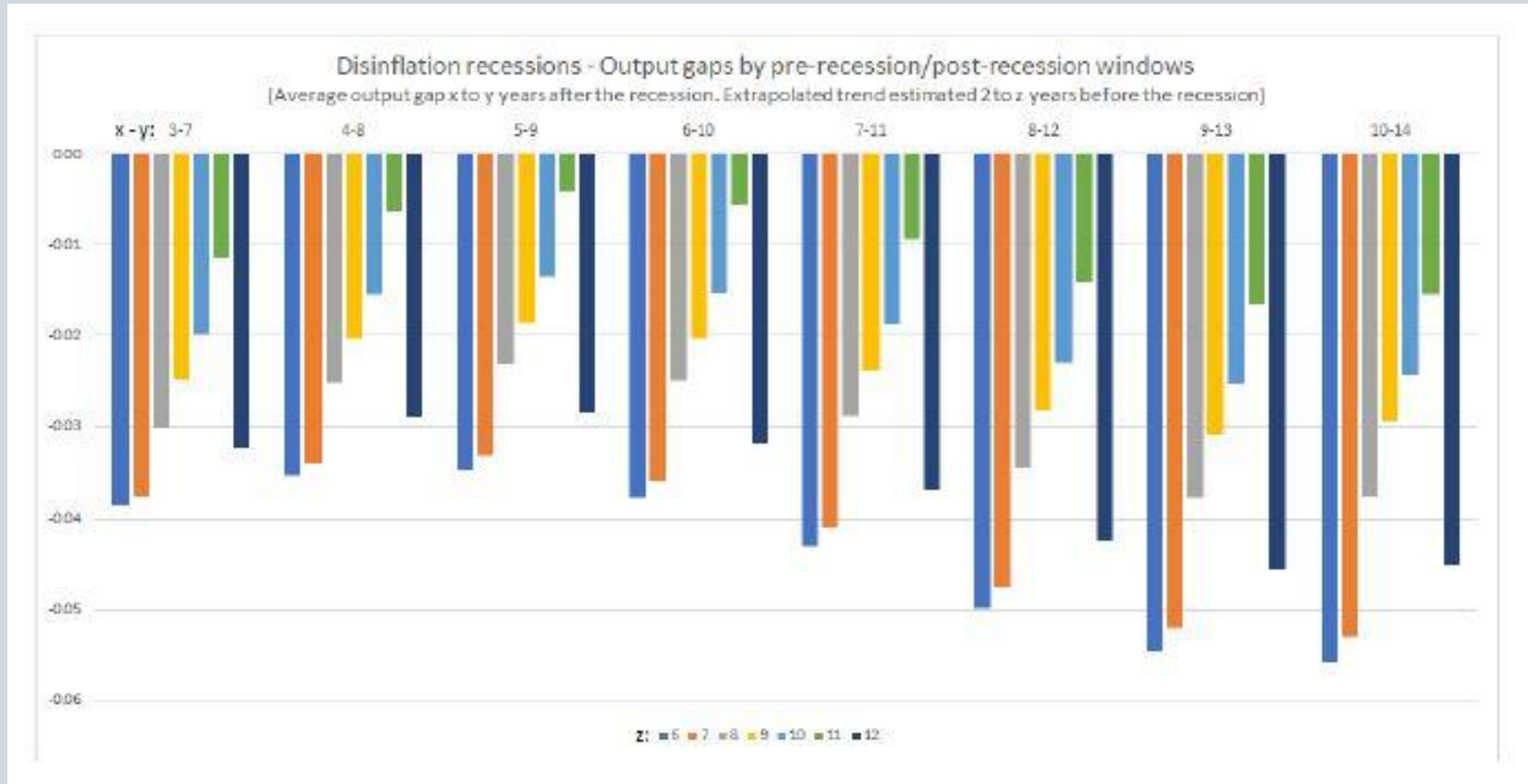
Persistence versus permanence



Macro evidence: Monetary Shocks



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how to reconcile the unemployment and the output results?

- decomposing the log output gap between a log employment gap and a log productivity gap
- conclusions:
 - The employment gaps are consistently negative, largely insensitive to the choice of time interval
 - The productivity gaps are, perhaps surprisingly, often positive, and are sensitive to the choice of pre-recession time interval

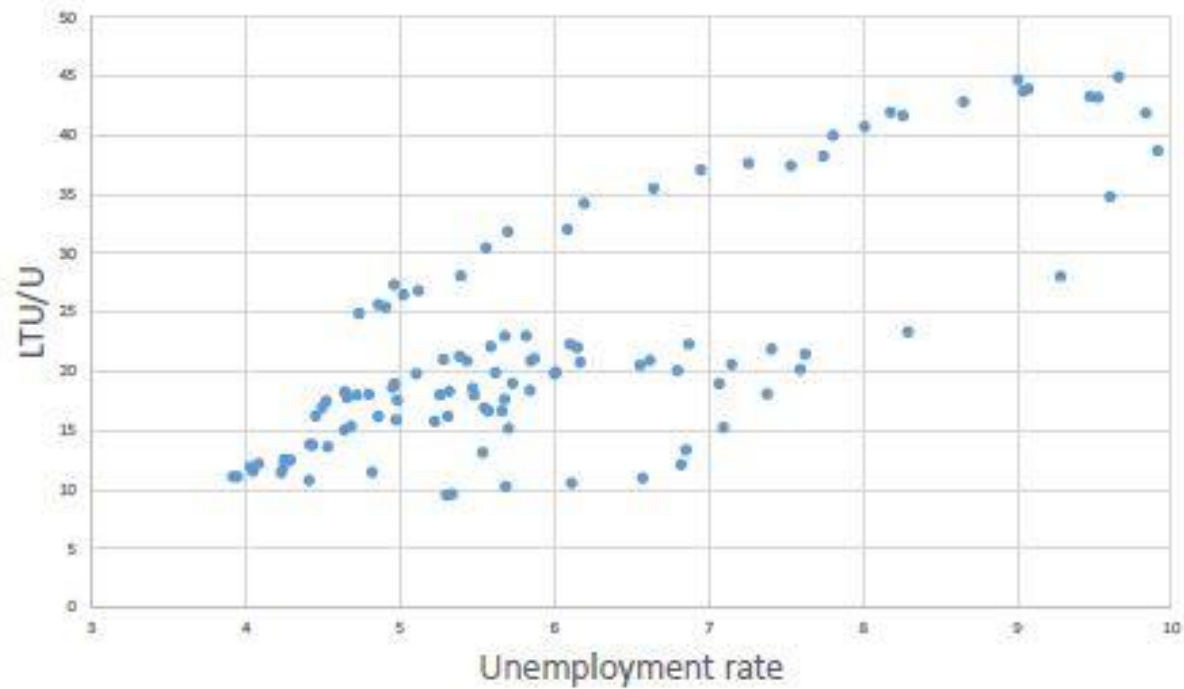
Macro evidence: Other recessions

- Oil-related and financial crises recessions are associated with large, highly persistent, increases in unemployment, consistent across pre-recession and post-recession time intervals.
- the fact that most recessions are associated with a positive unemployment gap is quite striking.

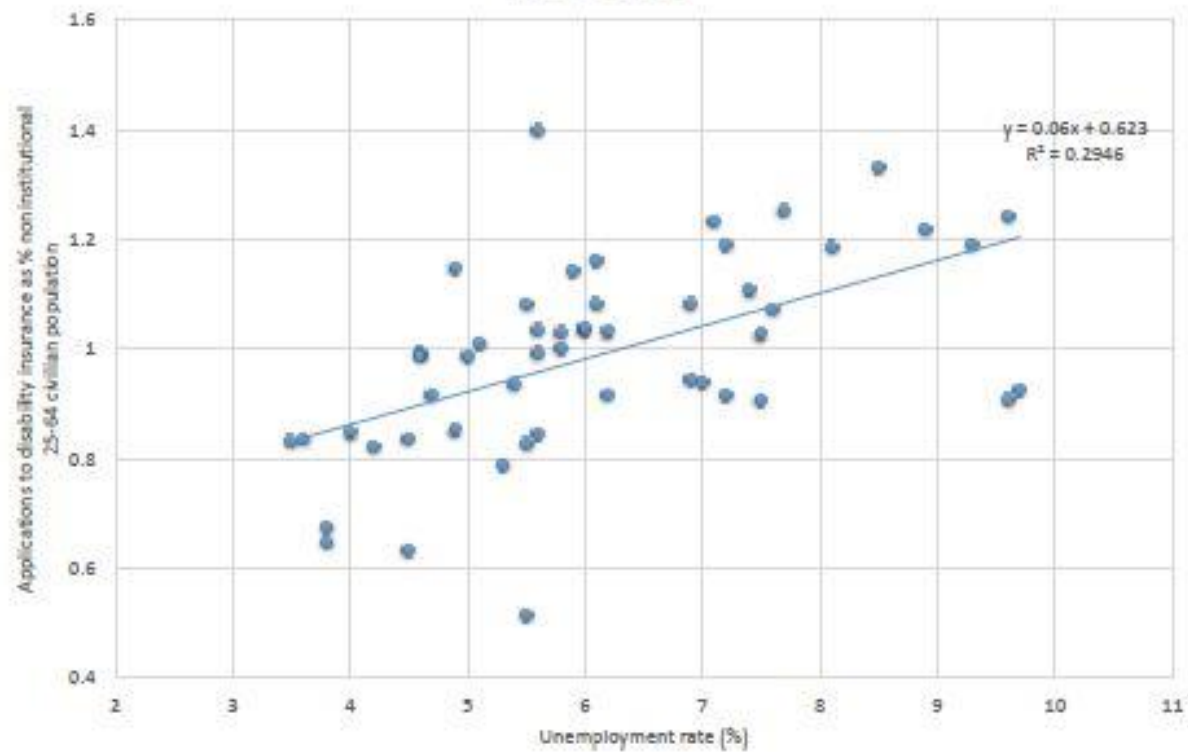
Micro evidence on the independence hypothesis

- wage formation
- power of insiders
- high hiring and firing cost
- Effect of high unemployment on morale, skills and employability of long term unemployed
- probability of being employed eight quarters earlier is roughly similar for the short-term and the long-term unemployed (Abraham et al. (2016))
- firms often give priority in hiring to those who have been unemployed the least time

Ratio of long term unemployment against unemployment rate, 1990-2016



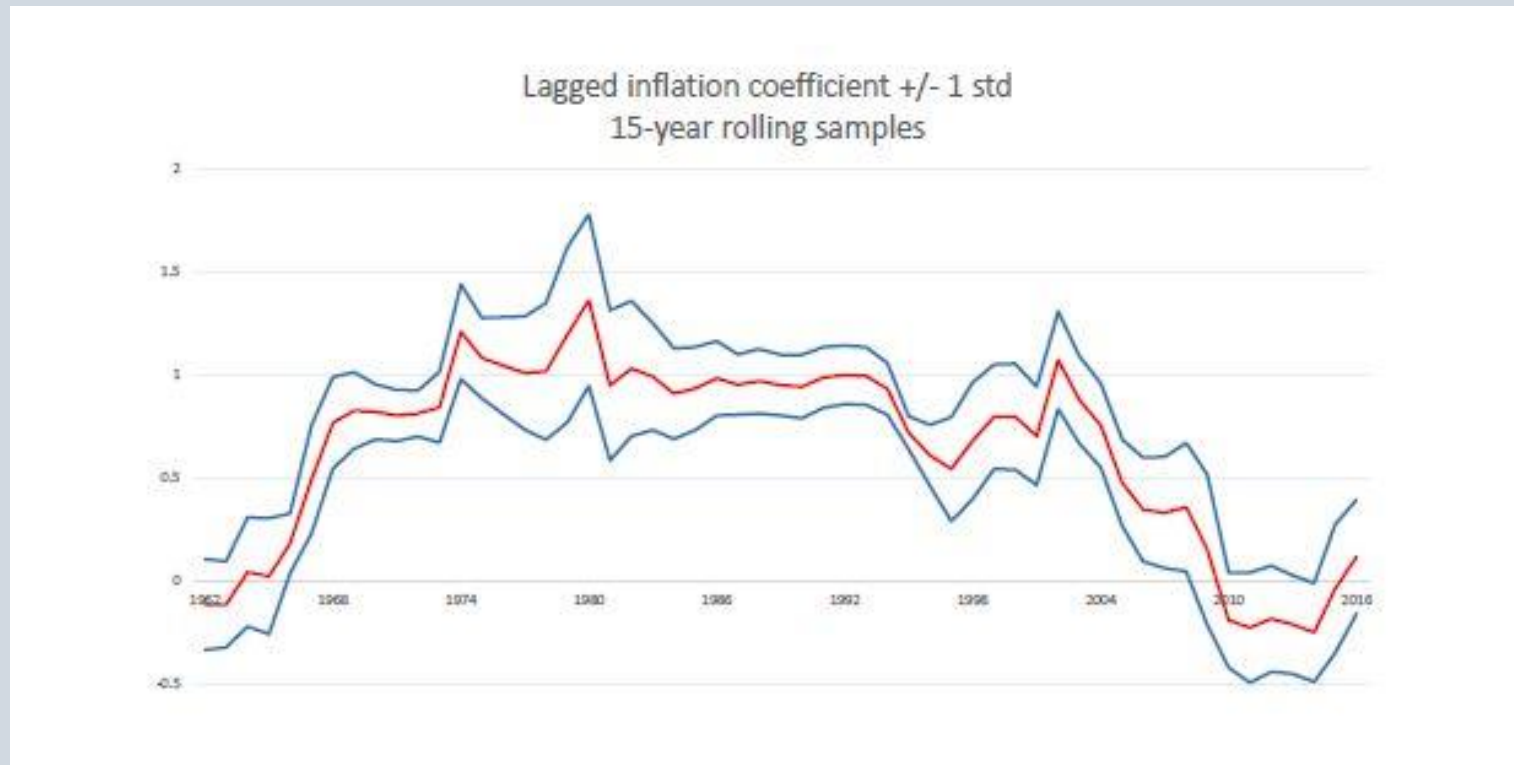
Applications to disability insurance vs unemployment, 1965-2014



Micro evidence: productivity

- the main channel of persistence was through employment rather than productivity.
- Productivity Channels
 - Permanent effects on TFP
 - 1 percent decrease in GDP is associated with a decrease in research and development spending of 1 percent of itself
 - Speed of adoption of inventions
 - Productivity Growth

The accelerationist hypothesis



what hides behind this change in expectations?

- more stable inflation expectations may arise from increased credibility of monetary policy
- the experience of low and stable inflation may mean that it is no longer salient, and movements in inflation are ignored by wage and price setters
- ✓ which of the hypotheses is more relevant?

Regressions of Inflation Expectations of Professional Forecasters and Consumers on Core and Headline Inflation

	1981Q3 to 1995Q4		1996Q1 to 2016Q1	
	Survey of Professional Forecasters	Michigan Surveys of Consumers	Survey of Professional Forecasters	Michigan Surveys of Consumers
Core	0.498*** [0.038]	0.375*** [0.061]	0.547*** [0.052]	-0.111 [0.125]
Headline minus core	0.125 [0.099]	0.288** [0.093]	0.077** [0.029]	0.231*** [0.060]
Constant	2.024*** [0.174]	1.873*** [0.267]	1.098** [0.103]	3.134*** [0.244]
Observations	58	58	83	83
R^2	0.75	0.66	0.60	0.19

Policy Implications and Conclusions

➤ $y^* (+1) = \alpha y^* + b(y - y^*)$, where $\alpha \leq 1$

➤ $\pi = c(y - y^*) + E\pi$ where $E\pi = 0$ for $-x \leq \pi \leq x$, $\pi(-1)$ otherwise

Policy Implications and Conclusions

➤ *Both hypothesis hold:*

one-period increase in output gap leads to a permanent increase in inflation of $c\Delta$, an unappealing trade-off.

➤ *Relax independence assumption:*

The one period increase in the output gap now leads to a total increase in potential output in future of $\Delta(1 + b + ab + a^2b + \dots) = \Delta + (b/(1 - a))\Delta$

➤ *Relax the accelerationist hypothesis:*

As long as the output gap is such that inflation does not exceed $c\Delta$, the increase in the output gap leads to higher current inflation but no increase in inflation in future periods

➤ *Relax both hypotheses:*

and an increase in the output gap today leads to both a larger increase in future output and a smaller increase in future inflation

Where does this leave us?

Failure of either of the hypotheses leads to a more attractive trade-off between output and inflation, and, in the presence of shocks, suggests a stronger role for stabilization policy. If the independence hypothesis fails, adverse shocks are more costly, and stabilization policy more powerful. If the accelerationist hypothesis fails, there is more room for stabilization policy to be used at little inflation cost.

Thank you 😊