

Are Households Neo-Fisherian?

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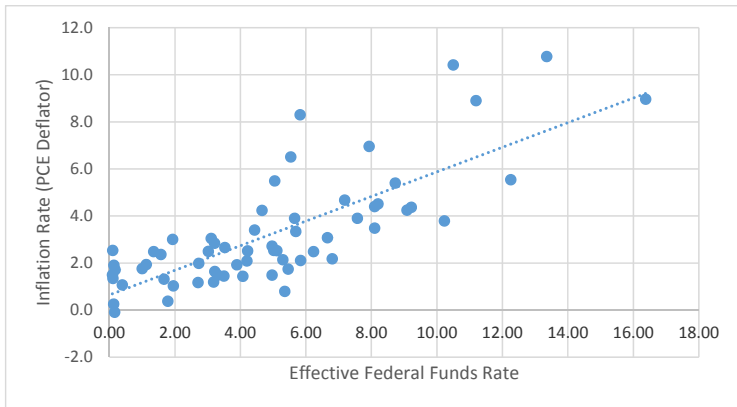
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Raw Data

Positive correlation between nominal interest rates and inflation.



Interpretation

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Neo-Fisherism proposes: interest rates \rightarrow inflation

Fisher equation: $i = r + \pi$.

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If positive, then we live in a Neo-Fisherian world.

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But they also allow us to phrase the question about Neo-Fisherism more precisely: is the short-run response of inflation to increases in the monetary policy interest rate positive or negative?

If positive, then we live in a Neo-Fisherian world.

More precisely, if positive *for some level of persistence to the monetary impulse*, then we live in a partially Neo-Fisherian world.

A Simple NK DSGE Model

$$\pi_t = \gamma y_t + \beta E_t \pi_{t+1}$$
$$y_t = E_t y_{t+1} - \sigma (i_t - E_t \pi_{t+1})$$

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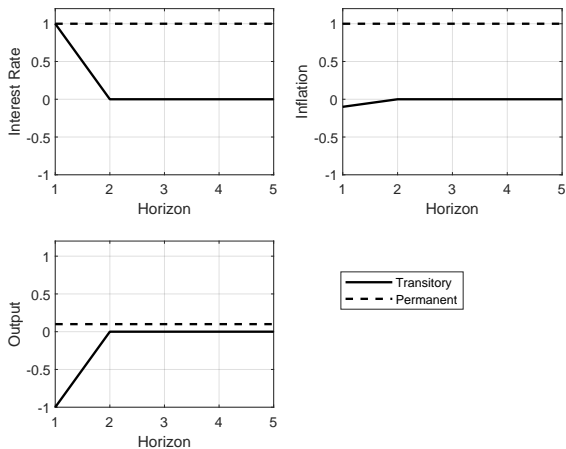
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Purely transitory shock to i_t : $y_t \downarrow \Rightarrow \pi_t \downarrow$

Permanent shock: jump to new steady state, Fisher effect takes hold:

$$E_t \pi_{t+1} \uparrow = i_t \uparrow$$
$$\Rightarrow \pi_t, y_t \uparrow$$

Impulse Responses



Policy Experiment

Raise i_t by 1 today

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In subsequent periods, stays there with probability p , reverts to steady state (with determinacy-inducing rule) with probability $1 - p$

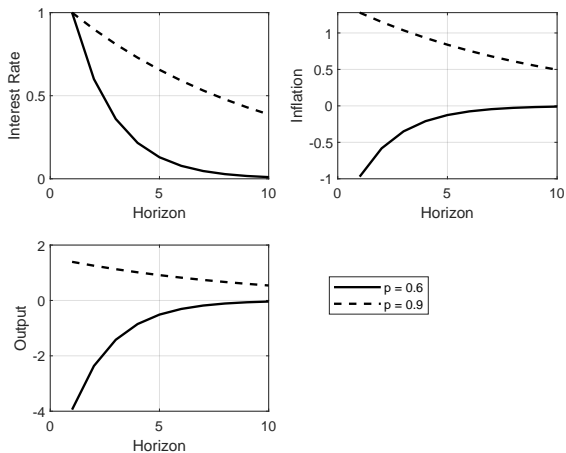
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$$i_{t+1} = \begin{cases} 1 & \text{with prob } p \\ 0, & \text{with prob } 1 - p \text{ (} i_{t+1} = \phi\pi_{t+1}, \phi > 1 \text{)} \end{cases}$$

Persistence Drives Neo-Fisherian Effect



Method

Hypothetical survey questions:

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- They work (see Shapiro, 2007, for the Health and Retirement Study).
- In this case, superior to recently popular information treatment experiments.
- Neo-Fisherian effects are inherently about *perceived* persistence of a monetary policy impulse.

Questions - Introduction

“We now want you to think about the connection between interest rates and inflation. The inflation rate in Germany is currently 1.4%. The ECB council in Frankfurt decides about monetary policy in Germany and the Euro area. The current main policy interest rate is 0%. When you answer the following three questions, please think about hypothetical situations in which the ECB adjusts its main policy interest rate in a stable macroeconomic environment.”

Question 1

“Suppose you have heard that the ECB raises its main policy interest rate by 0.25 percentage points. How does this influence your inflation expectations for the next 12 months?”

- Inflation will be lower.
- My inflation expectations remain unchanged.
- Inflation will be higher.

The survey provided “Don’t know”-options as well.

Question II

“The inflation rate in Germany is currently 1.4%. Assume now that the ECB unexpectedly raises its main policy interest rate from 0% to 0.25%. Also assume that it is expected that the ECB will leave its main policy interest rate at this level **for the next six months**. Which average annual inflation rate would you expect for the next three months?”

Question III

“The inflation rate in Germany is currently 1.4%. Assume now, alternatively, that it is expected that the ECB will leave its main policy interest rate at this level **for the next five years**. Which average annual inflation rate would you expect for the next three months?”

Alternative Treatment Arm

Increase of main policy interest rate from 0% to 1%
(instead of 25 bp).

Empirical Strategy

Compare the averages across answers to questions II and III.

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For both treatment arms.

Also check the inflation expectation revision with respect to a previous survey question on inflation expectations.

Caveat: our question already contains information treatment about current inflation that comes before our hypothetical questions.

Balance I

Raw data

	0.25%-Treatment	1%-Treatment
All	1315	1319
Employed, full time	558	544
Employed part time	129	120
Not employed	476	476
East Germany	182	180
West Germany	939	930
1st Income tercile	420	394
2nd Income tercile	467	458
3rd Income tercile	317	344
> 45 years old	915	927
< 45 years old	400	392
Female	576	540
Male	739	779
No college education	999	1000
College education	316	319

Balance II

Raw data

Prior inflation expectations:

	0.25%-Treatment	1%-Treatment
Mean	3.70	3.76
Std	6.80	6.64

Main Result

No evidence of Neo-Fisherism!

	5Y-6m 0.25%-Treatment	5Y-6m 1%-Treatment	1%-0.25% 6M	1%-0.25% 5Y
All	-0.531** (0.216)	-0.261 (0.285)	-0.452 (0.433)	-0.124 (0.324)
# Obs.	1,080	1,099	2,269	2,276

Result for: data winsorized at 1% and trimmed at $< -1\%$ and $> +15\%$ inflation expectations prior inflation expectations.

Robust.

Same for Weighted Data

No evidence of Neo-Fisherism!

	5Y-6m 0.25%-Treatment	5Y-6m 1%-Treatment	1%-0.25% 6M	1%-0.25% 5Y
All	-0.630** (0.287)	0.356 (0.294)	-0.902** (0.418)	0.125 (0.366)
# Obs.	973	980	2,023	2,030

Incidentally ...

... on average, people seem to understand conventional monetary policy.

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Heterogeneity

No evidence of Neo-Fisherism along any of the following dimensions:

- Gender
- Education
- Age
- Employment status
- East/West
- Income tercile

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Not quite the same for the understanding of standard monetary policy.

Summary

- No evidence of Neo-Fisherism either in the aggregate or in identifiable subgroups of the population.

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- On average, people appear to understand basic monetary policy effects.

Wish List

- Current survey design includes an information treatment (and many other questions) that make studying inflation expectation revisions tricky.

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- Would like to ask for probabilistic inflation expectations after the hypothetical policy treatment to study inflation uncertainty as well.