

New Directions in Research and Policy

Justin Wolfers, University of Michigan
Blanchard-fest celebration, MIT, June 4 2016.

New Directions in Macroeconomics and Policy

- ▶ Shift to empirics
- ▶ Cross-disciplinary fertilization
- ▶ Policy relevance

RePec Genealogy Data

Record of graduates

- Only authors registered with the RePEc Author Service are considered.
- Record is measured by aggregating scores of graduates in the same way that rankings of institutions are computed. The score thus represents the average rank across all other criteria for the set of graduates, who must be registered with the RePEc Author Service and have relevant information listed in the RePEc Genealogy.

This ranking is based on 47360 registered authors.

Same ranking by economic institutions or countries and states. All author rankings.

Rank	Author	Score	Students
1	Olivier J Blanchard Peter G. Peterson Institute for International Economics (IIE), Washington, District of Columbia (USA)	4.13	34
2	Rüdiger Dornbusch †	5.12	14.5
3	Edward C. Prescott Department of Economics, W.R. Carey School of Business, Arizona State University, Tempe, Arizona (USA)	6.43	36.5
4	Lawrence F. Katz Department of Economics, Harvard University, Cambridge, Massachusetts (USA)	6.49	42
5	Andrei Shleifer Department of Economics, Harvard University, Cambridge, Massachusetts (USA) National Bureau of Economic Research (NBER), Cambridge, Massachusetts (USA)	9.23	35

New Directions in Macroeconomics and Policy

- ▶ Shift to empirics
 - ▶ Falsification
 - ▶ Credibility revolution
 - ▶ Naturally occurring data (“big data”)
- ▶ Cross-disciplinary fertilization
 - ▶ Psychology: Behavioral economics
 - ▶ Sociology: Akerlof-Becker
- ▶ Policy relevance

Things that probably aren't true

- ▶ Rational expectations

Testing Rational Expectations: Are forecast errors forecastable?

	Michigan	Michigan- Experimental	Livingston	SPF (GDP Deflator)
Panel C: Are Forecasting Errors Persistent?				
$\pi_t - E_{t-12}\pi_t = \alpha + \beta (\pi_{t-12} - E_{t-24}\pi_{t-12})$				
$\beta: \pi_{t-12} - E_{t-24} [\pi_{t-12}]$	0.371** (.158)	.580*** (.115)	0.490*** (.132)	0.640*** (.224)
α : Constant	0.096% (.183)	0.005% (.239)	0.302% (.210)	-.032% (.223)
Adj. R ²	.164	.334	.231	.375
Panel D: Are Macroeconomic data fully exploited?				
$\pi_t - E_{t-12}\pi_t = \alpha + \beta E_{t-12} [\pi_t] + \gamma \pi_{t-13} + \kappa i_{t-13} + \delta U_{t-13}$				
α : Constant	-0.816% (.975)	0.242% (1.143)	4.424%*** (.985)	3.566%*** (.970)
β : $E_{t-12} [\pi_t]$	0.801*** (.257)	-0.554*** (.165)	0.295 (.283)	0.287 (.308)
γ : Inflation _{t-13}	-0.218* (.121)	0.610*** (.106)	0.205 (.145)	0.200 (.190)
κ : Treasury Bill _{t-13}	-0.165** (.085)	-0.024 (.102)	-0.319*** (.106)	-0.321*** (.079)
δ : Unemployment _{t-13}	0.017 (.126)	-0.063 (.156)	-0.675*** (.175)	-0.593*** (.150)
Joint Test on Macro Data ($\gamma=\kappa=\delta=0$)	F_{3,285}=2.65**	F_{3,164}=15.84***	F_{3,91}=8.29***	F_{3,120}=11.65***
Adj. R ²	.293	.382	.306	.407

Things that probably aren't true

- ▶ Rational expectations
- ▶ DSGE models

DSGE and Connection to Reality

- ▶ DSGE models “combine a sound, microfounded structure suitable for policy analysis with a **good probabilistic description of the observed data** and **good forecasting performance.**”

▶ Smets and Wouters, *AER* 2007

- ▶ “A long period of DSGE model refinement using the postwar sample preceded Smets and Wouters finding a particular DSGE model with forecasting performance on a par with standard benchmarks.”

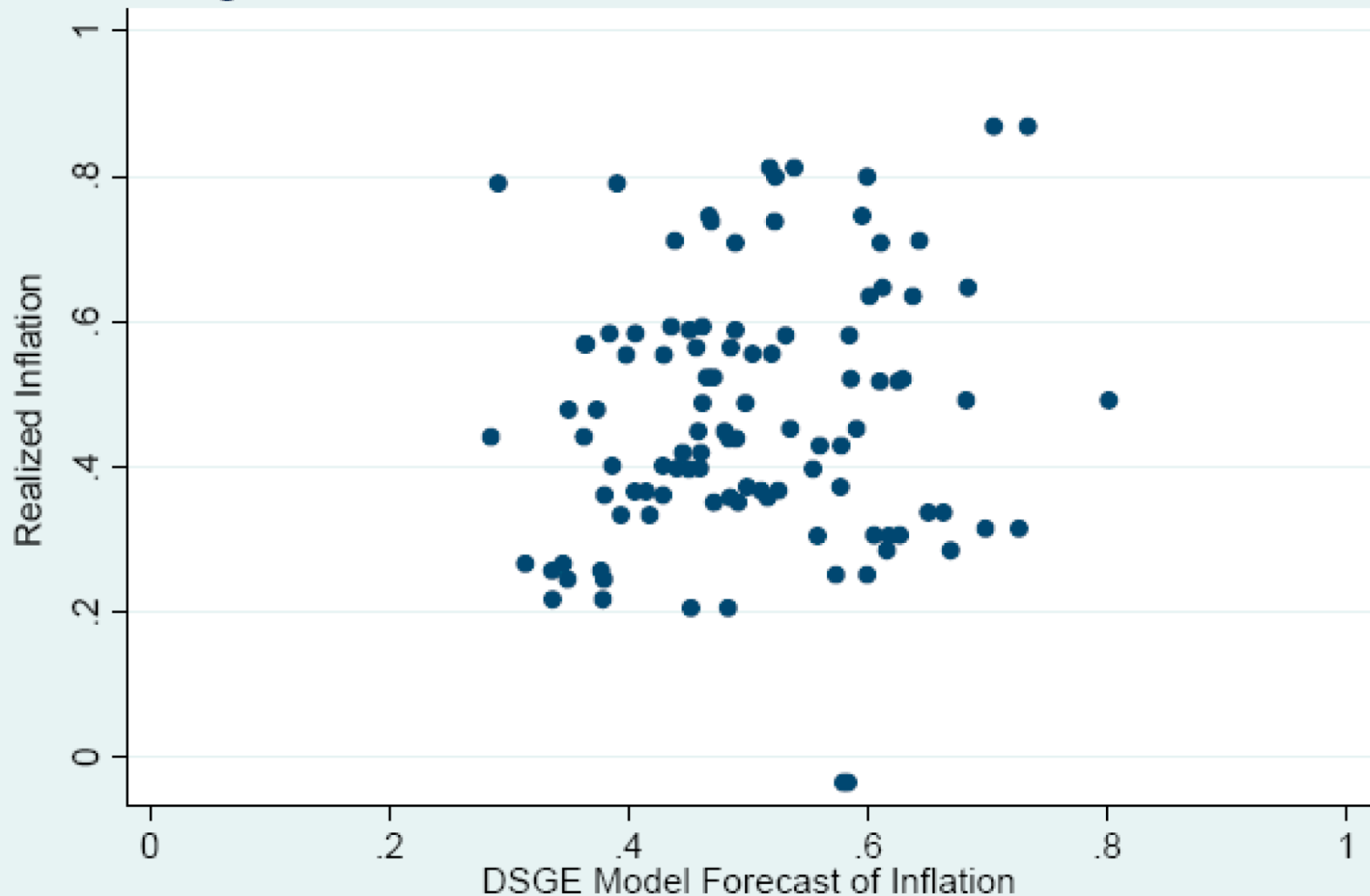
□ Faust and Wright, *Handbook of Economic Forecasting*

- ▶ “These models showed a moderate amount of nowcasting ability, but almost no forecasting ability beginning with 1-quarter-ahead forecasts.”

▶ Edge and Gurkaynak, *BPEA*

Real-Time Inflation Forecasts: Smets and Wouters Model

Figure 2a. Realized and 4Q Ahead DSGE Inflation Forecast



Assessing DSGE Forecasts

► $Outcome_{t+i} = \alpha + \beta E_t[DSGE Forecast_{t+i}]$

Table 1a. Inflation Forecasts

DSGE Model Forecast Accuracy

	1Q Ahead	2Q Ahead	3Q Ahead	4Q Ahead	5Q Ahead	6Q Ahead
<i>Slope</i>	0.451** (0.108)	0.089 (0.149)	0.031 (0.250)	0.209 (0.261)	0.167 (0.216)	0.134 (0.174)
<i>Intercept</i>	0.261** (0.051)	0.421** (0.082)	0.446** (0.122)	0.363** (0.128)	0.386** (0.112)	0.398** (0.112)
<i>R2</i>	0.13	0.00	0.00	0.02	0.01	0.01
<i>Obs</i>	104	104	104	104	104	104

Table 1b. GDP Growth Forecasts

DSGE Model Forecast Accuracy

	1Q Ahead	2Q Ahead	3Q Ahead	4Q Ahead	5Q Ahead	6Q Ahead
<i>Slope</i>	0.374* (0.174)	0.485 (0.249)	0.477 (0.321)	0.507 (0.303)	0.485 (0.312)	0.553 (0.279)
<i>Intercept</i>	0.419* (0.206)	0.313 (0.292)	0.331 (0.362)	0.299 (0.346)	0.320 (0.344)	0.284 (0.311)
<i>R2</i>	0.08	0.09	0.07	0.08	0.07	0.06
<i>Obs</i>	104	104	104	104	104	104

Things that probably aren't true

- ▶ Rational expectations
- ▶ DSGE models
- ▶ Consumption Euler equation
- ▶ Calvo pricing
- ▶ New Keynesian Phillips Curve
- ▶ Classical dichotomy

New Directions in Macroeconomics and Policy

- ▶ Shift to empirics
 - ▶ Falsification
 - ▶ Credibility revolution
 - ▶ Naturally occurring data (“big data”)
- ▶ Cross-disciplinary fertilization
 - ▶ Psychology: Behavioral economics
 - ▶ Sociology: Akerlof-Becker
- ▶ Policy relevance