1

Slide

This is the take-home wrap-up on Lecture 02

Formal testing for stationarity

and

Stationary transformations

It is not graded, and you may stay anonymous if you wish

It's gonna be **really helpful for the quizzes** next week ;)

Best of luck!

2

You're running some pretty usual and routine statistical test (a conventional criterion type). You got P-value about 0.00025. What's your conclusion gonna be?

✓	Reject the null	0%	0 votes
	Can't reject the null	0%	0 votes
	Not enough data	0%	0 votes
	Requires essential judgment	0%	0 votes

3

You're running some pretty usual and routine statistical test (a conventional criterion type). You got statistics value about 1.78. What's your conclusion gonna be?

	Reject the null	0%	0 votes
	Can't reject the null	0%	0 votes
✓	Not enough data	0%	0 votes
	Requires essential judgment	0%	0 votes

4

You're running a one-sample two-sided z-test. You got statistics value about -3.25. What's your conclusion gonna be?

✓	Reject the null	0%	0 votes
	Can't reject the null	0%	0 votes
	Not enough data	0%	0 votes
	Requires essential judgment	0%	0 votes

5

You decided your TS data required formal stationarity test. Which would you choose?

	ADF alone is enough	0%	0 votes
	KPSS alone is enough	0%	0 votes
✓	Both would be good	0%	0 votes
	Whatever. Just look at the graph	0%	0 votes

6

ADF and KPSS are both stationarity tests.

✓ TRUE		0%	0 votes
FALSE		0%	0 votes

7

ADF and KPSS are both unit root tests.

TRUE		0%	0 votes
✓ FALSE		0%	0 votes

8

Running ADF, you got P-value 0.08. What's your next step?

	Conclude that the TS is stationary.	0%	0 votes
	Conclude that the TS is NOT stationary.	0%	0 votes
✓	Run KPSS to double-check.	0%	0 votes
	Take the diffs and repeat.	0%	0 votes

9

You're sure that your TS is NOT stationary, but you run the tests anyway. You got ADF P-value >0.1, and KPSS P-value <0.01. What's your conclusion?

✓ The TS is NOT stationary, indeed.	0%	0 votes
Tests say it is stationary. Something is wrong with my judgment.	0%	0 votes
Tests results are mixed. I have to follow intuition.	0%	0 votes

10

You're thinking that your TS MIGHT BE stationary, but you're not sure and run the tests to double-check. You got ADF P-value 0.09, and KPSS P-value >0.1. What's your conclusion?

✓	The TS might be close to unit root, but I'll follow intuition and think it is stationary.	0%	0 votes
	Tests say it is stationary. I say it is stationary. It must be stationary.	0%	0 votes
	Tests say it's NOT stationary. Something must be wrong with my judgment.	0%	0 votes

11

Many of raw economic time series are non-stationary.

✓ TRUE		0%	0 votes
FALSE		0%	0 votes

12

We can transform raw data and get stationary TS to work with.

✓ TRUE		0%	0 votes
FALSE		0%	0 votes

13

Which is an example of a transformation we can apply to get stationary TS?

	taking logs	0%	0 votes
	taking 1-period differences	0%	0 votes
	taking 1-period growth rates	0%	0 votes
	all of them	0%	0 votes
✓	all of them, but logs	0%	0 votes

14

First differences always "kill" non-stationarity in data.

TRUE		0%	0 votes
✓ FALSE		0%	0 votes

15

Differences of order higher than 2 aren't ever used.

	Definitely TRUE	0%	0 votes
✓	At least in econometrics, they almost aren't.	0%	0 votes
	They are! Why not?	0%	0 votes

16

Percentage change and log-differences are exactly the same things.

TRUE		0%	0 votes
✓ FALSE		0%	0 votes

17

Over 10 periods, some TS first diffs are +0.25 on average. Thus, over the whole period, the initial TS ...

	grew by 0.25	0%	0 votes
	grew by 25%	0%	0 votes
✓	grew by 2.5	0%	0 votes
	Not enough data.	0%	0 votes

18

Over 10 periods, some TS log-diffs are -0.003 on average. Thus, over the whole period, the initial TS ...

	declined by about 0.3% each period.	0%	0 votes
✓	declined by about 3% overall.	0%	0 votes
	declined most of the periods, but not overall.	0%	0 votes
	Not enough data.	0%	0 votes

19

Over 5 periods, some TS log-diffs are all positive and are 0.12 on average. Thus, over this whole period, the initial TS ...

	grew by about 12% each period.	0%	0 votes
	grew all the time, and by about 60% overall.	0%	0 votes
✓	grew all the time, and by more than 60% overall.	0%	0 votes
	Not enough data.	0%	0 votes