Active Learning in Econometrics II

8.6.2018

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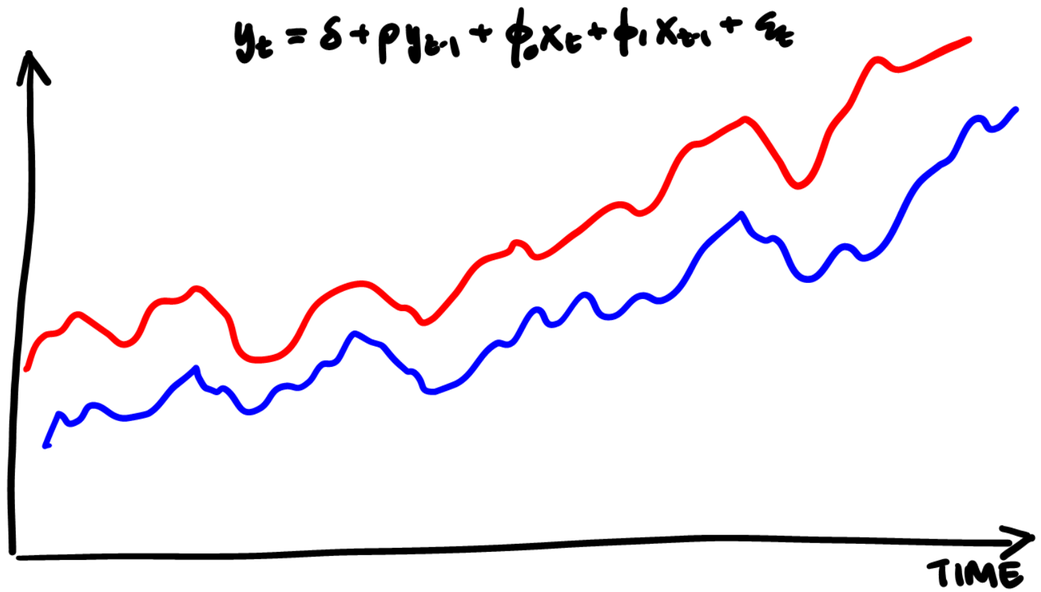
I teach Econometrics II, a mandatory
3. year BA-course with 80/250 students.
The course teaches statistical methods
to Economics students.

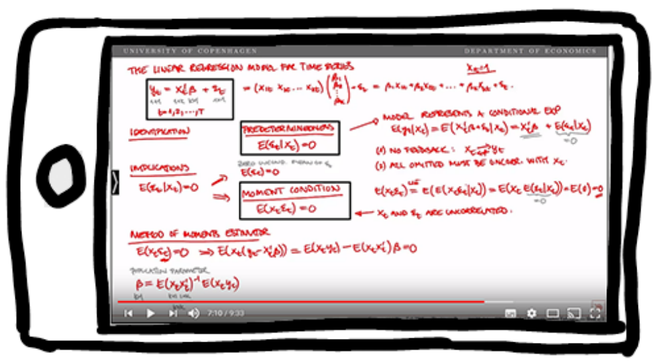


Over the last years, we have completely restructured the teaching and the structure of the course.

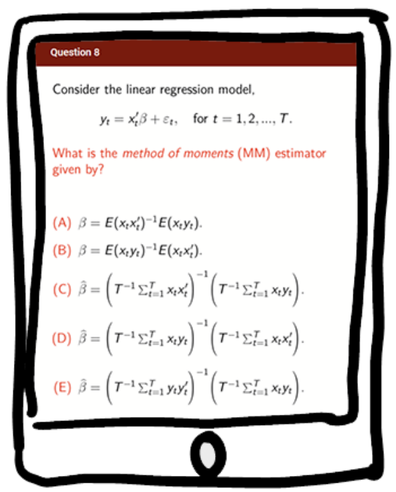
Focus on active learning and problem based teaching

Students must prepare for lectures

Read 10 pages in lecture note.



Watch a 10-minute video with derivations, explanations, and interpretation of one topic.



Complete an online review quiz with 5-10 multiple choice questions on key topics.

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Recent announcements

Updated list of students qualified for the exam
I have updated the list of students qualified fo...
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Posted on:
16 May 2018 at 20:39

Please spend a few minutes completing the midterm evaluation...
So far, only 28 of the 64 students who are qu...
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Have you completed the external evaluation?
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15 May 2018 at 16:33

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Review Quiz 4-02: The GARCH Model (5 questions)

Review Quiz 4-02: The GARCH Model

A GARCH(1, 1) model extends an ARCH(1) model...

(A) By adding ε_{t-2} to the specification of σ_t^2.

Section 1 of 6

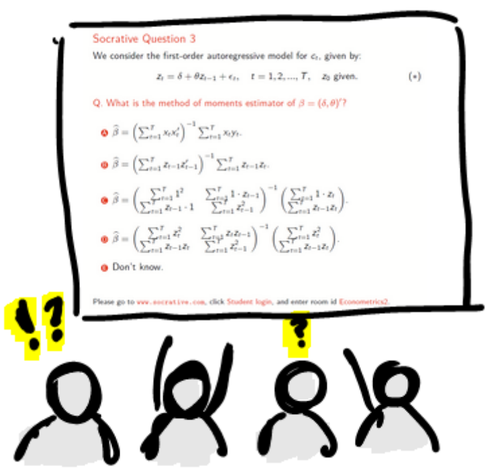
Review Quiz 4-02: The GARCH Model

Form description

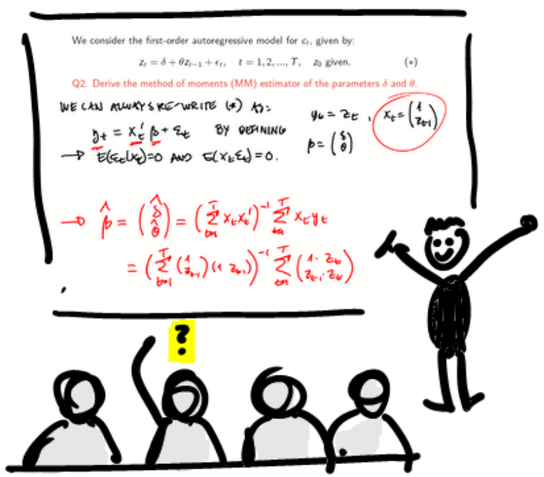
Image title

A GARCH(1, 1) model extends an ARCH(1)

Students are activated during lectures



Complete Socrative quizzes with peer discussion reviewing key concepts covered in video.



Work on mini-exercises guiding them through theoretical problems, while I give feedback.

Listen to mini-lectures.

Socrative Question 3

We consider the first-order autoregressive model for c_t, given by:

$$z_t = \delta + \theta z_{t-1} + \epsilon_t, \quad t = 1, 2, ..., T, \quad z_0 \text{ given.} \qquad (*)$$

Q. What is the method of moments estimator of $\beta = (\delta, \theta)'$?

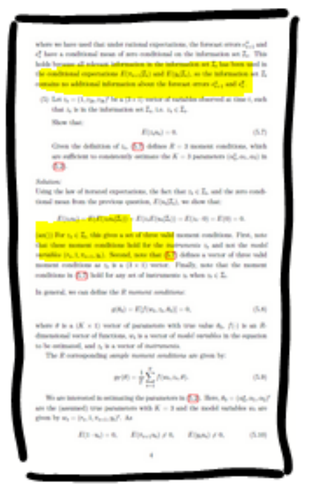
- (A) $\widehat{\beta} = \left(\sum_{t=1}^{T} x_t x_t'\right)^{-1} \sum_{t=1}^{T} x_t y_t.$
- (B) $\widehat{\beta} = \left(\sum_{t=1}^{T} z_{t-1} z_{t-1}'\right)^{-1} \sum_{t=1}^{T} z_{t-1} z_t.$
- (C) $\widehat{\beta} = \begin{pmatrix} \sum_{t=1}^{T} 1^2 & \sum_{t=1}^{T} 1 \cdot z_{t-1} \\ \sum_{t=1}^{T} z_{t-1} \cdot 1 & \sum_{t=1}^{T} z_{t-1}^2 \end{pmatrix}^{-1} \begin{pmatrix} \sum_{t=1}^{T} 1 \cdot z_t \\ \sum_{t=1}^{T} z_{t-1} z_t \end{pmatrix}.$
- (D) $\widehat{\beta} = \begin{pmatrix} \sum_{t=1}^{T} z_t^2 & \sum_{t=1}^{T} z_t z_{t-1} \\ \sum_{t=1}^{T} z_{t-1} z_t & \sum_{t=1}^{T} z_{t-1}^2 \end{pmatrix}^{-1} \begin{pmatrix} \sum_{t=1}^{T} z_t^2 \\ \sum_{t=1}^{T} z_{t-1} z_t \end{pmatrix}.$
- (E) Don't know.

Please go to www.socrative.com, click Student login, and enter room id Econometrics2.

Students solve theoretical problems during exercises

Videos explain general principles, but typically in a slightly different context.

I and the teaching assistants provide feedback and review solution to key steps.



Detailed written solution provided afterwards.

Schedule

Show/hide All

MONDAY, APRIL 9

Exercise 8: Theoretical Exercises on the ARCH Model

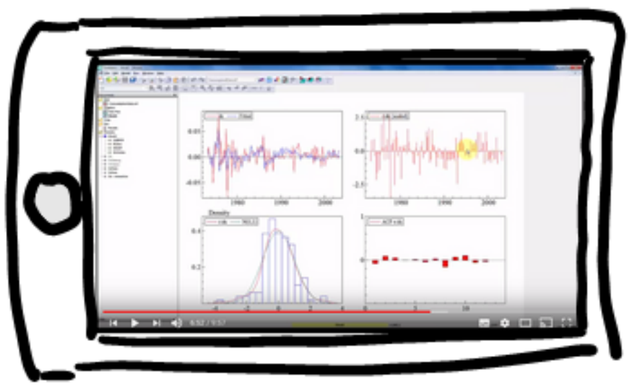
Note that all three exercise classes take place in room CSS 35.3.13 on the third floor of building 35.

We work through the derivations of the autoregressive conditional heteroskedasticity (ARCH) model.

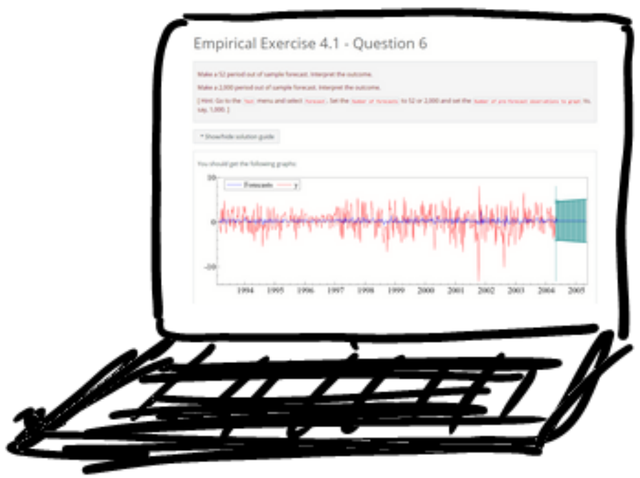
Learning goals:

- Give a precise definition and interpretation of the concept of autoregressive

Students solve empirical problems during exercises



Screencast videos explain how to use the statistical software.



I and the teaching assistants provide feedback and review solution to key steps.

Teaching assistants provide focused feedback on the difficult steps.

Schedule

Show/hide All

MONDAY, APRIL 16

Exercise 9: Empirical Exercises 4 on the ARCH Model

You will work actively with Empirical Exercises 4 on ARCH models.

Learning goals:

- Estimate ARCH and GARCH models and interpret the results

Resources:

Empirical Exercises 4: The ARCH Model.

Five assignments with peer feedback

Five assignments with peer feedback

Portfolio exam based on three of the assignments

Recent announcements

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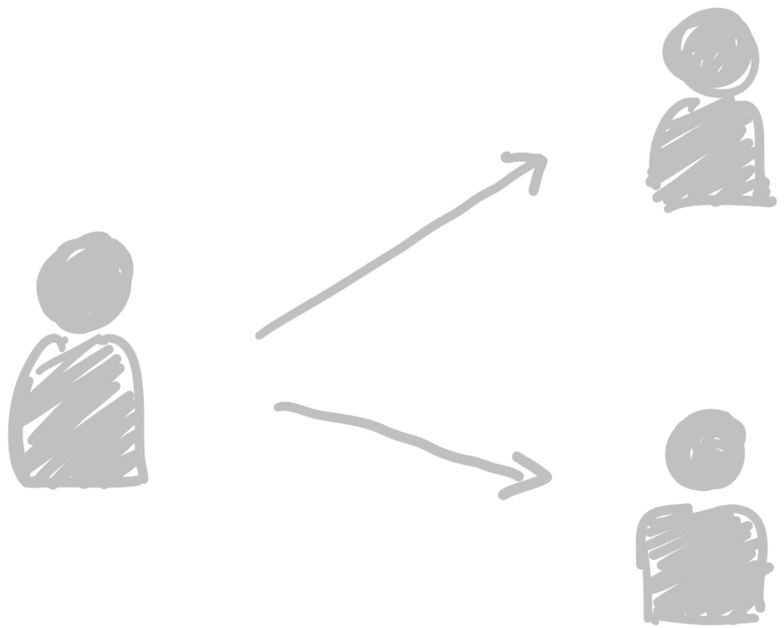
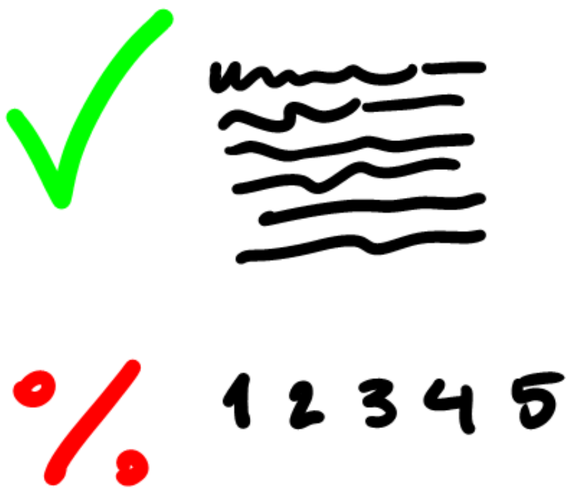


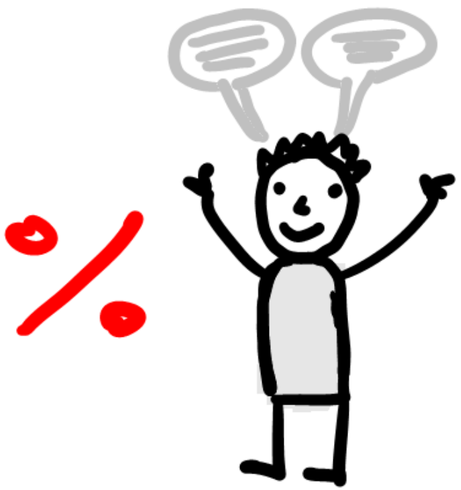
After handing in an assignment, each student must provide written feedback to two peers.

Written feedback based on rubrics linked to the assessment criteria

Focus on what can be improved.

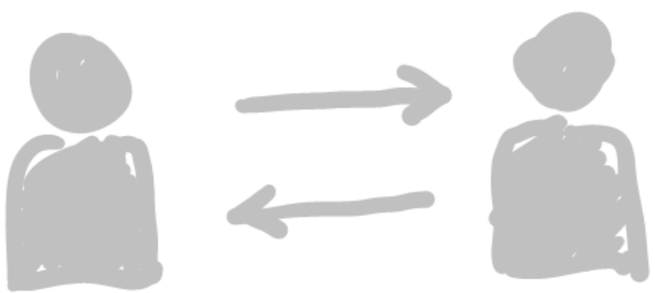


Only comments. No grading or scores.

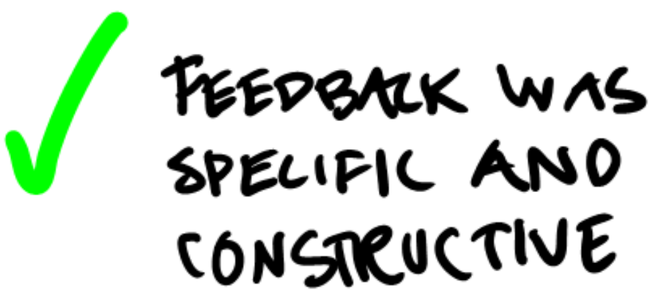


No individual feedback from teachers.

peergrade



Anonymous feedback.



Students must rate the quality of the feedback they receive.

Students can "flag" problematic feedback for the teacher to comment.

NEXT UP

Give reaction to feedback on Assignment 1: Private Consumption in Denmark
No deadline set

SUBMIT REACTION

ASSIGNMENTS

Assignment 5: Monetary Policy and Asset Price Volatility
Results available

Assignment 4: Volatility of Excess Stock Returns
Results available

Assignment 3: Interest Rate Pass-Through
Results available

Assignment 2: Forecasting the Price of Owner-Occupied Apartments

ACTIVE ASSIGNMENTS

No active assignments

COURSE ACTIVITIES

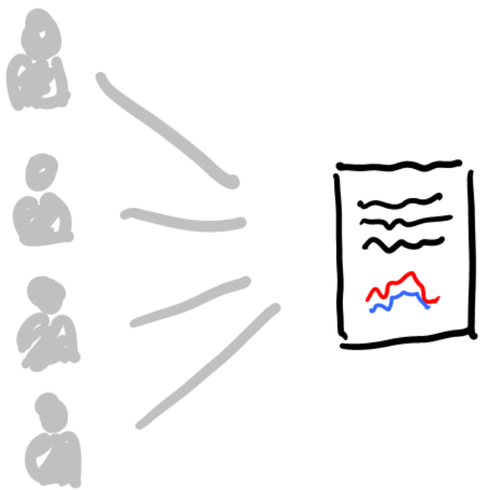
Sign-ups

67 of 74 students signed up for the course

91%

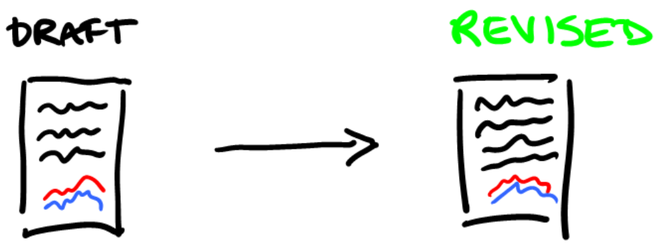
Recent activity

Students receive feedback and can use it to improve their assignments



Each assignment receives feedback from four peers.

I follow up with general feedback.



The feedback can be used to improve the assignments for the exam.

What have we achieved?

Much higher student engagement.

Greater student motivation from working with real cases.

Improvement in students' ability to write an academic paper.

Students train critical thinking through peer feedback.

Greater student awareness of assessment criteria.

Higher grades and lower failure rate despite assessment based on entire curriculum.

Thanks for your time!

Feel free to contact me for further info.
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@mortentabor