

PSEUDO-SOCRATIC DIALOGUE IN THE TEACHING OF ECONOMICS

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Abstract

I discuss my evolving experience using a 'Pseudo-Socratic Dialogue' (PSD) as an alternative to lecture in large introductory macroeconomics and other courses. PSD is teaching by questioning assisted by the use of response systems (clickers), just in time teaching, discussion boards, and wikis. PSD results in a more active environment in which students work harder, take more responsibility for their learning and more interest in the course. Evidence from other disciplines suggests that students learn more as well. I discuss my implementation and the effectiveness of the approach, as well as student and instructor satisfaction and effort. I also examine some difficulties with implementing the approach and suggest future avenues for improvement.

This paper discusses an approach to the teaching of large introductory courses in economics using a ‘Pseudo-Socratic Dialogue’ (PSD) – a question-driven interactive environment both in and outside of the classroom. I explain the approach, discuss the details, touch on its advantages, and provide some evidence of its effect and effectiveness in large, and not so large, introductory macroeconomics and money and banking classes.

PSD is implemented with the extensive use of clickers in class, and with questioning through other means – just in time teaching via graded homework done online by students in advance of class, the extensive use of online discussion boards, and wiki-based assignments to ask and answer questions in words. It is Socratic in that the focus of the approach is to engage and help students learn through questions. It is a dialogue in that students cannot sit passively in class, but must provide the responses that partially define dialogue, and it is pseudo both because student responses are often (but not always) limited to the first 5 letters of the alphabet and because economics does not generally deal with eternal truth, beauty and goodness. PSD is formative assessment on steroids. In a typical class, questions are clicked every few minutes, and in preparation for class, students have answered 50-60 online graded multiple choice questions for the week (just in time teaching). Students have also posted related questions on online discussion boards, answered by their classmates and/or the instructor. Additionally, broader, questions are posted by the instructor on a wiki where students collaboratively answer them, and more importantly, find out if their answers are correct when the instructor corrects the final collaborative product.

Of course this is not new. Since at least Socrates, and accelerating in the last 10 years or so, there has been a large amount of work on the transformation of the role of the instructor from sage on the stage to guide on the side, made possible by improvements in technology, and by our somewhat improved understanding of what works in education. This has been spearheaded by the physics education community and their focus on peer instruction, just in time teaching and active education, and the development and use of clickers to support these activities (Abrahamson (1999), Duncan (2007), Maier and Simkins (2008)). In addition to the active education literature, the growing availability, simplicity, and affordability of clickers has led to increasing adoption in colleges and has resulted in considerable work on their effective use and the effect of their use

(Caldwell(2007), Fies and Marshall (2006)). This has to some extent, brought those who thought they were just adding an interesting device to their teaching arsenal, to the active education and Socratic approach.

PSD is, in fact, an implementation of what Beatty et al. (2009) call TEFA - Technology Enhanced Formative Assessment which they describe as:

... *“a model of CRS-based teaching that we call “question-driven instruction.” In this model, posing questions via CRS does more than augment traditional instruction: it forms the very core of the instructional dynamic. Our primary in-class goal is not to lecture or present information. Rather, we seek to help students explore, organize, integrate, and extend their knowledge. Students receive their primary exposure to new material from textbooks, multimedia, and other out-of-class resources.”* (Beatty et al. (2006) p. 31).

Beatty (and I) argue for the elimination of the traditional passive lecture which is much less effective than instructors imagine (see Duncan 2007 for striking anecdotes on this) and elimination of the mini-lecture which often precedes questioning in clicker use. In place of this, a cycle of question, answers and discussion is used.

PSD has been introduced in large sections of introductory macroeconomics (250-450 students) as well as smaller honors sections (25-40 students) and medium sized sections of money and banking (80-150 students) at a large research university over the last 5 years. The students tend to be quite heterogeneous in terms of age, interests, majors and abilities.

Below I discuss why PSD is advantageous, how I implement it, what works and what doesn't and student and instructor reactions, and conclude with thoughts for future work..

WHY TEACH BY QUESTIONING?

A question evokes many useful reactions in students - curiosity, apprehension, challenge, satisfaction, excitement, wakefulness, engagement (Beatty et al. (2006), Salemi (2008)) all of which increase interest and awareness. These emotions are heightened when the answers are graded and 'count'. Questions force action on the part of the questioned, both physical and mental, and give them a stake in the answer and its

explanation. A question defines the very purpose of the discussion and provides a roadmap for where things are going. Of course the questions that I refer to are largely multiple-choice, but they allow for factual, evaluative and interpretive content (Salemi, 2004). In showing students the process of answering questions they have demonstrated difficulty with, the instructor is demonstrating how economists think. And questions form the basis of many games and can bring some of the same excitement and competitive flavor into the classroom (Martyn 2007).

From the instructor's viewpoint, developing the required set of questions forces her/him to define the required material and thus forms the basis of teaching by objective. It also answers the students' age-old question, what are we responsible for? Students' responses to questions provide the instructor with feedback on how they are doing, what areas need work, and the basis for understanding students' misperceptions of economic concepts.

Of course, to answer questions you have to be there and being there is good for learning (Romer (1993)). Asking questions continuously, in and out of class, provides a strong inducement for students to keep up and to show up. This lessens the surprise many student feel when they face their first graded exam questions in the middle of the semester in a traditional lecture. Students are constantly tested and often surprised by the results. This surprise is often the basis for better learning. Questions lead to more questions as students recognize that they may not understand material, and begin to ask for help. This provides support for the meta-cognitive reinforcement the physics education community stresses.

There are potential efficiency gains in teaching by questioning. A question that most students get right may not need or deserve much if any time, while one that most get wrong certainly does. Time is spent on areas the students need help with, not those they do not.

What do students in a clicker-question rich introduction to macroeconomics feel when faced with a question? 84% of students in a large introductory macroeconomics course recently agreed that clicked questions evoked curiosity in them (2% disagreed), 56% mentioned feeling apprehensive (26% disagreed), 72% felt challenged (12% not) and 84% felt satisfaction in recognizing that they knew the answer (3% not). What were

the reactions to getting questions wrong? 88% felt annoyance, 70% curiosity and 56% surprise. All of these provide a basis for subsequent learning.

IMPLEMENTING PSD

The mutually reinforcing elements of PSD are just-in-time teaching (JITT); asynchronous discussion board use; extensive classroom graded questioning using clickers; and collaborative written work in wikis.

JITT. Prior to each week's class, students are 'asked' 50-70 multiple choice questions selected by the instructor primarily from textbook test banks based on assigned readings. These are answered and graded automatically online. Students get immediate feedback (right/wrong) and this leads to considerable questioning on the discussion boards. There are also 4-7 summing up questions posted on a wiki (discussed below). The graded homework is analyzed by the instructor before class and questions that a substantial percentage of students got wrong are highlighted and used as clicker questions in class. Students' interest in these questions is enhanced by the promise that a random sample will appear on subsequent online quizzes and the midterm, and similar questions will form the basis of the final exam. (See Exhibit 3 for a small sample of questions; Simkins and Maier (2004) discuss the use of JITT in principles of economics courses and evaluate its benefits.

Asynchronous Discussion Boards. These allow students to do the asking, often about concepts and questions that appeared in the homework. They are generally motivated by the fact that they got the questions wrong on the homework, suspect that these questions may appear in class as clicker questions or on the bi-weekly online quizzes, and they develop a certain interest, perhaps lacking earlier. The postings are often answered by other students, providing peer instruction (possible extra credit for substantial and significant discussion board use provides some incentives for posting and replies). The instructor monitors answers and provides corrections or expansions, but generally for less than 10% of postings. The discussion boards allow one response from the instructor to be read by hundreds of students (rather than responding to hundreds of emails from students

asking the same question). The boards also personalize the course, letting the students know the instructor is involved and concerned. And questions, and answers, can be posted anytime, anywhere. The boards provide an almost painless way to deal with the thousands of mundane what, when, where questions (almost always answered by other students) and provide some basis for humanizing the large courses by hosting a ‘getting to know you board’ in which the instructor and students post and read brief introductions. The boards have a number of other uses, including hosting a ‘course improvement suggestion’ board, eliciting many useful ideas from students, a ‘study group formation’ board, a ‘courses, careers and the meaning of life’ board, and an ‘interesting items in the news’ board – all encouraging interaction, involvement, questioning, and providing feedback and insights to the instructor.

Classroom Graded Clicking. This is the core of PSD (see Exhibit 1 for examples). With many students learning how to learn on their own, and with self-testing and on-line discussion in advance of class, PSD classes focus on very different matters than traditional lecture.

First, students are clicked about how much of the course material they understand from their reading and homework before the week’s classes begin. Recently, 82% of students in a large introduction to macroeconomics class clicked that they felt that they understood at least 60% of the material before class; 50% felt that they knew more than 70% before the instructor uttered a word. Clearly lecturing on everything would be inefficient.

Selected topical news headlines and/or applications are displayed and questions based on them, sometimes review, sometimes evaluative, are clicked followed by discussion of the answers if they indicate disagreement (Exhibit 2).

Generally a rhetorical ‘evaluation’ or opinion (or sometimes just silly) question is asked and clicked. For example “Is money the root of all evil.” This leads to a discussion, and an explanation of the distinction between money, income and wealth, which is also presented as a clicked question. Some of the ‘big’ questions from the assignment, converted to multiple choice, are clicked and discussed as well (exhibit 1).

Online homework questions which many students got wrong, are displayed, clicked, discussed and often re-clicked. Peer instruction is used for some questions - after the initial click for a problem or evaluative question, the results are kept hidden, students told to discuss the question with classmates near them, and then the question re-clicked and the results revealed, to some amusement (exhibit 3).

Some questions are repeated throughout a class or even into the next class, an approach students find helpful (discussed below).

Clicked questions which most students get right, are quickly left behind and class time is spent more efficiently, dealing with what students don't know rather than what they do. There is as little 'lecturing' as possible, with the instructor constantly fighting the urge to explain everything to students.

Collaborative Writing with Wikis.. Students are encouraged to work on the weekly 'big' (summing-up) questions via a wiki which allows asynchronous collaborative writing (example in Exhibit 4). Some students will work on questions over a week or two after the material was covered (honors section students are assigned to work on select questions in certain weeks; in the larger class, it is voluntary and done for extra credit). The student work ranges from excellent to awful, with the awful work being the most important since it allows the instructor to see, learn from, and correct errors that persist in students understanding. Most importantly, all students in the class can see and learn from errors before they count-- on an exam or job interview. There are major efficiency gains in that the instructor needs to read one set of short essays rather than possibly hundreds, and all of the students can benefit from the instructor-corrected answers. And many of the wiki questions are repeated as clicker questions in class.

SOME LESSONS - WHAT WORKS/ WHAT DOESN'T/ WHAT MAY

Works

- A good textbook and test bank that matches the instructor's style and desired coverage. This is more crucial than in a traditional course since the textbook becomes the primary transmitter of knowledge and thus the instructor must follow it closely and students must actually buy and read it. Textbook material is supplemented with

online sources and with notes on difficult aspects of the material distributed in advance (rather than lectured in class). Test banks are equally essential as the source of homework, quiz and ultimately, the final exam. Developing the quantity of questions required for homework would be a Herculean task if done from scratch. Test bank questions are supplement where absolutely essential, but as seldom as possible. Even weak test bank questions cover enough of the important points to provide a basis for students to test themselves and to be useful for class discussion. An important issue here is efficient use of instructor time. Using the admittedly less than perfect test banks allows the instructor to assemble on-line homework quite rapidly, and quizzes and the midterm exam can be quickly created (as random selections from the homework). The final exam is a non-random selection of all of the homework questions (700+), slightly modified for clarity, etc.

- Incentives - graded clicks, graded homework and repeated questions on quizzes, midterm and final exam. Un-graded clicks result in some/many students answering randomly. One point for participation, four more for the correct answer (if there is one) provides incentives for both participation and rewards for knowledge and analysis. Cumulatively clicker questions are worth 10% of the course's total points, apparently a common percentage (Duncan 2007). The clicker score is derived from the percentage a student gets of the highest clicker points attained in the class, so that the instructor does not have to know in advance how many clicks/points there will be throughout the semester. Adding 10% to everyone's percentage at the end of the semester (up to 100%) allows the instructor to inform students not to worry about, or bother the instructor with sick days, forgotten clickers. Similarly, there has to be a grade incentive to doing the homework properly and some attempt to limit cheating. Timed online homework, at about 30 seconds per question, and the requirement that it must be done once, in one sitting seems to reduce the perfect scores that result when this is not done. Homework counts for 20% of the final grade, clicker points for 10%, online quizzes and midterm for 10% and the final, the only in-person, proctored exam, for 60%. The heavy weight on the cumulative comprehensive multiple choice final exam (half short-answer in the honors class) is designed to encourage and

reward students for what they know at the end of the course (and beyond) not for short-term cramming.

- Games and a game-like atmosphere. Students become fixated on their clicker points, assisted by periodic contests, with candy bars to the highest point gainer. Students might be even more motivated if the entire class became a game whose object was attaining the most clicker points. The unintended consequence might be enhanced learning. Computer simulations, carried out in class, in which students ‘vote’ for the policy action to be tried are popular as well (for example, the Chairman’s Game <http://www.frbsf.org/education/activities/chairman/index.html> in which students choose a funds rate target, and are clicked as to which direction to change it to match changed macro conditions). Also possible are contests to see which student clicks the correct answer first.
- Digitizing Tablets or Tablet PCs. An essential adjunct to PowerPoint and necessary if there is to be genuine discussion and reaction to students’ revealed answers. These allow ‘drawing’ on ‘top’ of slides to annotate material, shift a curve, sketch supply and demand, or draw a smiley face.
- Repetition. Repeating questions from homework, clicked news, slides, wikis. Students indicated that this was one of the more useful aspects of PSD – the chance to get things wrong before it carried a heavy penalty.

Doesn’t Work

- Allowing students to repeat the online homework, or having no time limit on it. Both seemed to encourage non-learning with lots of perfect homework scores and less than perfect grades on the final exam.
- Ignoring cheating. I indicate on the syllabus that I will periodically call names in lecture and require those students to see me with ID at the end of class. Any who do not see me but do show up as having clicked will suffer severe consequences. This is low cost (little time) and seems to have reduced if not eliminated phantom clicking.
- Office hours spent one on one with students dealing with course material. Students are advised that course related questions should be asked in class and on the discussion boards first. Office hours are reserved for discussion of courses, careers

and the meaning of life, or serious personal issues. Students in difficulty are further referred to learning resource center staffed by students.

May Work

- Displaying richer questions without showing the multiple choice answers. Then encouraging student discussion and work with their neighbors. Finally, displaying the multiple choices and clicking with follow up discussions. This may move the dialogue away from passive recognition towards genuine analysis.
- Targeted teaching, in which students with low homework/quiz/clicker scores are sent bi-monthly warning emails urging them to make use of existing peer-tutoring services and offering extra credit points if they do so.

REACTIONS AND RESULTS

As with virtually all previous studies, most but not all students like using clickers and like the active, interactive approach of PSD (Caldwell 2007, Salemi 2008). My experience has been the same. When asked about the use of clickers and the PSD approach, 74% of students agreed that the approach helped them learn better (15% disagreed), 77% felt that it made the class more interesting (9% not), 83% felt that it made them more involved in the subject (6% not), 61% agreed that it made them more independent learners (15% disagreed) and 92% felt that the frequent repetition of questions improved their learning (only 1% disagreed). 70% of students indicated that they worked harder or much harder (50.1% and 19.6% respectively) in this course compared to other courses of this level (depressingly, only 33.7% report putting in 4 hours or more per week).

Why did PSD 'work' for them? 80% agreed that it was less boring than lecture (10% disagreed), 80% indicated that it involved them intellectually (4% not), 60% felt that it provided some elements of a game (19% disagreed), 84% felt that the approach forced them to participate (6% did not), while 86% indicated that it provided testing and feedback for them (5% not) and 57% felt that they wasted less of their time, by covering material they felt they needed help with, not material they had learned on their own (17% did not agree).

When asked if the clickers were worth the cost and the time spent clicking, 68% agreed that they were worth it, while 17% disagreed. 64 % felt that clicker use in collaborative work (active exercises) helped them learn the material better while 16% disagreed. 59% felt that effective classroom clicking required that they do the reading and homework in advance while 25% disagreed. Should we have done even more clicking? 38% said yes, 41% wanted the same amount and 17% less.

Do students learn more? I am aware of no studies suggesting that graded homework and clicker use (part of PSD) have negative impacts on learning, and several at least, that suggest positive impacts (Lass 2007, Radosevich 2008, Caldwell 2007). Because I have been experimenting with this approach over a number of years, it is impossible to meaningfully compare current and past course outcomes. And teaching multiple sections using different methods is impractical, largely because I am committed to PSD.

ISSUES AND CONCLUSION

PSD works. Students like it, I like it, and it does not appear that students learn any less than with traditional lecture. It is likely that many learn more because they are more interested, because they are forced to attend more and work harder than in ‘traditional’ lecture courses, because of repetition and because they get more chances to get things wrong before it really matters. PSD moves instructors away from passive transmitters of facts towards facilitators of learning, and evidence from other disciplines suggests that students learn more because of this.

Note also that my application of PSD is primarily in very large classes in which discussion, interaction and feedback are largely impossible without these methods. PSD provides an efficient means of providing these, and of humanizing and shrinking the course to some extent. These large sections are taught without assistance (TAs have been used only for some technical assistance – freeing ‘hung’ homework) and without recitations (and periodically, as hybrid courses, meeting once a week only).

Of course, students are not homogenous and different students react differently to this approach. Some wonder why the instructor is not ‘teaching’, while others complain that they have to work harder than the instructor. But the large majority of students seem

energized, interested, engaged. What of the sleepers, talkers, uninterested ones? These remain and remain a concern. The increased feedback possible through constant testing gives hope that one can motivate them to get onboard earlier than the night before the final. As for the talkers, sleepers, newspaper readers in the distant fog at the back of the room, an occasional hand full of fingers silently held up, followed by a clicked “how many fingers were up”, does seem to provide some incentive to look up occasionally.

There are also those students who seem able to do the homework and quizzes adequately, and click their clickers at the right time, but demonstrate little or no knowledge on the final exam. Here too, there is some hope that the frequent testing and feedback along with targeted emailed warnings can alert them to their shortcomings early enough to seek help.

Some directions for future investigation and evaluation of PSD are suggested by Maier and Simkins and based on work done in physics education. These include:

- Developing a basic ‘concept-inventory’ for introduction to macroeconomics to evaluate course gains is an area that seems due for work (I use a very simple pre-post test now which indicates positive gains (normed and raw), correlated with clicker performance).
- Developing a set of key introductory macroeconomic misconceptions that can form the basis for developing questions with suitable distracters
- Starting to develop a much richer set of ‘core’ questions for use in class.

In addition, the following seem promising:

- Incorporating more peer learning particularly through displaying context-rich questions without multiple choice answers, encouraging discussion amongst students, and then revealing multiple choice answers for clicking, thus reducing the emphasis on passive knowledge
- Developing a set of ‘violin string’ mini-explanations and questions for macroeconomics. These would consist of very simple explanations of very simple macroeconomic concepts which can be ‘tested’ minutes later to demonstrate the low retention of lecture presented material (the example Duncan cites shows less than

10% of physics students recalled an explanation of sound transmittal through wood rather than violin strings, 10 minutes after it was discussed in lecture).


- A more formal comparison of lecture and PSD by applying each to different topics/weeks in a class and comparing quiz performance, controlling for demographic and other factors.

EXHIBIT 1– PSD ‘LECTURE’ SLIDES

Slide 1

SR Keynesian Macro –Aggregate Demand and Supply

- *The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back.*
- "In the long-run we are all dead"



1

Slide 2

How much of this week’s material do you feel you understand before we begin, based on reading and HW?

- A. <60%
- B. 61-70%
- C. 71-80%
- D. 81-90%
- E. 91-100%


2

Clicked, not discussed

Slide 3

It’s The Great Depression, Again (I hope not). What Would You Do?

- A. Increase taxes, cut the deficit, raise interest rates
- B. Increase government spending, increase the money supply, to hell with the deficit
- C. Impose wage and price controls and mandatory jobs programs
- D. Leave the country



3

Clicked then discussed

Slide 4

In the News?

-




4

Jump to headline stories which are discussed and clicked

Slide 5

Course Issues

- Clickers – register at iclicker.com
- Hung HW and quizzes; Time
- Discussion Board
- Wiki
- Quiz 1 Weds 4 – Thurs 9pm
 - Hw 1 and 2, 20 questions 15 minutes, 1 at a time, no saving, no redoing, no cheating
- Book versions
- ODE
 - econweb.rutgers.edu/sheflin
- Short-Run Supply ONLY




5

Slide 6

What Determines The Overall Level Of Prices And Output (GDP) in the Aggregate Economy?

- a) Money
- b) Inflation
- c) Opportunity cost
- d) Aggregate demand and supply
- e) Demand and supply for money

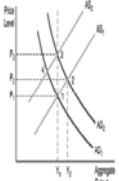


6

Clicked and discussed

Slide 7

Output and Prices in SR (Keynesian)



- Aggregate D&S
 - Versus Micro D&S
- Agg D=C+I+G+NX
 - C=f(Y,T,Wealth)
 - I=f(i) G exog NX
- Agg D downward sloping
 - P ↓ → M/P ↑ → r ↓ → I ↑ → D ↑ → (p,y) ↑
- Aggregate S curve Qs=f(P) cet. par. Upward sloping
 - reflects cost, technology, etc
 - P up → profit up and Qs up
 - Cet. Par. - Particularly wages


7

Posted in advance but not discussed

Slide 8

What determines the overall level of price and output in the economy?

- a) Money
- b) Opportunity cost
- c) Aggregate demand and supply
- d) Inflation
- e) Demand and supply for money



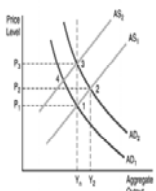
8

Clicked and discussed

Slide 9

Applications

- Aggregate Demand and Supply Shift simulation
 - Will it (click)
 - A. Increase Aggregate demand and output?
 - B. Decrease Aggregate demand and output?




<http://www.whitenova.com/thinkEconomics/adas.html>

Accompanies a web-based agg D&S shift simulation -

Slide 10

What Factors Shift the Aggregate Demand Curve? Aggregate Supply?

- $D = C, I, G, NX (=X-M)$
 - Expectations, confidence, foreign conditions, animal spirits
 - Fiscal policy
 - $G \rightarrow D$
 - $T \rightarrow Y-T \rightarrow C \rightarrow D$
 - Monetary Policy
 - $r \rightarrow i \rightarrow D$
- S – costs of production
 - Wages, raw materials, technology




Posted, not discussed

Slide 11

A Problem (do it on you own)

- In the late 1990's, aggregate demand was growing rapidly, but so was productivity. What happened to prices and output (Y)?

- A. Y up a lot, P up some
- B. Both P&Y down
- C. P up a lot, Y up some
- D. Y down, P up some
- E. Both P&Y essentially unchanged




Clicked but not discussed and answers not revealed

Slide 12

A Problem (do it after talking to your neighbors)

- In the late 1990's, aggregate demand was growing rapidly, but so was productivity. What happened to prices and output?

- A. Y up a lot, P up some
- B. P up a lot, Y up some
- C. Y down, P up some
- D. Both P&Y down
- E. Both P&Y essentially unchanged




Students discuss and then click and then responses for both this and previous slide revealed and discussed.

Slide 13

Which of the following would NOT cause the aggregate demand curve to shift to the right (increase)?

A. Increase in taxes
 B. Increase in government spending
 C. Increase in investment
 D. Increase in the money supply
 E. All would



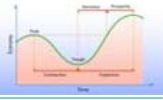
13

Clicked and discussed – note digitizing tablet used to draw on top of the slide

Slide 14

What Causes Recessions/Depressions, Expansions

A. Demand shifts/shocks
 B. S shifts/shocks
 C. Unemployment
 D. A and b
 E. A, b and c



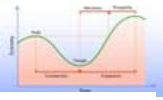
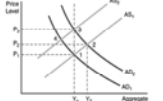
14

Clicked, discussed

Slide 15

What Causes Recessions, Depressions, Expansions – i.e. business cycles?

- What are business cycles?
 - Periodic, irregular ups and downs in economic activity
 - Expansions, contractions (recessions, depressions)
 - Peaks troughs
- D or S Shocks
 - Keynesian – D
 - Real BC - S

15

Posted, not discussed

Slide 16

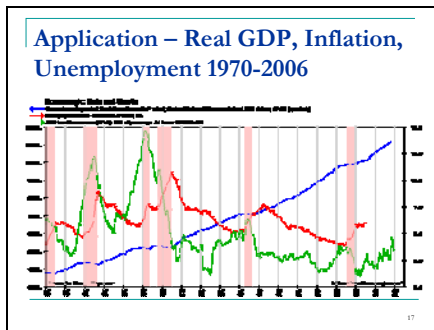
HW



16

Jump to selected hw questions – see appendix 3

Slide 17



Quick discussion of hw assignment

Slide 18

Applications

- [The Great Depression](#)
- [John Maynard Keynes](#)

Mention of additional readings

Slide 19

Which is NOT true of the Great Depression?

- A. 1929-1933
- B. Severe Inflation
- C. Unemployment up to 25%
- D. Most severe downturn in U.S. history
- E. Real GDP fell approx 30%; Stocks down 90%

clicked

Slide 20

The Great Depression

- 8/1929-3/1933
- Most severe in U.S. history:
 - Black Thursday 10/24/29
 - Unemployment 25%
 - No unemployment insurance or welfare
 - Real gdp fell 30%
 - Wages down 43%
 - Stocks down 90%
 - Bank failures – no insurance
 - Hoovervilles, Okies, dust bowl, California
 - World-wide

Posted, not discussed

Slide 21

Changed Economic structure of U.S. Economy

- Roosevelt 1932 – New Deal
 - Role of Government NRA, CCC, WPA
 - FDIC, SEC
 - Expanded Gov't role – Keynesian econ
 - Social Security
- Second downturn 1933
 - Recovery with WWII




21

Posted, not discussed

Slide 22

About Keynes - which is NOT true?

- A. Professor at Cambridge University, England
- B. Author of General Theory of Employment, Interest and Money
- C. Advocated strong use of monetary policy to counter depression
- D. Active in the arts
- E. All ARE true




22

Slide 23

Interesting Facts about Keynes

- Personal 1883-1946
 - Cambridge University, England
 - Mother Mayor of Cambridge, father a professor
 - Member of the Apostles and Bloomsbury Group
 - Virginia Woolf, E.M.Forster and Bertrand Russell
 - Married a Russian ballerina, founded ballet,
 - avant garde personal life
 - WW I treasury: Bertrand Russell, claimed that Keynes' work at the Treasury "consisted of finding ways of killing the maximum number of Germans at the minimum expense".
- Speculated successfully for Cambridge and himself
- Work *The economic consequences of the peace (1919)*; *The General Theory of Employment, Interest and Money (1936)*, and more




23

Posted, not discussed

Slide 24

Which of the following is NOT true of Keynesian Macroeconomics?

- A. Focuses on the economy in the short-run
- B. Primary concern is with depression/unemployment
- C. Concentrate on the role of Aggregate Demand in explaining depression/recession
- D. Primary focus on control of inflation
- E. Points to the need for government fiscal policy to stimulate an economy in recession/depression




24

clicked

Slide 25

Essence of Keynesian Macroeconomics

- Short-run, depression/ unemployment
- Focus on Aggregate Demand central
- Underemployment equilibrium possible
 - If too little private demand $C+I+NX$
 - Economy not self-adjusting in SR
 - Role of Gov't in stabilizing economy
 - Create demand – G up, T down if private sector is not doing so



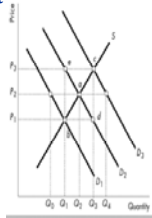
25

Posted, not discussed

Slide 26

What Causes inflation in the SR and relate to Unemployment

- Inflation
 - Demand pull
 - Cost push
- Unemployment
 - Too little aggregate demand
 - Underemployment equilibrium



26

Slide 27

How much of this week's material do you feel you understand now?

- A. <60%
- B. 61-70%
- C. 71-80%
- D. 81-90%
- E. 91-100%

27

Hopefully higher than at beginning of the week

Slide 28

How would you evaluate this weeks classes?

- A. Neither interesting nor useful
- B. Interesting but not useful
- C. Not Interesting but useful
- D. Interesting and Useful

28

Instructor feedback

EXHIBIT 2– SAMPLE NEWS OF THE DAY (WITH CLICKER QUESTIONS)
(approx 9/15/08)

-- Goldman posts sharply lower profit amid "marked decrease in client activity and declining asset valuations."



Officials Try to Stem Crisis; Fed to Meet

Concern Turns to A.I.G. — Dow Lost Most Since '01

By STEPHEN LABATON

The market's descent on Monday could set the stage for more fallout. Officials at the Fed will consider an interest rate cut when they meet later on Tuesday.

What is the Fed?

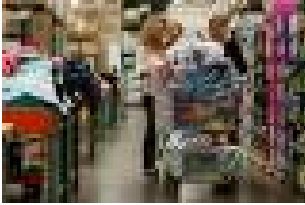
- A. Government Insurance Agency
- B. Central Bank of the U.S.
- C. Stock Market Regulator

Industrial Output Tumbles 1.1%

Production by U.S. industries plunged in August, falling double the rate expected as car making slumped and weather both mild and stormy struck.

Why is Aggregate Output Falling?

- A. Aggregate Supply is falling
- B. Aggregate Demand is Falling
- C. Money Supply is falling



Prices Probably Decrease as Growth Slows: US Economy Preview

Bloomberg - 14 hours ago

By Timothy R. Homan Sept. 14 (Bloomberg) -- Americans paid less for goods and services in August, manufacturing slumped and homebuilding sank deeper into a recession, signaling slower growth is taming inflation, economists said before reports this week ...

Why Are Overall Prices Falling?

- D. Aggregate Supply is Falling
- E. Aggregate Demand is Falling
- F. Money Supply is falling



AFP

Oil Falls to Six-Month Low as Refineries Escape Major Damage

Bloomberg - 1 hour ago

By Mark Shenk Sept. 14 (Bloomberg) -- Crude oil fell to a six-month low in New York and gasoline tumbled amid signs that refineries along the Gulf of Mexico coast will soon resume operations after escaping major damage from Hurricane Ike.

Why are Crude Oil Prices Falling?

- A. Oil Supply is falling
- B. Oil Supply is rising
- C. Oil Demand is falling
- D. Oil Demand is rising

EXHIBIT 3– SELECTED HW FROM JITT (QUESTIONS IN BOLDFACE WERE ANSWERED INCORRECTLY BY MORE THAN 30% OF STUDENTS)

1. Which is the most correct statement about the invisible hand?
 - a. The invisible hand always ensures both equity and efficiency.** b. The invisible hand is more effective at ensuring equity than it is at ensuring efficiency. c. The invisible hand is more effective at ensuring efficiency than it is at ensuring equity. d. Market power is the instrument with which the invisible hand directs economic activity.

2. The primary determinant of a country's standard of living is
 - a. the country's ability to prevail over foreign competition. b. the country's ability to produce goods and services. c. the total supply of money in the economy. d. the average age of the country's labor force.

3. **The income of a typical worker in a country is most closely linked to which of the following?**
 - a. population b. productivity c. market power d. government policies**

4. The business cycle is the
 - a. relationship between unemployment and inflation. b. irregular fluctuations in economic activity. c. positive relationship between the quantity of money in an economy and inflation. d. predictable changes in economic activity due to changes in government spending and taxes.

5. **In the short run Recessions in South Korea and Indonesia will cause**
 - a. the U.S. price level and real GDP to rise. b. the U.S. price level and real GDP to fall. c. the U.S. price level to rise and real GDP to fall. d. the U.S. price level to fall and real GDP to rise.**

6. Which of the following would cause prices and real GDP to rise in the short run?
 - a. Short-run aggregate supply shifts right. b. Short-run aggregate supply shifts left. c. Aggregate demand shifts right. d. Aggregate demand shifts left.

7. **Which of the following would cause prices to fall and output to rise in the short run?**
 - a. Short-run aggregate supply shifts right. b. Short-run aggregate supply shifts left. c. Aggregate demand shifts right. d. Aggregate demand shifts left.**

-

15. Which of the following has been suggested as a cause of the Great Depression?
 - a. a decline in the money supply b. a decrease in stock prices c. the collapse of the banking system d. All of the above are correct.**

-

EXHIBIT 4– SAMPLE WIKI QUESTIONS AND ANSWERS (instructor comments in capitals)

SOME BIG QUESTIONS 3 - COMPLETE AND CORRECT 9/30

1) WHAT ARE THE DETERMINANTS OF AGGREGATE OUTPUT (REAL GDP) AND THE OVERALL LEVEL OF PRICES IN THE SHORT-RUN? Aggregate supply and demand determine the overall level of prices and aggregate output IN THE SR.

2) WHY IS THE SHORT-RUN AGGREGATE SUPPLY CURVE UPWARD SLOPING AND THE AGGREGATE DEMAND CURVE DOWNWARD SLOPING? In short run Aggregate Supply, the price level rises and the money wage rate is unchanged. If the price level increases and the money wage rate is constant, the firm has an incentive to increase production since the higher price covers the higher marginal cost. Thus, the aggregate supply curve is upward sloping. The aggregate demand curve is downward sloping because of the wealth effect and the substitution effect. As the price level increases, THE REAL VALUE OF WEALTH AND MONEY HOLDINGS FALLS (W/P, M/P) AND THUS REDUCES AGG D QUANTITY. **DON'T CONFUSE THIS WITH FACTORS THAT **SHIFT** AGG D LIKE DECREASE IN HOUSING AND STOCK VALUES WHICH CREATES A NEGATIVE WEALTH EFFECT AND SHIFTS AGG D TO THE LEFT.

3) WHAT CAUSES RECESSIONS/DEPRESSIONS? INFLATION (IN THE SHORT-RUN)? Shocks in the aggregate demand OR aggregate supply curve leads to recessions AND BOOMS. Inflation occurs when the increase in aggregate demand is much greater than the increase in aggregate supply AND PRICES AND OUTPUT BOTH INCREASE. ALSO, LEFTWARD SHIFTS IN AGG S DUE TO SAY OIL PRICE INCREASES, CAN CAUSE STAGFLATION - PRICES/INFLATION UP WHILE OUTPUT SLOWS OR FALLS. SIMILARLY, A RIGHTWARD SHIFT IN AGG S DUE, SAY, TO TECH. IMPROVEMENTS CAN LEAD TO A BUSINESS CYCLE EXPANSION WITHOUT INFLATION

4) FIVE IMPORTANT FACTS ABOUT THE GREAT DEPRESSION? 1) It was from 8/1929-3/1933 2) Real GDP fell 30% 3) 25% of the workforce was unemployed 4)the effects were worldwide 5)there was no unemployment insurance and NO insurance for bank failures either ALSO: DEFLATION, 1/3 OF BANKS FAILED, CAUSED BY DRAMATIC DROP IN AGG D, PARTIALLY CAUSED BY DROP IN MS.

5) FOUR INTERESTING FACTS ABOUT KEYNES? 1) He wrote The General Theory of Employment, Interest and Money (1936), the basis of modern macroeconomics. He also wrote on the topic of probability. 2) His mother was the Mayor of Cambridge and his father was a professor 3) He had an avant garde personal life 4)He ATTENDED the Versailles peace conference at the end of WW1 5) He was a member of the Bloomsbury Group, a circle of outstanding artists and writers that included E.M Foster, Bertrand Russell, and Virginia Woolf 6)He speculated successfully for Cambridge 7)helped EXPLAIN the Great Depression which help us even today; our government policies

changed due to the depression 7) HELPED ESTABLISH BRETTON WOODS SYSTEM OF FIXED EXCHANGE RATES IN EFFECT FROM 40'S – EARLY 1970'S

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