

Learning to Argue with Intermediate Macro Theory: A Semester-Long Team Writing Project

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First Draft: June 2, 2013

This Draft: April 2, 2014

Forthcoming, The Journal of Economic Education

Abstract

We describe our experience with integrating a semester-long economic analysis project into an intermediate macroeconomic theory course. Students work in teams of "economic advisors" to write a series of nested reports for a decision-maker that analyze the current state of the economy, and propose and evaluate policies. The project simulates real-world policy consulting with an emphasis on applying economic theory and models. We describe the project setup and how to tailor its theme to current events, explain methods for keeping it manageable in larger classes, discuss student learning outcomes, and document course evaluation results. Besides improving the learning experience, this project prepares economics students to contribute their own views to policy debates and buttress them with tight macroeconomic reasoning.

Keywords: Teaching intermediate macroeconomic theory, financial crisis, cooperative learning, team-based writing project

JEL classification: A20, A22, E00, G01

We thank our undergraduate students and teaching assistants at Boston College and Washington State University for making this project a success. We are grateful to Richard Tresch for his comments, and we thank Tisha Emerson, Alan Love and Vicki McCracken for their suggestions. Contact: Georg Strasser, 172 178.979 cm370(prsPsl)-37n Pullman, WA 99164, Phone: (509) 335-8509, Fax: (509) 335-1173, Email: marketa.halova@wsu.edu

1 Motivation

Employers frequently voice dissatisfaction with the skills of college graduates. The skills

2 Project Description

Table 1: Project Example - Advisors to President Obama (WSU 2012)

Project Overview Theme	President Obama requested that your team of economic advisers prepare a series of three reports describing the state of the economy, analyzing the causes of the recession, evaluating existing policies, and proposing new policies.
Report 1 Assignments	<ol style="list-style-type: none"> 1. A description of the current state of the U.S. economy and a comparison to the state prior to the recession (Please use important economic variables to describe the economy and explain to the President why these variables are important.), 2. A definition of a recession (Please inform the President whether the recession is over or not.), 3. A comparison of the recession to another U.S. recession or a recession in another country (Please explain to the President why you chose this particular comparison by telling him why it is interesting and relevant.), and 4. A brief analysis of causes of the recession.
Report 2 Assignments	<ol style="list-style-type: none"> 5. A thorough explanation of the causes of the recession (i.e., how the recession started) and how it spread throughout the economy: You can make any argument you like but you will probably want to discuss the housing sector and financial sector. Describe how the crisis spread from these sectors to the real economy. Be sure to include theory and models we learned. 6. An evaluation of monetary policies taken by the Fed: Discuss actions taken by the Fed and describe the effect of these policies on the economy in both the long-run and the short-run using the theories and models we learned. Evaluate whether these policies were successful in combatting the recession. 7. An evaluation of fiscal policies taken by the government: Discuss the actions taken by the government and describe the effect of these policies on the economy in both the long-run and the short-run using the theories and models we learned. Evaluate whether these policies were successful in combatting the recession. You will probably want to discuss the national debt.
Report 3 Assignments	<ol style="list-style-type: none"> 8. A discussion of the U.S. federal government deficit and trade deficit. Discuss why these deficits are or are not a concern, and 9. A summary of the most pressing issues in the U.S. economy today and what should be done to address them. Your suggestions should naturally follow from this summary and they should be balanced (E.g., if you suggest the government should increase spending, you need to consider the effect on government deficit. E.g., if you suggest the Fed should maintain a loose monetary policy, you need to consider the effect on inflation.)

we reward finding data sources and using macroeconomic variables beyond the ones covered in class.

ing graphs, tables, and references), and is due at the end of Week 9. The purpose of this report is twofold. First, the students have to revise Report 1 based on the feedback received from us. This task includes condensing Report 1 to eliminate repetitions and achieve concise writing. Second, the students address an additional set of issues related to the current state of the economy using the macroeconomic theory and models they have learnt so far to support the arguments. We emphasize that there are no correct answers that we expect to read. We encourage students to use the theory and models to bring their points of view across and support their arguments with, or even against, the macroeconomic theory presented in class or in the textbook. Again, we reward creative interpretations to encourage intellectual risk-taking.

Finally, Report 3, worth 15% of the total course grade, is the longest (for example, ten pages including graphs, tables, and references) and is due at the end of Week 14, about one week before the end of the semester. The purpose of this report is twofold. First, the students rewrite and condense Report 2 based on the feedback we provided. Second, they address a final set of issues that focus on policy recommendations; here, a balanced view has to be presented, considering both the pros and cons of the policies. Again, rather than emphasizing one particular approach to the current economic woes, the students are encouraged to present their own economic and political views supported by theory and models, or to point out deficiencies in the existing theory and models.

based on feedback, rewards cooperative learning, and reinforces learning. In this section we discuss these benefits individually.

3.1 Learning to "Argue with Macro Theory"

With the standard style of teaching intermediate macroeconomics, students tend to memorize textbook storylines to provide the correct answer on exams. Instead of promoting memorization of correct answers as the dominant learning strategy, we complement the textbook-based teaching by encouraging the students to argue with macro theory. Instead of temporarily filling up short-term memory with static knowledge, we equip students with a dynamic, pretested, and thus ready-to-use toolset.

Students are free to present any view about the project assignments and make any policy recommendation, but are required to apply the macroeconomic toolset of theory and models to support their views. For example, students can take a stand on the effectiveness of fiscal policy using Keynesian or neoclassical arguments (we cover both theories in our courses). Students are also welcome to disagree with the activist role of the government and the Federal Reserve Bank that underlies most standard intermediate macro material, as long as this viewpoint is supported by sound economic arguments and data. Since students have to apply theory and models to explain real-world events in addition to standardly studying them for exams, they learn the course material on a deeper level.

We emphasize that there are no correct answers that we expect to read. Students can even argue against the theory and models by correctly pointing out violated assumptions and weaknesses. This allows us to refrain from presenting macroeconomic theory "as an ever-more-successful approach to the truth about how economies work, but rather an investigation into a phenomenon that evolves as fast as we can keep up with it" as advocated by Seabright

⁷This is reflected in our course evaluations. When asked what is particularly good or interesting about this course, one student at WSU in the Fall of 2013 wrote: "Application of theories to the real world made you really understand the effects and consequences of the theoretical models. Lot of working with the models made you fully understand fiscal and monetary policies. Comparison of short-run and long-run effects showed you the advantages and disadvantages of policies. Made you understand the current economic situation much better."

(2012). Using theory and models to present arguments also simulates real-world policy consulting and encourages students to actively participate in policy debates by weighting their views against current consensus models.

3.2 Real-time Experience and Current Topics

Because the current generation of students revels in following real-time events and being connected to the world, we spark students' interest in macroeconomics by centering the project on the current hottest economic policy debate. Besides the "Advisors to President Obama" theme described in detail in Table 1, we have used themes "Campaign Advisors to

text.

The financial crisis also exposed gaps in the undergraduate macroeconomics curriculum. Many factors that played a key role in the crisis were assumed away in standard models (Colander 2010) and the leading textbooks thus did not prepare students to understand the crisis, its causes, and policy responses (Gray and Miller 2011). However, while the need to include new topics such as the importance of credit and financial intermediaries in the macroeconomy has been recognized (e.g., Friedman 2010), time constraints make incorporating new topics a challenge as standard topics easily fill up the whole semester (Blinder 2010). Our project naturally introduces new topics that are not covered in-depth in intermediate macroeconomics textbooks but are part of ongoing policy debates without compromising the coverage of the standard theory. This is largely achieved by outsourcing fact collection to students. While preparing the reports, students study topics such as the housing sector, lending practices, asset market bubbles, securitization, originate-to-distribute model, leverage, role of rating agencies, too-big-to-fail institutions, systemic risk, and regulation. This common base of knowledge that all teams acquire has a positive side effect on the quality of in-class discussion: students are more informed which brings the discussion to a more sophisticated level.¹⁰

With our project the intermediate macroeconomic theory course becomes an up-to-date experience. As students address issues that evolve in real time, the conclusions of the first report at the beginning of the semester can, and for good reasons should, differ from the conclusions in the final report. Not only students' information changes as they study the course material, but also the economic and political conditions evolve during the semester { sometimes considerably as in recent semesters.

¹⁰Although we give all teams the same assignments to have a common direction, the project leaves ample room for pursuing different interests. For example, finance majors enrolled in our courses have explored the links between the macroeconomy and financial markets, which is a natural way for researchers to study the macroeconomy but still under-represented in intermediate macroeconomics textbooks.

3.3 Nested Reports and Feedback

The need to introduce more writing projects into the undergraduate economics curriculum has been noted by others. For example, Docherty, Tse, Forman, and McKenzie (2010) implement intensive writing in large (up to 500 students) intermediate macroeconomics courses with two short independent writing assignments (1000 and 2000 words) aimed at improving writing skills. In contrast to short writing assignments, we fully integrate the writing project into our semester-long course by structuring the project as a series of three nested reports. This project structure has two advantages. First, it allows us to provide feedback on interim reports which gives students an opportunity to improve throughout the semester and produce a final Report 3 containing a polished discussion of issues from Reports 1 and 2 along with policy recommendations¹¹. Second, it replicates realistic consulting projects where consultants have to adjust in real time to changing information. The nested reports thus demonstrate that the first report can differ from the final one as students learn more theory/models and as real-world events unfold throughout the semester.

3.4 Teamwork and Cooperative Learning

The project is structured within a cooperative learning framework with its five key elements { development of interpersonal and small group social skills, positive interdependence, face-to-face interaction, group processing, and individual accountability { described by, for example, Bartlett (2006) and McGoldrick, Cooper, Marburger, Rhoads, and Smith (2013). This approach has been used in many fields (Hurtado, Eagan, Pryor, Whang, and Tran 2012). In intermediate macroeconomics, Yamarik (2007) has used cooperative learning in student groups working on small assignments such as problem-solving exercises inside the classroom

¹¹Extensive literature has shown the importance of feedback for student learning. For example, Hattie and Timperley (2007) distinguish feedback about the task (FT), the processing of the task (FP), self-regulation (FR), and the self as a person (FS). The FR and FP forms are effective for deep processing and mastery of tasks, and the FT form is effective when the feedback is used to improve strategy processing or self-regulation. Our project creates ample opportunities to provide these three kinds of feedback. Furthermore, structuring the project as a series of nested reports allows us to provide timely feedback which is highlighted as one of the most critical features of effective feedback by, for example, by Higgins, Hartley, and Skelton (2002).

and problem sets outside of the classroom, and documented improved student learning outcomes.

In our project, students engage in cooperative learning to generate a larger, more in-depth joint product. To gain interpersonal and small group social skills valuable in the real-world work environment, students work in teams of about three economic advisors¹². The teams are free to divide the work among the team members; however, they are responsible for reviewing each other's work to create positive interdependence and make sure they generate a cohesive analysis. We also encourage face-to-face interaction within the teams to generate team discussions about diverse opinions and promote learning from each other¹³. Staggering the project into three nested reports gives the teams an opportunity for group processing of both the taskwork and teamwork as it leads to team discussions about how well the teams are functioning and how to improve on the next report.

Individual accountability can be introduced in different ways. For example, Report 1 can be assigned as an individual exercise if the class size allows. In this setup, teams can be formed subsequently based on the interests expressed by the students in their first report inTJ/w7(tl)1(ts)-39ob a6m158lf-58le

and strengthens not only students' economic analysis but also their teamwork and written communication skills.

3.5 Full Integration into the Course

Last but not least, the project is fully integrated into the intermediate macroeconomic theory course. It is not an ad-hoc project that would replace other intermediate macro material; instead, it is a guiding framework for our course as the project assignments are designed to cover the entire course material instead of focusing on an arbitrarily selected narrow topic.

We use several additional tools to achieve this integration. First, to generate excitement about the project theme, we periodically start our classes with a short relevant video or online article. For example, during the "Campaign Advisors to Candidates in 2012 Presidential Election" theme, we showed a video of the presidential candidate debate on fiscal policy. During the "Federal Reserve Bank Chair Appointment" theme in 2013, we read articles about merits of the individual candidates.

Second, after each nested report has been graded, we set class time aside to summarize what the teams wrote. Since the teams often come to conflicting conclusions, this exposes the students to different viewpoints and generates a lively discussion. For example, in one of the assignments for the 2012 BC project set up as economic advising to presidential candidates, we provided students with policy-related slogans of the real-world politicians and asked them to evaluate three of them. The teams were free to decide the slogans they found most interesting but they had to use arguments based on economic theory/models to support or reject them. Table 2 ranks the slogans by the number of teams that chose to analyze them, and shows how many teams were for or against each policy.

¹⁴Ambiguous slogans were augmented with more details to facilitate a clear-cut evaluation: "Work must be rewarding": lower tax on wages; "End Bush tax cuts for the rich": increase the top income tax bracket from 35% back to 39.6%; "Low capital tax": cut the top corporate tax rate to 15%, eliminate taxes on capital gains, interest, and dividends, eliminate estate taxes; "We are the 99%": reduce income inequality among U.S. population; "Affordable housing for all"; "Extend level of mandatory health insurance"; "Eliminate Obamacare": undo Patient Protection and Affordable Care Act; "Fair economy": no bailouts for banks; "Stop the Ponzi scheme": eliminate retirement insurance in the Social Security Act; "All electric energy from

inequality and redistribution slogans were selected most frequently and these policies found avid supporters as well as staunch opponents. This example attests to the diversity of thought in our classroom channeled by our project into a productive in-class discussion.

Third, on our exams, we use some questions with the project theme¹⁵. This full integration reinforces learning throughout the course.

Table 2: Evaluation of Competitors' Proposed Policies (BC 2012)

Competitors' Proposed Policy	Pro	Con	Total
\End Bush tax cuts for the rich"	14	3	17
\We are the 99%"	11	2	13
\Free money" (Abolish the Fed)	1	10	11
\Eliminate Obamacare"	5	2	7
\Fair economy"	3	4	7
\Work must be rewarding"	4	2	

4.1 Student Learning Outcomes

The student learning outcomes are reliably the same as long as the project theme centers on current macroeconomic events and policy issues. The primary learning outcomes focus on mastering the course material and understanding current events while secondary learning outcomes pertain to skills for economist jobs and general skills as listed in Table 3. All project assignments map into one or several learning outcomes. Table 3 shows this mapping for the WSU 2013 project outlined in Table 1. For example, learning outcomes 1 and 4 are assessed based on the project assignments 5 through 9.

Table 3: Student Learning Outcomes and Corresponding Project Assignments

		Learning Outcome	Project Assignments
Primary	Current events	1) Making connections between macroeconomic theory/models and the current state of the economy (for example, presenting an explanation of the causes of the recession using theory/models)	5{9
		2) Viewing the economy as a whole comprised of interconnected parts (for example, describing how the recession spread from the housing and financial sectors to the rest of the economy)	4{9
	Course material	3) Using macroeconomic theory/models to support interpretations of current events (for example, using theory/models and considering both short-run and long-run effects to argue whether monetary and fiscal policies were effective in combating the recession) 4) Being cognizant of weaknesses and assumptions in models (for example, a consumption function reflecting a homogenous population with identical savings rates, no explicit model of consumer confidence, or a long-term	5

The course and the project increase students' confidence in dealing with macroeconomics. We conducted surveys at BC in the Fall 2012 and Fall 2013 asking "Before/after taking intermediate macroeconomic theory my level of understanding of economic news, statements, and opinions on the media and in public debate was ..." 92 out of 123 students responded to this survey. On a Poor/Fair/Good/Very Good/Excellent scale, the students' self-assessed proficiency increased by more than one category during the semester, from between Fair and Good to close to Very Good. Overall, after taking our project-augmented course students feel ready to discuss current events and policy issues facing the U.S. and world economy.

5 Resource Requirements and Flexibility

A necessary condition for any teaching idea to succeed is that it satisfies the instructor's resource constraints. For this project, the limiting factors are class size and grading resources.

We have successfully adjusted team size and page limits in response to class size. We have used team sizes of two to four students and project lengths of eight to ten pages a1(m)-401(

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students have progressed in mastering the class material, and to focus our lectures on areas of confusion.

Our project is interesting for economics majors as well as non-majors because the latter

6 Summary

In this paper we describe the setup and experiences from integrating a semester-long, team-based, written economic analysis project into an otherwise standard intermediate macroeconomic theory course. Students write a sequence of nested reports on the current state of the economy and the appropriate policy response to it, responding to events during the semester in real time. Students can follow any line of argument but have to support it by macro theory and models, which simulates a real-world policy consulting experience.

The project is very flexible. It is textbook-independent and can be easily tailored to current economic and political affairs. It is interesting for economics majors as well as non-majors and flexible enough to be feasible even for larger classes.

As we have shown, students initially find the project challenging, but are in the end impressed by the amount of learning and the skills they have acquired. We are especially encouraged by the new-found confidence the students express in using economic theory and models outside of the classroom. The project makes students enthusiastic about "boring theory" and greatly improves their learning experience. But above all, the project nurtures young economists that have skills and confidence to actively engage in the policy debates of today and the future.

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Appendix: Grading Matrix Example

Tables 5 to 7 show the grading matrix for the WSU 2012 Advisors to President Obama Project" including the corresponding student learning outcomes (SLOs) from Table 3.

Table 5: Report 1 Grading Matrix

CONTENT - 50% (50 points)

1. Description of the current state of the U.S. economy and comparison to the state prior to the recession (Please use important economic variables to describe the economy and explain to the President why these variables are important) (12.5 points, SLO 6)

<i>Emerging</i>	<i>Developing</i>	<i>Mastering</i>
Does not attempt to or fails to identify and summarize accurately.	Identifies and summarizes, though some aspects are incorrect or confused. Nuances and key details are missing or glossed over.	Clearly identifies and summarizes the issue. Identifies integral relationships essential to analyzing the issue.
Results are not relevant.	Results are relevant but not complete.	Results are complete, focused, relevant.

2. Definition of recession (Please inform the President whether the recession is over) (12.5 points, SLO 7)

<i>Emerging</i>	<i>Developing</i>	<i>Mastering</i>
Does not attempt to or fails to identify and summarize accurately.	Identifies and summarizes, though some aspects are incorrect or confused. Nuances and key details are missing or glossed over.	Clearly identifies and summarizes the issue. Identifies integral relationships essential to analyzing the issue.
Results are not relevant.	Results are relevant but not complete.	Results are complete, focused, relevant.

3. Comparison of the recession to another recession in the history of the U.S. or any recession in another country (Please explain to the President why you chose this particular comparison by telling him why it is interesting and relevant) (12.5 points, SLO 6)

<i>Emerging</i>	<i>Developing</i>	<i>Mastering</i>
Does not attempt to or fails to identify and summarize accurately.	Identifies and summarizes, though some aspects are incorrect or confused. Nuances and key details are missing or glossed over.	Clearly identifies and summarizes the issue. Identifies integral relationships essential to analyzing the issue.
Results are not relevant.	Results are relevant but not complete.	Results are complete, focused, relevant.

4. A brief analysis of causes of the recession (12.5 points, SLO 2)

<i>Emerging</i>	<i>Developing</i>	<i>Mastering</i>
Does not attempt to or fails to identify and summarize accurately.	Identifies and summarizes, though some aspects are incorrect or confused. Nuances and key details are missing or glossed over.	Clearly identifies and summarizes the issue. Identifies integral relationships essential to analyzing the issue.
Results are not relevant.	Results are relevant but not complete.	Results are complete, focused, relevant.

PRESENTATION - 50% (50 points)

ORGANIZATION: Meaningful introduction, logical flow of ideas, development of ideas within sections or paragraphs, cohesive analysis, proper use of sources (25 points, SLOs 8,10)

<i>Emerging</i>	<i>Developing</i>	<i>Mastering</i>
Work is unfocused and poorly organized; lacks logical connection of ideas. Analysis is not cohesive and does not flow well. Format is absent, inconsistent or distracting. Unnecessary repetitions exist.	Basic organization is apparent; transitions connect ideas, although they may be mechanical. Format is appropriate although at times inconsistent.	Organization is clear; transitions between ideas enhance presentation. The analysis is cohesive and flows well. Consistent use of appropriate format. Few issues with other components of presentation.
Few sources are cited or used correctly. No evidence of search, selection or source evaluation skills. Repeats information provided without question or dismisses evidence without adequate justification.	Most sources are cited and used correctly. Demonstrates adequate skill in searching, selecting, and evaluating sources to meet the information need but only information covered in class/textbook is used.	All sources are cited and used correctly. Evidence of search, selection, and source evaluation skills; notable identification of uniquely salient resources. Examines evidence and its source; questions its accuracy, relevance and completeness. Interesting and relevant information not covered in class/textbook is used.

CONTENT - 50 % (50 points)

Table 6: Report 2 Grading Matrix

