

ECO 120: Global Macroeconomics

Assessment Exercise: International Macroeconomic Influences

Administered: Final Exam Week, Fall 2016

General Education Learning Objective: Students will demonstrate knowledge and abilities relating to critical and creative thinking.

Course Specific Learning Objectives:

- Use the supply and demand model for currencies to predict changes in exchange rates.
- Apply the model of aggregate demand and aggregate supply to predict and demonstrate how international influences affect real GDP and price level in the short run and long run.
- Apply the model of aggregate demand and aggregate supply to current international economic and political issues.

Administration:

The following task was part of students cumulative final exam, which was worth a significant part of students' final grades. Students completed the task independently, and without any aids such as notes, textbook, or electronic devices. The task includes content from multiple points in the semester, including material initially taught in third week and material covered in the final three weeks of class.

Instructional Content:

The assessment tool measures students' ability to use models to predict the short-run effects of a change in international conditions on a country's macroeconomy and exchange rate.

The task measures students' abilities to think about multiple dimensions of the situation using multiple macroeconomic models. One challenge students face is deciding what model to use to answer each aspect of the situation.

Students use the aggregate supply/demand model to illustrate the impact on real GDP of a change in the Brazil *Real* and Argentine Peso exchange rate. Then students are asked consider a monetary policy prescription meant to counteract this effect and describe the impact on the exchange rate through the foreign exchange supply and demand model. Finally, students apply the aggregate supply/demand model again to illustrate the impact of the policy on the macroeconomy.

Assessment Exercise:

Prior to 1999 the Argentine economy was in a recession. Then in 1999 the Argentine Peso appreciated significantly against the Brazilian Real. Recognize that Argentina and Brazil are the two largest economies in South America, and they share a border with each other, and they are major trading partners. Argentina's recession grew much worse with the appreciation of the Peso.

1. Use a graphical model to illustrate the Argentine economy in a recession (i.e. prior to 1999).
2. Use the graphical model to illustrate the change in Argentina's real GDP due to the appreciation of the Peso against the Brazilian Real in 1999. Explain the reasoning behind any shifts and describe the result.
3. Suppose Argentina's central bank increases the supply of Pesos and uses these to purchase U.S. dollars. Use a graphical model to illustrate the effect of this policy on the exchange rate between Argentine Pesos and U.S. dollars. Explain the reasoning behind any shifts and describe the result.
4. Use a graphical model to illustrate the impact on Argentina's real GDP of the policy proposed in part C. Explain the reasoning behind any shifts and describe the result.

Evaluation Rubric:

Question	Score = 1	Score = 2	Score = 3
A. Identifying the starting Point	Student picks the wrong model or labels model incorrectly.	Student uses AS/AD model, labels correctly but starts in long run equilibrium or boom	Student uses AS/AD model, labels correctly and starts in recession
B1. Appreciation of Argentine Peso: Effect on Real GDP (Graph / Model)	Student picks wrong model or labels model incorrectly	Student draws AS/AD model and labels correctly, but draws incorrect shift	Student correctly sets up and labels the AS / AD model and shifts only the AD curve leftward demonstrating graphically a decrease in short-run equilibrium real GDP.
B2. Appreciation of Argentine Peso: Effect on Real GDP (Description)	Student fails to conclude that there is a decrease in Real GDP.	Student correctly concludes that there is a decrease in real GDP, but there is an error or omission in the student's logic or description.	Student correctly concludes that there is a drop in real GDP because there will be a decrease in exports to Brazil or an increase in imports from Brazil.
C1. Exchange Rate Policy (Graph / Model)	Student picks wrong model or labels model incorrectly	Student uses Exchange Rate model and labels correctly, but draws incorrect shift.	Student correctly sets up and labels the market for currency exchange between Argentina and the United States and correctly demonstrates a rightward shift in the supply of Pesos and/or rightward shift in demand for Dollars.
C2. Exchange Rate Policy (Description)	Student concludes that the Peso will appreciate against the dollar (or Dollar depreciate against the Peso).	Student makes correct statements that Peso will depreciate against the dollar (or Dollar will appreciate against the Peso), but there is an error or omission in the student's logic or description.	Student makes correct statements that Peso will depreciate against the dollar because the policy causes an increase in supply of Pesos or equivalently an increase in demand for Dollars.
D1. Policy success (Graph / Model)	Student picks wrong model or labels model incorrectly	Student draws AS/AD model and labels correctly, but draws incorrect shift	Student correctly sets up and labels the AS / AD model and shifts only the AD curve rightward demonstrating graphically an increase in short-run equilibrium real GDP.
D2. Policy success (Description)	Student fails to conclude that there is an increase in real GDP as a result.	Student correctly concludes that there is an increase in real GDP, but there is an error or omission in the student's logic or description.	Student correctly concludes that there is an increase in real GDP because there will be an increase in exports to the United States.

General Education Assessment Performance Categories:

- **Unsatisfactory:** Student scores 7-9 in sum for all the above traits.
- **Underdeveloped:** Student scores 10-12 in sum for all the above traits.
- **Competent:** Student scores 13-15 in sum for all the above traits.
- **Proficient:** Student scores 16-18 in sum for all the above traits.
- **Exemplary:** Student scores 19-21 in sum for all the above traits.

Actions Prior to Assessment: I interleaved the foreign currency exchange market throughout the semester, applying shocks from the foreign exchange market to many of the other models and concepts I teach in class, including the loanable funds market, the labor market, and the model for aggregate supply / aggregate demand. With in-class exercises and take-home practice problems, my students get practice in approaching real world problems, selecting multiple models from throughout the semester to use to analyze the problem, then solving the problem.

Results: The results are given below. There were 61 students who completed the assessment exercise. A large majority of the class (approximately 72%) performed in the competent category or above, and even a majority (63%) performed at the “exemplary” level or above. Still there is room for improvement as approximately 28% of the class performed at the “underdeveloped” level.

Performance	Percentage	Cumulative Percentage
Exemplary	34.4	34.4
Proficient	21.3	55.7
Competent	16.4	72.1
Underdeveloped	21.3	93.4
Unsatisfactory	6.6	100.0

Strengths in Student Learning: Students often gave model consistent explanations for their answers, even if the model was wrong. For example, if they incorrectly shifted AD left when the correct answer was AD right, they described real GDP decreasing.

Students seemed to perform well on the exchange rate question, where Argentina increases the supply of Pesos and buys dollars. Students always showed both graphs and usually gave model consistent answers to what would happen to the value of the currency.

Students seem to recognize that a depreciation of the Argentine Peso leads to an increase in Aggregate Demand for Argentina. Though sometimes they neglected to say it was through the net exports channel.

Unlike previous semesters, students had no problem dealing with three countries. I think the question wording changes we have made over the years helped students understand this better.

Weaknesses in Student Learning: Similar to past years, many students do not seem to catch on that question (b) is about explaining the impact on real GDP. Rather, they should use a model for currencies and illustrating the appreciation of the Peso as the result and not even addressing what might happen to real GDP.

While not very common, more students than I would like failed to recognize the correct model to use or label the graphs and axes appropriately.

Closing the loop: I believe the evidence shows that interleaving macroeconomic models throughout the semester leads to a high ability for students to apply multiple models to analyze multiple aspects of an economic situation. To address the weakness that students incorrectly pick an exchange rate model when asked about the impact on real GDP (albeit, resulting from a change in exchange rates), I plan to drill students throughout the semester why we pick the model we do, and emphasize repeatedly what macroeconomic *effects* the question is asking for informs our model choice, and that these macroeconomic variables should be labeled on the axes of our choice model.