

# A ROLE-PLAYING EXERCISE FOR DEVELOPMENT AND INTERNATIONAL ECONOMICS COURSES

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In this article, I describe a role-playing exercise for a development economics seminar in which students playing the roles of various ministers advise the president of a country on how to resolve the macroeconomic problems associated with a natural resource boom. Education literature indicates that role playing serves as an effective teaching device to motivate student participation, improve the understanding of reading material, and increase course enjoyment. Victor Fuchs (1993, 23) wrote: "Student involvement is the key to student learning; the teacher's primary task is to motivate and facilitate that learning." An appropriately timed role-playing exercise can stimulate involvement and enhance the learning environment. Although previous studies offer useful simulation ideas, I believe this article is the first to contain a detailed description of how role playing may be used in development or international economics courses.[ 1] A videotape by the Derek Bok Teaching Center at Harvard University documents the exercise's strong impact on student interest and participation and can facilitate replication of the exercise.[ 2] Although the particular topic may interest a limited number of instructors, the procedural framework has other fruitful applications in the economics classroom.

## **THE ROLE-PLAYING FRAMEWORK**

In preparation for the exercise, the instructor should inform students of the following scenario. In response to an OPEC decision to curtail oil production and raise the price of oil from under \$15 a barrel to \$30 a barrel, the Indonesian president has called a meeting of various ministers to discuss the oil boom's potential economic impact and the government's response. Each student takes the role of an Indonesian minister who must advise the president on the appropriate revenue allocation (Indonesia's national oil company, PERTAMINA, is state owned) and on sensible policy changes. The ministries include those of finance, industry, agriculture, oil, health and education, and planning. Depending on the class size, the instructor may add other government bodies such as the trade ministry, investment board, and the central bank or ask students to team up as co-ministers.

The instructor provides students with a description of the exercise (Table 1), which includes discussion questions for the assigned reading on natural resource booms and Dutch disease.[ 3] The term Dutch disease originated from the Netherlands' problems after 1960 following substantial discoveries of natural gas. Instead of stimulating long-term economic growth, the natural gas boom led to problems with real-exchange-rate appreciation, stagnation of manufactured exports, and economic recession. Economists commonly apply the term to countries that experience similar conditions following a boom in natural resource export earnings or other increases in foreign exchange coming into the country. The instructor should also state several assumptions regarding the nature of the exercise's oil shock. For example, in the short run, OPEC members have made binding commitments not to cheat, world demand for oil is price inelastic, and Indonesia has a relatively small market share among OPEC members. In the long run, the OPEC agreement could collapse if members cheat by increasing their oil supply or lowering their price slightly, and consumers could substitute toward goods that use oil more efficiently or not at all.[ 4] Clearly students must have background information and appropriate economic tools to play their roles effectively. These preparation steps can save valuable time during the simulation and allow students to formulate their approach.

During the exercise, the instructor assumes the role of president and facilitates discussion using the assigned questions. For example, if economists recommend saving a portion of the windfall gains to prevent macroeconomic problems, how much should the government spend on vital development projects across sectors? How could large aid inflows lead to similar Dutch-disease problems? To play a believable role as president, the instructor encourages student involvement by promoting the students' attempts to influence the president's decision. The instructor has the responsibility of prompting all students to contribute and of guiding the discussion. In my seminars of 6 to 14 students, the exercise has

required one class meeting of 1 hour and 15 minutes. I chose timed opening statements from each student followed by open discussion. For example, the oil minister could begin the meeting with a briefing on the OPEC agreement and a projection of the oil boom's duration.

Some aspects of the role-playing exercise merit highlighting for their benefits and drawbacks. First, the setting matters. For example, changing the physical location of the class or taping the session can add realism and reinforce the extraordinary nature of the role-playing exercise. As a more feasible change in setting, students can sit in different seats from the ones they regularly choose, or the instructor can change the arrangement of desks and chairs according to the various ministries. Placards in front of the students with their name and ministerial position also add realism and encourage participation. Second, sharing the role of minister by organizing students into ministerial teams may improve student confidence and lead to more thorough arguments. Sharing can also lead to free-rider behavior or frustration for a student whose colleague speaks too much.

Third, a less-structured exercise can lead students to become more excited about the topic and increase spontaneity in the discussion. Raising student excitement levels about course material has obvious benefits. However, a less-structured format may contribute to pitfalls, with some students, often males, dominating the discussion. An unstructured open discussion can lose the focus on economic principles as students become involved in debating. Assigning a paper or policy memorandum before the simulation helps students to consolidate their ideas, at the potential cost of less in-class spontaneity. Other options include formally recognizing each student before he or she may speak and setting time limits on student commentary. Constraints on student participation will depend on the instructor's objectives, rules on debating and speaking that are observed in the actual situation that the exercise simulates, and class size.

Finally, follow-up discussion provides the opportunity to highlight the key economic principles and obtain student evaluations. However, curtailing the role play to make time for feedback could stifle the exercise's progression, and waiting until the next class when the experience is no longer as fresh in students' minds may yield fewer responses. As a compromise, upon completion of the exercise the instructor can hand out a consolidated information sheet to improve student understanding and retention of the material and a questionnaire for student evaluations. I use anonymous surveys asking students to rate how role playing affected their participation and understanding of the material compared with the regular class format.

## **MODIFICATIONS**

Instructors may apply this framework to a number of developing country and international economics topics that lend themselves to debate. For example, my introductory international economics course performed a simulation of a U.S. economic summit on commercial policy in the shoe industry. The discussion centered around protection from cheap shoe imports and possible compensation for American workers in the shoe industry.[ 5] As the largest deviation from the format, three students shared the role of president and facilitated the discussion, while the instructor played a less active role as summit reporter. Although facilitation by student leaders did increase spontaneity, they were less inclined to ensure equitable student participation. A shorter time period and larger class size exacerbated this problem, with a few students not participating beyond the opening statements.

The same international economics class engaged in a second exercise with more substantive modifications to the format. In groups of three, students debated the issues around enforcement of intellectual property rights in trade between industrialized and developing countries.[ 6] one student represented a large developing country that wanted to import a new antimalarial drug but did not enforce patent rights; another student represented an industrialized country that had recently developed the drug; and a third student played a neutral intermediary. Without the initial costs of expensive research, pharmaceutical companies in the developing country could replicate the import's chemical composition and charge a lower price. After negotiations, each group turned in a written summary of their conditions for trade and welfare effects in the respective countries. The writing assignment gave them a tangible objective as they role played, and the small-group approach served as a more effective means to increase student participation in this larger course.

## STUDENT EVALUATION OF THE EXERCISE

The exercises have yielded favorable student and professional evaluations. Although I did not formally survey seminar participants in earlier years for their evaluations, students gave me positive verbal feedback following each exercise and favorable end-of-semester anonymous course evaluations. Also, when the Derek Bok Teaching Center taped one of the Dutch disease exercises in a 1992 teacher training seminar, the evaluator noted a high level of student enthusiasm and demonstration of knowledge from the assigned reading. The Bok Center has since loaned the tape to other instructors as a training device.

Results from blind evaluations of the most recent Dutch disease and shoe industry exercises are summarized in Table 2.[ 7] I will limit written evaluation comments to those on the Dutch disease simulation, as the shoe industry exercise yielded similar responses. Among those who participated more during the exercise than during the regular class discussion, one student commented that playing a ministerial role prompted him (or her) to make strong arguments and to listen closely for flaws in the reasoning of other students. Several students said they had a better grasp of the issues discussed because they had direct involvement in defending a certain position. Among the students who participated the same or less than usual, one student preferred more speaking rules to preserve order in the discussion, and another student replied that the rules I had set actually limited participation. Asked if they paid closer attention to the reading than usual, several of the students who said yes commented that wanting to come prepared for the policy meeting and not appear "stupid" led them to read more closely. Four said they paid closer attention only to the material that concerned their specific ministry. When asked how they would compare the mock ministerial session with the course's standard discussion format as a learning tool, all the students reported positive comments, with some qualifications. Several students expressed concern that the class spent too much time arguing over political matters at the expense of a more rigorous discussion of the economic concepts in the reading. These students felt that the main lesson they learned from the class was the difficulty in agreeing upon economic policy, rather than the principles behind Dutch disease. Among those who liked the exercise's less-structured format, one student replied that the array of issues the class touched on seemed more diverse because of the flexible environment for interaction. Another student reported, "I sincerely enjoyed myself. Lack of structure decreased any barriers, it was a chance to see the results of a college education."

The evaluations have led me to conclude that each exercise has served as a useful device to enrich the learning experience. Because the simulations do not cover as much material as in the lecture format, instructors must consider the opportunity cost of the time they devote to a role-playing exercise. The simulations I have described stress how policymakers might behave in a realistic situation, so they constitute an ideal opportunity for students to understand how the practical issues of policymaking frequently lead to real-world divergence from economic principles. Devoting just one class meeting of the semester to illustrate the complexity of the decisionmaking process should serve as an effective use of class time for any development or international economics course.

## NOTES

[1.] Joseph (1965) describes exercises in market price determination and in labor-management disputes; Lloyd (1970) presents a collective bargaining simulation; Siegfried and Fels (1979) discuss general attributes of role-playing as an educational tool; Blank (1985) compares a commodity futures market exercise with other teaching aids; Hester (1991) presents simulations of commercial banking systems; King and LaRoe (1991) offer two international trade role-playing ideas; and Jacobson (1994) combines experiments with writing assignments and discusses advantages over the lecture format.

[2.] The Bok Center has granted me permission to distribute copies of the videotape at a cost of \$10.50 to cover taping and mailing.

[3.] I assigned Roemer (1985) and Gillis et al. (1992).

[4.] I thank an anonymous referee for emphasizing the importance of these issues. In previous exercises, I have not stated the assumptions explicitly; rather, students raised concerns regarding the nature and length of the boom when they discussed why economists call the phenomenon a disease.

[5.] Students read Feenstra (1992) and Mussa (1993) to prepare for the simulation.

[6.] A timely article in the media ("Trade Tripwires," *The Economist*, August 27, 1994, p. 61) served as a useful illustration of course material.

[7.] The intellectual property rights exercise required a written summary at the end, so I shortened the evaluation form. Of doe 13 students who had time to complete the survey (out of a course enrollment of 23), 5 preferred more structure and 8 said the same. Asked if they would recommend the exercise for another class, 12 said yes and I said no. Copies of the written evaluations for all three exercises are available upon request.

TABLE 1  
Role-Play Description

The topic	Oil boom and Dutch disease
The setting	Meeting between the Indonesian president and various ministers
The goal	Decide on revenue allocation and policy changes to prevent problems associated with resource booms
Pre-exercise preparation	Assign roles and discuss instructions Assign Roemer (1985) and Gillis et al. (1992) Ask students to prepare opening statements defending their positions
Students' role	
Individual/Team 1	Finance Minister
Individual/Team 2	Industry Minister
Individual/Team 3	Agriculture Minister
Individual/Team 4	Oil Minister
Individual/Team 5	Health and Education Minister
Individual/Team 6	Planning Minister
Responsibilities	Make effective arguments that favor the respective constituents
Instructor's role	President
Ground rules	One to two minute opening statement per student Open discussion, facilitated by the president
Discussion	1) What macroeconomic problems could the country expect following the oil boom? 2) Why do economists consider these problems a disease? 3) What share of the windfall should the government save and what share should it allocate toward vital development projects? 4) Why does exchange rate devaluation help to prevent Dutch disease? 5) Have other countries experienced similar problems with natural resource booms or with other forms of foreign exchange inflows?
Follow-up discussion	Review economic principles Evaluate the role-play

TABLE 2  
Evaluation Summary, College of William and Mary, Spring and Fall Semesters, 1994

Question	Dutch disease exercise[a]
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Did role playing encourage you to participate more or less than with the regular discussion format?

More

Less	2
Same	2
Did the exercise promote your understanding of the lecture material?	
Yes	na
No	
Did you pay closer attention to the reading than usual?	
Yes	5
No	2
Parts	4
Do you prefer more or less structure for this sort of exercise?	
More	4
Less	6
How would you compare the exercise with the standard class format as a learning tool?	
More stimulating	10
Less stimulating	0
	Shoe industry exercise[b]
Question	
Did role playing encourage you to participate more or less than with the regular discussion format?	
More	na
Less	
Same	
Did the exercise promote your understanding of the lecture material?	
Yes	17
No	1
Did you pay closer attention to the reading than usual?	
Yes	12
No	4
Parts	1
Do you prefer more or less structure for this sort of exercise?	
More	5
Less	11
How would you compare the exercise with the standard class format as a learning tool?	
More stimulating	18
Less stimulating	0

[a] Performed in The Pacific Rim Tigers, an upper-level seminar, with 14 students enrolled.

[b] Performed in introduction to international economics, with 23 students enrolled.

na--not asked (because of different course structures).

## REFERENCES

- Blank, S. 1985. Effectiveness of role playing, case studies, and simulation games in teaching agricultural economics. *Western Journal of Agricultural Economics* 10 ( 1): 55-62.
- Feenstra, R. 1992. How costly is protectionism? *Journal of Economic Perspectives* 6 ( 3): 159-78.
- Fuchs, V. 1993. Education and its consequences: My philosophy of life. *The American Economist* 37 ( 2): 17-24.
- Gillis, M., D. Perkins, M. Roemer, and D. Snodgrass. 1992. *Economics of development*. 3d ed. New York: W. W. Norton.
- Hester, D. I 1991. Instructional simulation of a commercial banking system. *Journal of Economic Education* 22 ( 2): 111-43.

Jacobson, J. 1994. Incorporating data collection and written reports in microeconomics. *Journal of Economic Education* 25 ( 1): 31-43. Joseph, M. 1965. Role playing in teaching economics. *American Economic Review* 55 ( 2): 556-65.

King, P., and R. LaRoe. 1991. The laboratory-based economics curriculum. *Journal of Economic Education* 22 ( 3): 285-92.

Lloyd, J. 1970. Role playing, collective bargaining, and the measurement of attitude change. *Journal of Economic Education* 1 ( 2): 104-10.

Mussa, M. 1993. Making the practical case for freer trade. *American Economic Review* 83 ( 2): 372-76.

Roemer, M. 1985. Dutch disease in developing countries. Swallowing bitter medicine. In the primary sector in economic development, ed. M. Lundahl. London: Croom Helms.

Siegfried, J., and R. Fels. 1979. Research on teaching college economics: A survey. *Journal of Economic Literature* 17 ( 3): 023-69.

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