

# ECONOMICS GAMES AND SIMULATIONS

## An Evaluation

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### INTRODUCTION

If you want to provide economic information to a group, whether it is in a classroom, business, or governmental setting, consider doing so through the highly motivational instructional method of a simulation game experience.

#### Goals

Simulation gaming provides content information in the form of facts, principles, concepts, and generalization. It also generates process information in the form of decision-making, analytical and social skills, as well as attitudes. You must be able to choose the particular simulation or game that will best achieve the specific goals and objectives you desire. My aim is to provide you with the kinds of information you need about ten economic simulation games that will help you make the best possible selection for your purposes. I shall review and evaluate these exercises, providing data about the following factors: producers, cost, game description, level of game play, number of players, playing time, physical setting, prior preparation time, subject matter, goals and objectives, social skills, game administration, limitations, and special recommended adaptation. To conclude, I will provide a general evaluation of each simulation game.

#### What are Economic Simulation Games?

An economic simulation game is an activity in which participants interact within an artificially produced environment that re-creates some aspect of economic reality. The participants, or players, assume the roles of individuals or groups that exist in a particular economic system. Each of the players or groups is striving to achieve a goal. The rules of the simulation game limit the range or possible responses of each player, as well as the number of players. Essentially, the ultimate objective of the players is to reach their goals.

#### Uses of Economic Simulation Games

These simulation games are extremely useful for business, government, and social organizations, as well as at the levels of secondary, college, and adult education. The simulation games may be used for one or more of the following purposes:

- (a) *as a body of knowledge*, to teach specific facts and principles,
- (b) *as a training technique*, to prepare individuals in the dynamic process of decision making, analyzing, creating feedback, and planning;

**TABLE 1 The Ten Economic Simulations**

Simulation Game	Summary Description
<i>Stocks and Bonds</i> (board game)	The purpose of this game is to create the economic atmosphere of Wall Street. Participants have the opportunity to invest in ten securities and attempt to accumulate as much wealth as possible. The participant who amasses the greatest fortune is considered the winner.
<i>Stock Market</i> (board game)	Simulates the stock market exchange, including all dynamic economic forces. Margin buying, conversion of securities, selling short, and warrants are essential parts of this game.
<i>Economic System</i> (simulation game)	Simulates an economy that involves levels of production, consumption, investments, and natural resources. Players represent workers, manufacturers, and farmers. Participants attempt to satisfy their needs for food and manufactured goods.
<i>Tightrope</i> (simulation game)	Simulates the economic stability and growth of a nation. The participants form a group named the Economic Advisory Council, which makes decisions dealing with the fiscal and monetary policies of that country.
<i>Executive Decision</i> (board game)	Simulates the economic conditions that involve corporate management and big business. Players enact the roles of top-level executives who make decisions on what to produce. Prices are determined by the law of supply and demand.
<i>Railroad</i> (simulation game)	Simulates the railroad competition of the 1870s as four independent lines compete for the transportation business of carrying ore from the mines to the mills.
<i>The National Economy</i> (simulation game)	Simulates a nation's economic atmosphere and conditions. Each industry attempts to maximize profits and minimize losses.
<i>Collective Bargaining</i> (simulation game)	Simulates the atmosphere and conditions that prevail during the negotiation of a new labor contract. In the bargaining

**TABLE 1 The Ten Economic Simulations**

Simulation Game	Summary Description
	sessions, union representatives and management deal with such economic issues as (1) wages, (2) additional holidays and vacations, (3) greater pension, health insurance, and other fringe benefits.
<i>The Firm</i> (simulation game)	A simulation of the economic conditions and problems encountered in running a business. Each store owner's major objective is to accumulate as high a profit as possible to out-distance the competition.
<i>Scarcity and Allocation</i> (simulation game)	Simulates conditions on a desert island on which participants try to increase their standards of living. The island contains the basic necessities, such as vegetation and wildlife.

- (c) *as a role experience* that allows an individual to undertake an event or position to gain greater awareness and knowledge; and
- (d) *as a means of further developing social skills* in terms of communication, cooperation, competition, and understanding social rules.

Table 1 presents a summary description of each simulation game.

**Criteria For Selection**

Simulation games should provide the kind of knowledge that participants can apply to new situations and problems; game operators expect participants to acquire concepts and generalized techniques for dealing with new problems and new materials. Instruction in economics should be directed toward increasing the store of dependable and reliable knowledge, encouraging the formation of concepts, developing generalizations, and enhancing participants' social skills so that when they encounter a new problem or situation, they will be better able to select an appropriate technique for analyzing it and will bring to bear the necessary information (facts, concepts, and generalizations) for a solution. The simulation games selected had to incorporate the above factors, but include economic behavior and goals as well. The standards for inclu-

**TABLE 2 Suitability for Group Levels**

Simulation Game	Business/ Government Organizations		
	College	High School	
<i>Stocks and Bonds</i>	not suitable	least suitable	most suitable
<i>Stock Market</i>	not suitable	suitable	most suitable
<i>Economic System</i>	not suitable	least suitable	most suitable
<i>Tightrope</i>	most suitable	most suitable	suitable
<i>Executive Decision</i>	not suitable	not suitable	most suitable
<i>Railroad</i>	least suitable	least suitable	most suitable
<i>The National Economy</i>	least suitable	most suitable	most suitable
<i>Collective Bargaining</i>	most suitable	most suitable	most suitable
<i>The Firm</i>	least suitable	suitable	most suitable
<i>Scarcity and Allocation</i>	not suitable	not suitable	most suitable

sion permitted a wide enough range, but also enough focus to serve specific training and educational needs.

A final selection criterion was price. All the simulation games are available commercially for less than \$50.00 as of January 1980.

**BASIC CONSIDERATIONS**

**Age Level, Group Size, Playing Time**

You should carefully consider the age, ability, size, and available time of your group before selecting a simulation game. Tables 2 and 3 provide the basic information you will need to make a wise selection.

**Instructional Purpose and Preparation**

Table 4 indicates the stated instruction purpose of each simulation game and how successfully it is carried out. Table 5 indicates the amount of time and the knowledge of subject matter essential in preparing the various simulation games. This table is divided into two components—the preparation involved for the instructor and for the participants.

**Complexity**

Table 5 ranks the simulations according to their complexity as follows:

**TABLE 3 Simulation Games: Some Basic Considerations**

Simulation/Game	Playing Time (Hours)			No. of Players			No. of Groups
	Minimum	Best	Maximum	Minimum	Best	Maximum	
<i>Stocks and Bonds</i>	1-1/2	3	4-1/2	2	24	30	6-8
<i>Stock Market</i>	1	8	12	1	6	12	6
<i>Economic System</i>	7	20	25	9	12	26	13
<i>Tightrope</i>	3	5	8	1	15	no limit	—
<i>Executive Decision</i>	1	3	5	2	6	12	no limit
<i>Railroad</i>	1	1-1/2	2	5	15	24	4
<i>The National Economy</i>	2-1/2	3-1/2	5	any number	any number	any number	3
<i>Collective Bargaining</i>	1	2	3	6	24	36	6
<i>The Firm</i>	3	5	7	4	20	no limit	no limit
<i>Scarcity and Allocation</i>	1	2	3	any number	any number	any number	no limit

**TABLE 4 Stated Purpose and How Well Carried Out**

Simulation/ Game	Purpose	Carried Out
<i>Stocks and Bonds</i>	To understand the terminology and differences between types of stocks	highly successful
<i>Stock Market</i>	To understand the different securities and how prices are determined	highly successful
<i>Economic System</i>	To understand the basic economic questions of what to purchase, how and for whom to produce	highly successful
<i>Tightrope</i>	To understand how the government uses fiscal and monetary policy	moderately successful
<i>Executive Decision</i>	To understand the laws of supply and demand	highly successful
<i>Railroad</i>	To understand certain competitive and oligopolistic monopolies	highly successful
<i>The National Economy</i>	To understand the components of national income and how they are related	highly successful
<i>Collective Bargaining</i>	To understand the process of collective bargaining	highly successful
<i>The Firm</i>	To understand the explicit and implicit cost of a business enterprise	somewhat successful
<i>Scarcity and Allocation</i>	To understand how people handle their alternative and opportunity costs	moderately successful

Easy: one-dimensional with little or no verbal skills; simple and repetitive tasks, with single goals and objectives and limited subject matter.

Moderate: two-dimensional approach, involving some verbal skills; greater task difficulty, with more goals and objectives and increased mastery of subject matter.

Complex: multidimensional approach involving abstract strategies, detailed planning, high verbal skills, and comprehensive subject matter, with many goals and objectives.

**RULES**

When rules are direct and concise, the game operator can use time effectively and efficiently so participants' motivational and involvement levels are not only maintained but, in many cases, increased. Tables 7 and 8 rate the ten economic simulation games for clarity and organization.

**ECONOMIC ISSUES**

In considering a particular simulation game, you should carefully examine it to see what issues are involved in order to fully determine its suitability to the needs and goals you have established. Table 9 indicates the major economic issues in each simulation game.

**TABLE 5 Instructor and Participant Preparation**

Simulation/ Game	Instructor	Participants
<i>Stocks and Bonds</i>	(1 hour) knowledge of stocks and securities	no prior knowledge required
<i>Stock Market</i>	(1 hour) knowledge of the stock and securities exchange	(1 hour) knowledge of the stock and securities exchange
<i>Economic System</i>	(1 hour) knowledge of factors of production, law of supply and demand	no prior knowledge required
<i>Tightrope</i>	(5 hours) knowledge of fiscal and monetary policy	(10 hours) need instruction in fiscal and monetary policy
<i>Executive Decision</i>	(1 hour) knowledge of factors of production, law of supply and demand	no prior knowledge required
<i>Railroad</i>	(1 hour) knowledge of formation of large-scale corporations	no prior knowledge required
<i>The National Economy</i>	(1 hour) knowledge of national income determination	no prior knowledge required
<i>Collective Bargaining</i>	(1 hour) knowledge of labor relations	(1 hour) knowledge of labor relations
<i>The Firm</i>	(1 hour) knowledge of resources, capital, and management	(1 hour) knowledge of resources, capital, and management
<i>Scarcity and Allocation</i>	(1 hour) knowledge of factors of production, economic system	no prior knowledge required

**TABLE 6 Complexity**

Easy	Moderate	Complex
<i>The Firm</i>	<i>Collective Bargaining</i>	<i>Tightrope</i>
<i>Scarcity and Allocation</i>	<i>Stock Market</i>	<i>The National Economy</i>
<i>Executive Decision</i>	<i>Economic System</i>	
<i>Railroad</i>		
<i>Stocks and Bonds</i>		

**TABLE 7 Clarity of Rules**

Simulation/ Game	Less Than Adequate	Adequate	Good	Outstanding
<i>Stocks and Bonds</i>			X	
<i>Stock Market</i>				X
<i>Economic System</i>				X
<i>Tightrope</i>	X			
<i>Executive Decision</i>			X	
<i>Railroad</i>				X
<i>The National Economy</i>		X		
<i>Collective Bargaining</i>			X	
<i>The Firm</i>			X	
<i>Scarcity and Allocation</i>			X	

**TABLE 8 Organization of Rules**

Simulation/ Game	Less Than Adequate	Adequate	Good	Outstanding
<i>Stocks and Bonds</i>				X
<i>Stock Market</i>				X
<i>Economic System</i>				X
<i>Tightrope</i>	X			
<i>Executive Decision</i>				X
<i>Railroad</i>				X
<i>The National Economy</i>			X	
<i>Collective Bargaining</i>			X	
<i>The Firm</i>			X	
<i>Scarcity and Allocation</i>			X	

**TABLE 9 Economic Issues**

Simulation/Game	Economic Issues
<i>Stocks and Bonds</i>	Law of supply and demand Stocks and securities
<i>Stock Market</i>	Law of supply and demand Stock Market
<i>Economic System</i>	*Law of supply and demand Production and consumption Investment and improvement Natural resources
<i>Tightrope</i>	Fiscal policy Monetary policy
<i>Executive Decision</i>	Factors of production Law of supply and demand
<i>Railroad</i>	Monopoly Free enterprise system
<i>The National Economy</i>	Investment Production Consumption Inflation Employment
<i>Collective Bargaining</i>	Role of labor Role of management
<i>The Firm</i>	Management and profits Production and distribution
<i>Scarcity and Allocation</i>	*Factors of Production

\*Indicates, when more than one game treats an issue, which game does so most effectively.

## CONTENT

A simulation game may be content or process oriented. You must decide whether your primary purpose is to create a content-centered learning experience involving facts, concepts, and so forth, or process-centered, involving attitudes, decision making, and analytical and verbal skills.

Table 10 classifies each simulation game according to its orientation toward content, process, or a combination.

Instructors establish goals or specific information that they want to impart. Table 11 indicates the information content of each simulation game to help you choose among these exercises.

**TABLE 10 Content/Process Orientation**

Content-Centered	Combination	Process-Centered
<i>Tightrope</i>	<i>Economic System</i> <i>Collective Bargaining</i> <i>Stocks and Bonds</i>	<i>Stock Market</i> <i>Executive Decision</i> <i>Railroad</i> <i>The National Economy</i> <i>The Firm</i> <i>Scarcity and Allocation</i>

**TABLE 11 Content Information**

Simulation/Game	Topics Incorporated	
<i>Stocks and Bonds</i>	Security Bond Interest Stock Dividend Split	Round lot Bear market Bull market Market price
<i>Stock Market</i>	Common stock Preferred stock Bonds Warrants Broker Buying on margin	Selling short Selling long Stock splits Bull market Market price
<i>Economic System</i>	Farmer Worker Manufacturer Factory Commissioner Mine owners Production	Consumption Resources Investment Marginal utility Marketing Tax revenues
<i>Tightrope</i>	Federal Reserve Act Income tax laws Corporation tax laws Great Depression World War II 1950s economic conditions 1960s economic conditions Monetary policy Fiscal policy Gross national product Money supply Whole price index	
<i>Executive Decision</i>	Raw materials Finished product Corporation Executive Labor Management	Law of supply Law of demand Equilibrium price Price fluctuation Decision making
<i>Railroad</i>	First transcontinental railroad completed Hepburn Act Transportation Act Interstate Commerce Act of 1887 Vanderbilt Competition Profit Price determination Market Fixed costs Rebates Variable costs	
<i>The National Economy</i>	Capitalism Production Profit	Consumer goods Producer goods Optimum level

TABLE 11 Content Information

Simulation/Game	Topics Incorporated	
	Loss	Deficit spending--
	Unemployment	Keynesian
	Inflation	Economics
	Investment	Total Annual
	Luxury goods	Income
		Law of diminishing goods
<i>Collective Bargaining</i>	Strike	Collective bargaining
	Fringe benefits	Work stoppage
	Wage package	Business stewards
	Pension	Negotiations
	Insurance	One-year contracts
<i>The Firm</i>	Firm	Marginal cost
	Profit	Production
	Loss	Public accountant
	Salary	Manager
	Inventory	Law of supply
	Entrepreneur	Law of demand
	Buyer	Fixed cost
	Short run	Variable cost
	Long run	Financing loans
<i>Scarcity and Allocation</i>	Savings	Scarcity
	Opportunity cost	Allocation
	Capital formation	

**ECONOMIC AWARENESS**

Each of these simulation games imparts, in some form, a certain economic awareness. A game operator who has identified this aspect of the learning experience is better equipped to handle it in a way most comfortable for and beneficial to participants.

Table 12 lists the major economic awarenesses that are set forth in each simulation game.

**ROLES**

Role playing in these particular simulation games ranges from a single- to a multidimensional approach. The single-dimensional roles involve brief data in the form of name, age, employment, and position; that is, they are roles in name only, and are not very flexible. Multidimensional roles incorporate duties, responsibilities, tasks, and so forth. These roles have depth and are extremely flexible. Participants' reactions to the various roles in the ten simulation games ranged from high to minimal involvement. The instructor's role may vary from supervisor to supervisor/participant to full participant.

Table 13 indicates the various roles for each game, the flexibility level of the roles, and the role of the instructor.

**Interest Factor of Roles**

Besides identifying the roles, one has to ask how well they motivate participants, whether they are challenging, whether they sustain interest, and whether participants get involved in them. Table 14 rates the motivational level of each of the economic simulation games.

TABLE 12 Economic Awareness

Simulation/Game	Economic Awareness
<i>Stocks and Bonds</i>	<ul style="list-style-type: none"> <li>Individuals play an important part in our stock market.</li> <li>Information concerning a stock or bond affects its price.</li> </ul>
<i>Stock Market</i>	<ul style="list-style-type: none"> <li>Stock Market is largely based upon the principles of supply and demand.</li> <li>Stock Market is a risk-taking endeavor where wealth is both accumulated and lost.</li> </ul>
<i>Economic System</i>	<ul style="list-style-type: none"> <li>An aggressive approach may be rewarding in that it facilitates the achievement of certain goals.</li> <li>The development of certain strategies may lead to more effective play.</li> </ul>
<i>Tightrope</i>	<ul style="list-style-type: none"> <li>The influence of governmental spending policy (Keynesian Approach) in bolstering the economy.</li> <li>The influence of a "laissez-faire" approach and how it affects the economy.</li> </ul>
<i>Executive Decision</i>	<ul style="list-style-type: none"> <li>The effect of decision making upon the success and failure of a business enterprise.</li> <li>The role the "profit motive" plays in generating economic activity.</li> <li>Prices can be influenced by the law of supply and demand.</li> </ul>
<i>Railroad</i>	<ul style="list-style-type: none"> <li>Competition may or may not be beneficial to a society.</li> </ul>
<i>The National Economy</i>	<ul style="list-style-type: none"> <li>The need for governmental regulation to protect the economy.</li> </ul>
<i>Collective Bargaining</i>	<ul style="list-style-type: none"> <li>Each person at the bargaining table brings personal values and views that influence the course of negotiations.</li> <li>Cooperation and compromise are essential of negotiation.</li> </ul>
<i>The Firm</i>	<ul style="list-style-type: none"> <li>The free enterprise system can operate effectively when the factors of production are employed wisely.</li> <li>Management skills are needed for a successful business venture.</li> <li>A business firm is an extremely complex enterprise.</li> </ul>
<i>Scarcity and Allocation</i>	<ul style="list-style-type: none"> <li>People will use "saved time" for many different economic purposes.</li> </ul>

**SKILLS, ACTIVITIES, AND INTERACTIONS**

Table 15 presents the various skills and activities employed in each simulation game. These elements of simulation gaming play a major part in shaping the level of participant involvement.

**Interaction**

A simulation game may generate an interaction based on the individual with the system, one-to-one competition, partnership, or group relationship. You must determine the kind

**TABLE 13 Roles**

Simulation/Game	Participant Roles	Flexibility	Instructor's Role
<i>Stocks and Bonds</i>	Investors, bankers, stock clerk	Moderate	Supervisor
<i>Stock Market</i>	Investors, bankers, stock clerk	High	Supervisor
<i>Economic System</i>	Farmer, manufacturer, worker, mine operator, road and police commissioners	High	Supervisor
<i>Tightrope</i>	Representatives of economic interests	Moderate	Supervisor/Participant
<i>Executive Decision</i>	Manufacturers, bankers, market rater	Low	Supervisor
<i>Railroad</i>	Railroad executives, mine operators	Moderate	Supervisor/Participant
<i>The National Economy</i>	Representatives of consumers, luxury goods, capital and/or producer goods	High	Supervisor
<i>Collective Bargaining</i>	Representatives of management, shop stewards	High	Supervisor
<i>The Firm</i>	President, vice-president, accountant	Low	Supervisor
<i>Scarcity and Allocation</i>	Roles are Open-ended determined by players	Low	Supervisor

**TABLE 14 Motivational Levels of Roles**

Low	Average	Above Average	High
<i>Tightrope</i>	<i>The National Economy</i>	<i>Railroad</i>	<i>Economic System</i>
<i>Scarcity and Allocation</i>	<i>The Firm</i>	<i>Collective Bargaining</i>	<i>Executive Decision</i>
			<i>Stocks and Bonds</i>
			<i>Stock Market</i>

of interaction that best suits your needs. Table 16 indicates the various kinds of interactions that each simulation game may create. Some employ several types of interactions.

**Competition, Compromise, Cooperation**

Competition, compromise, and cooperation are three types of interaction that appear frequently during play of the economic simulation games. Some use more of one type than another. Table 17 will help you determine the levels of competition, compromise, and cooperation in each game.

**SCORING**

The end results of a simulation game may be determined in a quantitative or qualitative manner. Quantitative scoring determines a winner according to which participant or participants have the highest numerical scores in points, money, and so forth.

Qualitative scoring determines a winner by descriptive terms; that is, through achieving a certain goal or goals. You must determine which scoring system is more suitable to your needs.

**REALITY AND SIMULATION GAMING**

The economic simulation games attempt to capture different aspects of our economic system. Actually, each is a re-creation, involving an activity in which participants interact within an artificially produced environment. When that environment closely resembles the actual situation, we may say that it closely depicts reality. In selecting a simulation game, you

must determine your own needs concerning "reality testing." If your priority demands a very close resemblance between a simulation game and reality, you should choose one with a high rating; whereas if your priorities are otherwise, a low- or medium-rating game may be suitable. Table 19 indicates the ratings of the economic simulation games and their similarity to economic reality.

**DEBRIEFING OR POSTGAME DISCUSSION**

The debriefing of any simulation game is extremely important. It is generally during this period that participants have the opportunity to analyze, reflect on facts and concepts, and make generalizations about their experience. A good guideline for this process can be extremely useful for the game operator. Table 20 indicates the ratings of the debriefing guidelines of each simulation game.

**FLEXIBILITY**

If a particular economic simulation game does not meet your specific needs, certain ones lend themselves more to adaptation and modification than others. The process of adapting and modifying a game involves designing changes to add a new dimension or reshape an old one to make a simulation game a more effective instructional device. Table 21 indicates the flexibility of each simulation game, as well as some suggestions for possible adaptations or modifications. You may also wish to develop your own changes.

**MATERIALS AND COST**

The economic feasibility of a simulation game is extremely important. Will the dollars you spend produce the greatest return for you? Table 22 indicates not only the kind of packaging, cost per simulation game, completeness, and durability, but an evaluation rating of best buys.

TABLE 15 Skills and Activities

	<i>Stocks and Bonds</i>	<i>Stock Market</i>	<i>Economic System</i>	<i>Tightrope</i>	<i>Executive Decision</i>	<i>Railroad</i>	<i>The National Economy</i>	<i>Collective Bargaining</i>	<i>The Firm</i>	<i>Scarcity and Allocation</i>
<i>Information Processing</i>										
analysis	VS	VS	VS	VS	VS	VS	VS	VS	VS	VS
gathering information				S				VS		
planning goals, strategies	VS	VS	VS	VS	VS	VS	VS	VS	VS	VS
research				VS				VS		
extensive reading				VS				VS		
news reporting/writing										
individual problem solving	VS		VS		VS	VS	VS		VS	VS
<i>Group Activities</i>										
group problem solving			VS	VS		VS	VS	VS		
debate				VS				VS		
public speaking				VS				VS		
small group discussion			VS	VS		VS	VS	VS	VS	
class/large group discussion				VS				VS		
<i>Human Relations</i>										
competition	M		VS		VS	VS		VS		
persuading/influencing		S	VS	VS			VS	VS		
bargaining/negotiating			VS	VS		VS	VS	VS		
helping/supporting	M		VS	VS		VS	VS	VS		
interviewing										
listening	VS	VS	VS	VS	VS			VS		
hiring and firing/supervising			VS							
deceiving, exploiting			VS					VS		
forming coalitions			VS	VS		VS		VS		
<i>Role Playing</i>										
specific individual			VS					VS		
a group member			VS	VS		VS	VS	VS	VS	
switching roles			VS							
<i>Resource Management</i>										
record keeping		VS	VS				VS		VS	VS
survival			VS				VS			VS
chance	VS	VS								
maximizing resources	VS	VS	VS	VS	VS	VS	VS	VS	VS	VS
managing resources	VS	VS	VS	VS	VS	VS	VS	VS	VS	VS
<i>Evaluation (exclusive of debriefing)</i>										
self-evaluation	VS	VS	VS	VS	VS	VS	VS	VS	VS	VS
evaluation of peers	VS	VS	VS	VS	VS	VS	VS	VS	VS	VS

Key: VS—very significant  
 S—significant  
 M—minor

TABLE 16 Kinds of Interaction

Simulation/ Game	Individual	One-to-One	Partnership	Group
<i>Stocks and Bonds</i>	X			
<i>Stock Market</i>	X			
<i>Economic System</i>	X	X	X	X
<i>Sightrope</i>				
<i>Executive Decision</i>	X			
<i>Railroad</i>			X	X
<i>The National Economy</i>				X
<i>Collective Bargaining</i>		X	X	X
<i>The Firm</i>				X
<i>Scarcity and Allocation</i>	X			

TABLE 17 Competition, Compromise, Cooperation

Simulation/ Game	Competition	Compromise	Cooperation
<i>Stocks and Bonds</i>	Low	Low	Moderate
<i>Stock Market</i>	Low	Low	Moderate
<i>Economic System</i>	High	High	High
<i>Sightrope</i>	Low	High	High
<i>Executive Decision</i>	Moderate	Low	Low
<i>Railroad</i>	High	Moderate	Moderate
<i>The National Economy</i>	Moderate	High	High
<i>Collective Bargaining</i>	High	High	Moderate
<i>The Firm</i>	Moderate	Low	Low
<i>Scarcity and Allocation</i>	Low	Low	Low

**TABLE 18 Resources and Scoring**

Simulation/Game	Participants' Starting Resources	Scoring
<i>Stocks and Bonds</i>	Equal amounts of money to invest	All stocks and bonds are converted into money. The participant with the greatest amount wins.
<i>Stock Market</i>	Equal amounts of money to invest (\$2000 and ten shares of blue chip and speculative stock)	At the end of the twelfth turn, the winner is the player who has the greatest net worth.
<i>Economic System</i>	Capital Money Food Consumer products for each player	The participant with the most points at the end of the game wins.
<i>Tightrope</i>	No economic resources	Success is measured qualitatively in terms of improved decision making, as well as the various fiscal and monetary movements made.
<i>Executive Decision</i>	Equal amounts of money to invest	Winner is determined by converting all assets into money, and the participant with the largest sum is declared winner.
<i>Railroad</i>	Unequal amounts of capital, land, and money	The group that accumulates the most money wins.
<i>The National Economy</i>	Equal amounts of capital for each role	A winner or loser may be determined quantitatively by profits.
<i>Collective Bargaining</i>	Unequal amounts of capital	A winner is determined by dollars, which are converted into points.
<i>The Firm</i>	Equal amounts of labor, capital, and land	A winner is determined by net worth.
<i>Scarcity and Allocation</i>	Equal amounts of capital, labor, and food	The participant who has accumulated the most hours saved or materials gained through the twelve rounds is declared the winner.

**TABLE 19 Similarity to Economic Reality**

Simulation/Game	Low	Moderate	High
<i>Stocks and Bonds</i>		X	
<i>Stock Market</i>		X	
<i>Economic System</i>			X
<i>Tightrope</i>		X	
<i>Executive Decision</i>	X		
<i>Railroad</i>			X
<i>The National Economy</i>		X	
<i>Collective Bargaining</i>			X
<i>The Firm</i>	X		
<i>Scarcity and Allocation</i>	X		

**TABLE 20 Debriefing Guidelines**

Totally Inadequate (No debriefing questions)	Inadequate (Few questions)	Adequate (8-12 questions)	Thorough (Several pages of questions and guidelines)
<i>Stocks and Bonds</i>	<i>Scarcity and Allocation</i> <i>Executive Decision</i> <i>Collective Bargaining</i> <i>The Firm</i> <i>The National Economy</i>		<i>Tightrope</i> <i>Stock Market</i> <i>Economic System</i> <i>Railroad</i>



**TABLE 21 Flexibility and Possible Modifications**

Simulation/Game	Inflexible	Slight Alterations Possible	Flexible	Highly Flexible	Adaptation/Modification
<i>Stocks and Bonds</i>			X		<i>Prices:</i> Instead of being predetermined, prices could be determined by law of supply and demand
<i>Stock Market</i>				X	<i>Prices</i> could reflect current stock market prices
<i>Economic System</i>				X	<i>Structure of Classroom:</i> Open area with 7 large tables, since movement of participants is essential.  <i>Winners:</i> Instead of having one winner, there can be three, one in each category (farmer, worker, manufacturer.)  <i>Taxes</i> Incorporate an income tax system, using the various forms, so participants experience a new dimension of learning.
<i>Tightrope</i>		X			<i>Expansion</i> Changing general economic advisors to specific advisors (such as labor, manufacturing, banking) would create distinct points of view, which will not only be represented but pursued, thus presenting many new areas and challenges to participants, requiring them to utilize more of their analytical abilities.  <i>Point System</i> The instructor may assign numerical point values to Complex decisions may warrant more points, while less complex decisions receive a lower point value. This would give participants a quantitative measure of the effect of their decisions.
<i>Executive Decision</i>				X	<i>Time Flexibility</i> Changing time sequence may add dimensions to this particular simulation to face participants with new problems, crises, and conflicts, which generate new approaches in their decision making.
<i>Railroad</i>		X			<i>Expansion.</i> Increase number of railroad groups from 4 to 8.  Stimulate further competition in game by using the concept of oligarchy.
<i>The National Economy</i>		X			
<i>Collective Bargaining</i>		X			<i>Price:</i> Financial figures could be revised to reflect current economic price and cost levels.
<i>The Firm</i>	X				
<i>Scarcity and Allocation</i>	X				

**CONCLUSION**

Now that we have reviewed the different aspects of each simulation game, you may wish to view the total evaluation of each game, as shown in Table 23.

**Sources**

*Economic Decision Games—  
Collective Bargaining,  
The Firm,  
The National Economy  
Scarcity and Allocation*  
1968  
Erwin Rausch

Didactic Systems, Inc.  
Box 457  
Cranford, New Jersey 07016  
\$13.30

*Economic System*  
James S. Coleman and  
T. Robert Harris  
1969  
Bobbs-Merrill, Education Division  
4300 West 62nd Street  
Indianapolis, Indiana 46268  
\$25.00

*Executive Decision*  
Sidney Sackson  
1971

TABLE 22 Packaging

Simulation/Game	Kind of Packaging	Best Buy (\$ Value)	Cost per Kit or Book	Completeness	Durability and Reusability
<i>Stocks and Bonds</i>	Kit	Fair	\$12.00	Complete	High
<i>Stock Market</i>	Kit	Best	\$12.00	Complete	High
<i>Economic System</i>	Kit	Best	\$25.00	Complete	High
<i>Tightrope</i>	Pamphlet	Good	\$2.00	Must duplicate materials	Average
<i>Executive Decision</i>	Kit	Fair	\$12.00	Complete	High
<i>Railroad Game</i>	Booklet	Best	\$1.25	Must duplicate materials	Low
<i>The National Economy</i>	Pamphlets for 30	Good	\$13.30	Must duplicate materials	Low
<i>Collective Bargaining</i>	Pamphlets for 30	Good	\$13.30	Must duplicate materials	Average
<i>The Firm</i>	Pamphlets for 30	Low	\$13.30	Must duplicate materials	Average
<i>Scarcity and Allocation</i>	Pamphlets for 30	Low	\$13.30	Must duplicate materials	Average

TABLE 23 Total Evaluation of Simulation Games

	<i>Stocks and Bonds</i>	<i>Stock Market</i>	<i>Economic System</i>	<i>Tightrope</i>	<i>Executive Decision</i>	<i>Railroad</i>	<i>The National Economy</i>	<i>Collective Bargaining</i>	<i>The Firm</i>	<i>Scarcity and Allocation</i>
Content	2	2	2	0	2	2	2	1	1	1
Roles	1	(1)	2	1	1	1	1	2	1	1
Rules	2	2	2	1	2	2	1	2	2	2
Skills	1	1	2	0	1	1	2	2	0	1
Validity	2	2	2	1	1	2	2	2	0	1
Flexibility	1	2	2	0	1	1	1	1	0	0
Debriefing	0	2	2	1	0	2	0	0	0	0
Realistic	2	2	2	0	2	1	0	1	1	1
Durability	2	2	2	1	2	0	0	1	1	1
Expense	1	2	2	2	1	2	2	2	0	0
TOTAL	14	18	20	7	13	14	11	14	6	8
<i>Overall Rating</i>	Good	Out-standing	Out-standing	Adequate	Good	Good	Good	Good	Adequate	Adequate

Key: 0 = Inadequate  
 1 = Adequate  
 2 = Excellent  
 (1) = Information unavailable or irrelevant

Avalon Hill  
4517 Harford Road  
Baltimore, Maryland 21214  
\$12.00

*Railroad*

Fred W. Newmann and  
Donald W. Oliver  
1967

Xerox Education Publications  
245 Long Hill Road  
Middletown, Connecticut 06457  
\$1.25

*Stock Market*

1970  
Avalon Hill  
4517 Harford Road  
Baltimore, Maryland 21214  
\$12.00

*Stocks and Bonds*  
Hooper, Brooks, and  
Hoffman  
1964

Avalon Hill  
4517 Harford Road  
Baltimore, Maryland 21214  
\$ 12.00

*Tightrope*

Larry Baskind, Ann Buddington,  
Melvin Erickson, Ala Kay Hill,  
and Geradine Murphy  
1969

El Paso Public Schools  
Purchasing Agent  
Box 171C  
El Paso, Texas 79999  
\$2.00