The Innovative Application of the “Experimental Economics” Teaching Mode in the International Financing Course

Ping CHEN

College of Finance and Business English, Wuhan Technology and Business University, Wuhan, China
Hubei Collaborative Innovation Institute for Modern Logistics and Business (Nurtured), Wuhan, China
249160241@qq.com

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Abstract. With the beginning point of improving the teaching mode in financial professional teaching, by introducing the experimental economic mode in the international financial course teaching, the author preliminarily sketches the concept of the economic teaching model and verifies the classroom teaching efficiency of the mode.

Introduction

The teaching contents of international financial courses have some calculation and operation problems, such as futures hedging and foreign exchange arbitrage. It is hard to improve students’ learning interest by using the traditional teaching mode in the course teaching, affecting the teaching effects. As a result, it is extremely important to study and improve the existing teaching mode and look for the simple and vivid teaching mode to attract and motivate their study interest. The “experimental economics” has the strong operability and provides the standardized working process, so that the teaching work has the definite guide. To introduce the basic paradigm of experimental economics in the international financial course teaching not only cultivates students’ practical manipulative ability and exploring spirit, but also forms the vivid image in teaching process. It has certain practical application significance.

The Basic Concept of the “Experimental Economics”

The experimental economics under the controlled experimental environment can control experimental conditions, observe experimenters’ behaviors and analyze experimental results for certain economic phenomenon, so as to test, compare and perfect economic theories or provide the decision-making basis. In the international financial teaching, the experimental economics uses the experiments to draw a conclusion under the “limited time and space” to regard the classroom experiments as the teaching mode and invite students to participate in experiments. According to the experimental results, students can summarize economic rules and explore causes. In essence, such a teaching mode aims to cultivate students’ explosive learning methods and change the passive acceptance knowledge and guide students to actively explore knowledge. In the classroom experiments, teachers should design experiments by focusing on learning targets of relevant knowledge points before class, notice the assumption and arrange experimental objects, and prepare for paper, pens and commodity props in the experimental process. The experiment also should consider time duration, operation difficulty and possible problems. In the teaching process, teachers should explain the experimental rules, master experimental process, and make a preparation to summarize the experimental conclusions. After finishing teaching, teachers should guide students to systemize knowledge and summarize general rules. The key is to analyze and explain relevant knowledge and principles by discussing experimental results.
The Process Design of the “Experimental Economics” Teaching Mode

Experimental Design

The classroom experiment applied the basic paradigm of the “experimental economics” teaching mode. By introducing the simulation experiment in the chapter teaching, that is to say, according to the certain trade ruling, an experimental environment similar to the actual economic problems is created. By constantly changing experimental parameters, the author analyzed data results to provide basis for the trade decision-making.

In the experiment, students were divided into two parties as students’ odd or even number to act as party A and party B to participate in the foreign exchange forwards trade. In order to improve students’ participation positivity and activate the classroom atmosphere, the usual performance award is used to pay for remuneration for students.

Experimental Contents and Objects

The experiment was arranged in the foreign exchange options trading of international financial course. Experimental objects included senior three students in international economy and trade and international business in Wuhan College of Industry and Commerce. These students have basic knowledge of certain foreign exchange trade and have already mastered the concept and trading mechanism of foreign exchange forwards, foreign exchange futures and foreign exchange options. The teaching design introduced the experiment to let students experience the earnings and risks in the trading parties of foreign exchange options in the trading process and summarize foreign exchange market traders to use options to avoid from risks.

Experimental Process

In the experiment, assumed that A and B companies exported vehicles from the USA. After 3 months, they paid 1 million dollars for the American exporters. Assuming that the spot rate was USD/CNY=6.82, 6.82 million RMB should be used to purchase 1 million dollars for the American party—immediate payment.

Assumed that A company signed a options contract with banks to fix import costs and prevent from exchange rate risks. The option premium was 150000 yuan RMB. A Company had the right to buy the required 1 million dollars as USD/CNY=6.90 exchange rate in any day within the valid period of contracts or had the right not to execute the contract. B Company didn’t purpose options. After 3 months, dollar exchange was purchased as the market quotation. Due to the foreign exchange market quotation changes, three different exchange rate situations after 3 months would be shown up. The market exchange rate was USD/CNY=7.15, USD/CNY=6.85 and USD/CNY=6.90.

The teacher announced the above-mentioned trading background and trading rules, so that students with odd number (A Company) and students with even number (B Company) should consider 3 minutes. After 2 minutes, they should make a trade decision and a student should record it. Then, the losses and gains of A Company and B Company should be compared.

Experimental Results

According to the market exchange rate situation after 3 months, groups with odd number and even number will have the different earning results.

(1) In the first situation, the market exchange rate was USD/CNY=7.15.
Table 1. Profits and Losses between A Company and B Company in the First Situation.

<table>
<thead>
<tr>
<th>Companies</th>
<th>Odd number group (A Company)</th>
<th>Even number group (B Company)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade decision</td>
<td>Executed options (15 people)</td>
<td>Not executed options (5 people)</td>
</tr>
<tr>
<td>Costs</td>
<td>705</td>
<td>730</td>
</tr>
<tr>
<td>Profits and losses (costs saved by B Company)</td>
<td>10</td>
<td>-15</td>
</tr>
<tr>
<td>Rational selection</td>
<td>√</td>
<td></td>
</tr>
</tbody>
</table>

(2) In the second situation, market exchange rate was USD/CNY=6.85

Table 2. Profits and Losses between A Company and B Company in the Second Situation

<table>
<thead>
<tr>
<th>Companies</th>
<th>Odd number group (A Company)</th>
<th>Even number group (B Company)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade decision</td>
<td>Executed options (4 people)</td>
<td>Not executed options (16 people)</td>
</tr>
<tr>
<td>Costs</td>
<td>705</td>
<td>700</td>
</tr>
<tr>
<td>Profits and losses (costs saved by B Company)</td>
<td>-20</td>
<td>-15</td>
</tr>
<tr>
<td>Rational selection</td>
<td>√</td>
<td></td>
</tr>
</tbody>
</table>

(3) In the third situation, market exchange rate was USD/CNY=6.90

Table 3. Profits and Losses between A Company and B Company in the Third Situation.

<table>
<thead>
<tr>
<th>Companies</th>
<th>Odd number group (A Company)</th>
<th>Even number group (B Company)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade decision</td>
<td>Executed options (10 people)</td>
<td>Not executed options (10 people)</td>
</tr>
<tr>
<td>Costs</td>
<td>705</td>
<td>705</td>
</tr>
<tr>
<td>Profits and losses (costs saved by B Company)</td>
<td>-15</td>
<td>-15</td>
</tr>
<tr>
<td>Rational selection</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>

Therefore, A Company had the same result, no matter it executed the option contract or it didn’t execute the option contract.

**Results and Analysis Discussion**

By making a comparison on the above-mentioned trading experiment and final earnings, students were easy to draw a conclusion on the textbook. In the import and export trade, there is a problem of receipt and payment for foreign exchange forwards. If the foreign exchange rate is large, it will bring the exchange rate risk and apply the foreign exchange option contracts. No matter for the variation of exchange rate, the buyers of options will realize the hedging. The greatest losses are limited by the option premium, while maximum return is infinite. However, in the experiment, it can be found that the foreign exchange options trade also loses the possibility to gain benefits by
changing exchange rate, while locking the losses brought by the exchange rate variation. Through
the actual operation and earning comparison of A and B companies, students could greatly master
the rules of foreign exchange options trading and trading decision-making mechanism and improve
the trading operation ability.

The Summary and Prospect of the “Experimental Economics” Teaching Mode

After applying the “Experimental Economics” teaching mode, students’ classroom teaching
experience and questionnaires could acquire the feedback information of the teaching mode: First of
all, the classroom experiment made students become interested in study contents shortened the
distance between theoretical knowledge and practical operation, motivated students’ study interest,
expanded their professional horizon, and made the classroom teaching become interesting,
intellectual and active. Secondly, the experiment enriched the students’ emotional experience and
enhanced students’ participation. Students will have the deeper cognition on the theoretical
knowledge of foreign exchange market and have the profound investment interest. Through the
experiment, students’ excitement and enjoyment as finding out the financial investment trading
principles are just the value and charm of the classroom experiment. Through the classroom
experiment, students will have more intuitive cognition on the foreign exchange market investment
trade, become familiar with the basic operation skills, and motivate their interest in financial
investment. Lots of students join in the actual quotation operation of investment securities. Also, the
experiment improved students’ operation ability. Many students think that the “experimental
economics” teaching mode can deepen the comprehension on the financial theoretical knowledge
and application degree. At the same time, they will have the profound experience on the operational
process of financial business. Through the classroom experiment, students could master the
business process and obviously improve the operational ability.

In the future, the experimental economics teaching mode needs to be improved and expanded as
conducting the classroom teaching. The following problems should be noticed:

Firstly, the experimental economics may not be suitable for all theories in the financial course. To
select the classical theoretical framework with the strict assumption can effectively develop the
efficiency of the experimental economics.

Secondly, it is necessary to discuss more classical experimental economics teaching cases, verify
and compare with the conclusions.

Thirdly, the experiment can be expanded to more respondents. Students in different majors and
grades should be selected to participate in the experiment. The computer hardware and procedures
can be used to record and analyze the experimental result data, thus the experimental sample will be
greater and conclusions will be more convincing.

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References