A Brief Analysis of the Combined Teaching Model of Cases and Classroom Experiments in College Tourism Economics Course

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Abstract: **Tourism economics reveals the laws of demand and supply of various tourism products and the economic relations involved. The complex theories and mathematical models in Tourism Economics Course can easily make students lose interest in the course. We find that the combination of case teaching and classroom experiments can increase students' interest in tourism economics courses. Students are often hard to correctly interpret the economic significance of regression coefficients. It is of great significance for the teacher to offer the economic significance of various regression coefficients to students. In addition, this paper suggests that teachers should employ famous tourist attractions near the university as teaching cases.**

Keywords: **tourism economics; tourism management; case teaching; classroom experiment; regression analysis; coefficient.**

1. INTRODUCTION

Tourism economics is a branch of modern economics. It is a discipline that uses the general theory of economics to study various economic phenomena, economic relations, and economic laws in tourism economic activities. Therefore, tourism economics is a discipline relevant to tourism economic activities in human society. It reveals the law of demand and supply of various tourism products and the economic relations involved. Tourism economics is a core course offered by university tourism management majors. Tourism economics is a course that emphasizes both theory and practice[1]. The main objective of the course is to apply the theoretical knowledge and skills of economics to solve practical issues in tourism management. Students need to understand and master the basic theories, methods, and skills of tourism economics. The course cultivates students' basic literacy of tourism economics, such as tourism demand, supply, price, and effective utilization of resources. The course develops the ability to solve practical problems of the tourism economy, such as tourism demand simulation, tourism supply simulation, and analysis of tourism product price factors. Courses related to tourism economics include management, economics, tourism planning, tourism resource development, and tourism marketing. The teaching methods of the course mainly include lectures by teachers, introduction to the latest economic ideas and methods, group discussions in class, extracurricular reading, classroom experiments, and extracurricular practice. Teaching tools and means include multimedia equipment, graphic presentations, and data model analysis. The course assessment is comprehensive and dynamic. The mid-term exam and homework account for 30% of the total score, the final exam score accounts for 30%, the attendance accounts for 30%, and the course experiment accounts for 10%.

However, the theory and mathematical model of tourism economics are complex, and it is easy for students to lose interest in the course offering. Therefore, to strengthen the construction of the tourism economics course, we adopted the mode of combining case teaching and classroom experiments and accordingly achieved good teaching effects. the purpose of this paper is to use practical examples to illustrate the joint teaching model of case and classroom experiments.

2. INTRODUCTION TO THE COMBINED TEACHING MODEL OF CASES AND CLASSROOM EXPERIMENTS

Tourism contributes significantly to the overall economy. We can analyze the degree of this contribution from many aspects. For example, we can analyze the relationship between tourist hotel occupancy rate and GDP, the relationship between average tourist spending and GDP, and the relationship between the number of inbound foreign tourists and GDP. These analyses can use simple regression analyses. From these analyses, students can learn the modeling process and methods of tourism economics, overcome the fear of complex economic models, and increase their interest in tourism economics courses.

Tourism management major at Chengdu University offers the tourism economics course. We designed a classroom simulation experiment on the contribution of foreign tourists to China's economy. The experiment requires students to collect data on the number of tourists visiting China each year, the tourism revenue China receives from foreign tourists, and China's annual gross domestic product. Table 1 is the experimental data collected by a student. The experiment requires students to transform the annual data into logarithms and perform a simple binary regression analysis between tourism revenue and GDP. Students are required to submit a short lab report. In the lab report, students must report the regression analysis output (Table 2) and make a tourism economics interpretation of the regression coefficients.

Table 1: Data on China's Tourism Revenue and GDP for Case Analysis in Tourism Economics Course

Year	Revenue from Foreign Visitors (USD 100 million)	GDP (RMB 100 million)
	Variable: Foreign Travel Revenue	GDP
1980	6.17	4587.6
1981	7.85	4935.8
1982	8.43	5373.4
1983	9.41	6020.9
1984	11.31	7278.5
1985	12.5	9098.9
1986	15.31	10376.2
1987	18.62	12174.6
1988	22.47	15180.4
1989	18.6	17179.7
1990	22.18	18872.9
1991	28.45	22005.6
1992	39.47	27194.5
1993	46.83	35673.2
1994	73.23	48637.5
1995	87.33	61339.9
1996	102	71813.6
1997	120.74	79715
1998	126.02	85195.5
1999	140.99	90564.4
2000	162.24	100280.1
2001	177.92	110863.1
2002	203.85	121717.4
2003	174.06	137422
2004	257.39	161840.2
2005	292.96	187318.9
2006	339.49	219438.5
2007	419.19	270092.3
2008	408.43	319244.6
2009	396.75	348517.7
2010	458.14	412119.3
2011	484.64	487940.2
2012	500.28	538580

2013	516.64	592963.2
2014	1053.8	643563.1
2015	1136.5	688858.2
2016	1200	746395.1
2017	1234.17	832035.9

Notes: Sources from [2].

Table 2: Inserted Regression Analysis Output in A Short Classroom Experimental Report Submitted by An Undergraduate

R Square	0.990			
Adjusted R Square	0.990			
S.E.	0.167			
Observations	38			
	Coefficients	S.E.	t-Stat	P-value
Intercept	6.516	0.083	78.382	0.000
Foreign Travel Revenue	1.012	0.017	59.540	0.000

We also designed a classroom simulation experiment for the impact of various factors on the price of green residential neighborhoods in Chengdu. The experiment requires 8 credit hours. The purpose of the experiment is to use the Hedonic price method to evaluate the impact of some microscopic factors on the price of residential neighborhoods[3]. This method is commonly used in economics. We require students to use the extracurricular time to conduct field trips, observe various economic and humanistic environments of residential neighborhoods in the urban area of Chengdu, and discover the main micro-factors (environment, subway service). Students learn the process and method of collecting, organizing, and analyzing data, and use the Excel program. Table 3 is the data collected by a student in a classroom experiment. Students must write and submit a lab report.

Table 3: Data Collected by A Student for the Tourism Economics Classroom Experiment (2015)

Neighborhood	Price RMB/sq.m	Floor space sq.m	Halls	Bedrooms	Toilet	Decoration grading*	Environmental quality	Distance to MetroChengdu Station (m)
Times Jinke Garden	9545	110	2	2	2	1	Mature municipal facilities	970
Dongyuan Community	11207	116	2	3	2	1	good greening	2000
Tianyue House	12393	117	2	3	2	1	good lighting	1800
Shihao Jinhe Valley	8130	123	2	3	2	2	live in water	1300
Military Security Guard Garden	5932	118	2	3	2	1	Buildings are denser	540
Yuanyi Garden	8527	129	2	3	1	5	Convenient transportation	200
Oaks Square	9206	126	2	3	2	2	Buildings are denser	1200
Moma New City	10000	125	2	4	2	5	nice environment	1300
Milan Xiangzhou	8527	129	2	3	2	1	nice environment	2400
China Resources 24 City Phase III	12016	129	2	4	2	2	Bungalows on low floors	2100
Central West Bank Residence	9126	127	2	4	2	3	Convenient transportation	1200
New Territories Phase II	10945	127	2	3	2	5	Very low density and very high comfort	1500
Cinnamon Garden	9524	126	2	3	2	3	Convenient transportation	590
Washington Sands	11905	126	2	3	2	4	Lighting and ventilation	2800
Zhongfang Jinsha Begonia	13200	125	2	3	2	1	Practical	1800
Xicheng Tianxia	9200	125	2	3	2	2	Travel is quite convenient	330
Lijingwan	8000	125	1	3	2	5	Perfect surrounding facilities	2300
Jinyang Yicheng International	8800	125	2	3	2	5	better environment	1900
Honolulu	13115	122	2	4	2	5	good greening	2500
Shining lotus	8197	122	2	3	2	5	Perfect surrounding facilities	1600

Huazhi West Jincheng	8934	122	2	3	2	1	good greening	710
English County Phase 1	10744	121	2	3	2	5	Good environment	1200
Central West Bank Residence	8139	121	2	3	2	4	The traffic is very convenient	210
Jinhui Garden	8879	116	2	3	2	2	The traffic is very convenient	920
Crown International	8276	116	2	3	2	3	Good environment	370
Shangdong Merrill Lynch	6638	116	2	3	2	1	Convenient transportation	2700
Times Mansion	8245	114	2	2	2	4	High green rate	218
Linjiang Peak Pavilion	11480	108.88	2	2	1	5	nice environment	713
Vanke City of Charm	8916	115	2	4	2	5	better environment	500
Blue Queen International Apartment	13894	95	2	3	2	5	Convenient transportation	711
New Li Bai Shi Mansion	8983	118	2	3	2	4	Convenient transportation	848
Singapore Garden	9906	107	2	3	2	3	good greening	975

Notes: *Rough 1, no decoration 2, simple decoration 3, medium decoration 4, fine decoration 5.

3. DISCUSSIONS

In the tourism economics course offered in tourism management major at Chengdu University, we have introduced a combination of case teaching and classroom experiments, which has achieved good teaching results. This teaching model deepens students' understanding of tourism economics, masters the binary regression method, and increases their interest in tourism economics courses. A similar finding is that the participatory teaching method (such as case analysis) of the undergraduate course of tourism economics has achieved a good teaching effect and improved the students' initiative in classroom participation[4].

However, we found in the teaching that students have deficiencies in their grasp of the experimental courses. One problem is that it is difficult for students to interpret the economic significance of the regression coefficients. For example, regarding the contribution of foreign tourists to China's economic growth, the regression coefficient of Foreign Travel Revenue is 1.01. Some students' interpretation is that the contribution of foreign tourism revenue to China's GDP is 1.01. This interpretation is wrong. The reader does not know the true meaning of this interpretation. The correct interpretation is that, due to the use of logarithmic annual data, the meaning of the regression coefficient on Foreign Travel Revenue is that, in 27 years from 1980 to 2017, for every 1% increase in the income from foreign tourists to China, the average GDP growth rate was 1.01 %[5, 6]. Therefore, foreign tourists had a significant positive contribution to China's economic growth.

In addition, the estimated coefficient of Environmental Quality has a positive sign, while the estimated coefficient of distance to MetroChengdu has a negative sign[7]. Some students cannot understand the tourism economics meaning of these signs: the better the environmental quality, the higher the price of the community[8]. The farther the residential area is from the subway station, the lower the price.

There are many interesting teaching cases in tourism economics. We recommend the case of famous tourist attractions near the university. For example, we used the Jiuzhaigou scenic spot, a world natural heritage. On International Labor Day, the number of tourists will increase significantly. In Jiuzhaigou, the impact of the sudden surge in the number of tourists may lead to the shortage of tourism resources (such as guest rooms) supply. Also, the ticket price of Mount Emei Scenic Area, a world natural and cultural heritage, is adjusted to a certain extent with the seasons. This adjustment raises the economic issues on tourism supply and demand.

4. CONCLUSIONS

Tourism economics reveals the laws of demand and supply of various tourism products and the economic relations involved. Tourism economics is a core course offered by university tourism management majors. However, the theory and mathematical model of tourism economics are complex, and it is easy for students to lose interest in the course. In the tourism economics course offered in tourism management major at Chengdu University, we have introduced a combination of case teaching and classroom experiments, which has achieved good teaching results and increased students' interest in tourism economics courses.

The problem students had with experimental courses is that it is difficult for some students to interpret the economic significance of the regression coefficients obtained. For example, from 1980 to 2017, for every 1% increase from the income of foreign tourists to China, the average GDP growth rate was 1.01%. The Environmental Quality estimation coefficient has a positive sign, indicating that the better the environmental quality, the higher the price of the residential area. This shows that teachers must elucidate the economic significance of various regression coefficients to students, which is of great significance to the teaching of tourism economics. Moreover, in this paper, we recommend using the case of famous tourist attractions near the university.

REFERENCES

[1] Z. Wang. (2013). Exploration and practice of the teaching mode of Tourism Economics course. Education and Teaching Forum, 11): 235-236.

[2] NBSC. (2020). National data: Yearly data - national accounts - value added by industries. Retrieved 21 January, 2020 from http://data.stats.gov.cn/easyquery.htm?cn=C01

[3] V. Butsic, E. Hanak and R. G. Valletta. (2011). Climate Change and Housing Prices: Hedonic Estimates for Ski Resorts in Western North America. Land Economics, 87(1): 75-91.

[4] H. Bao. (2016). The application of participatory teaching methods in the teaching reform of Tourism Economics. Journal of Inner Mongolia Normal University (Educational Science Edition), 29(1): 130-132.

[5] D. N. Gujarati. (2003). Basic Econometrics. New York: McGraw-Hill.

[6] R. Davidson and J. G. MacKinnon. (1993). Estimation and Inference in Econometrics. Oxford: Oxford University Press.

[7] A. Cartenì, L. Pariota and I. Henke. (2017). Hedonic value of high-speed rail services: Quantitative analysis of the students' domestic tourist attractiveness of the main Italian cities. Transportation Research Part A: Policy and Practice, 100(348-365.

[8] M. A. Boyle and K. A. Kiel. (2001). A Survey of House Price Hedonic Studies of the Impact of Environmental Externalities. Journal of Real Estate Literature, 9(2): 117-144.