

Study on the Choice of College Students' Travel Mode in Lin-Gang Area

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Abstract: As China continues to implement the policy of expanding the enrollment scale, colleges and universities are faced with the reality that the scale continues to expand and the number of college students increases rapidly. Therefore, the land and educational resources of colleges and universities are gradually scarce or even lacking. To alleviate the problem, most of the new campuses located in remote suburbs. This phenomenon of "suburbanization" causes the travel inconvenience of college students. This paper selects the typical region of Lin-Gang universities as the research object, conducts a questionnaire survey on the travel status of college students in this region, and uses factor analysis and Multivariate Logistic model to analyze the travel characteristics of college students in the region of Lin-Gang University City and the factors affecting the travel mode choice of college students in this region. From the perspective of college students, this paper finds out the problems existing in the local transportation system, which provides decision-making reference for the government to strengthen and improve the local transportation system and provides convenience for residents and college students to travel.

Keywords: Lin-Gang University City; travel mode choice; factor analysis; Logistic model.

1. INTRODUCTION

Over the past two decades, the government has expanded the number of students in higher education. According to data released by the National Bureau of Statistics, in 1997, there were 3.17 million undergraduate and junior college students; in 2019, there were 30.32 million. In 1997, there were 176,400 graduate students; and in 2019, there were 2.86 million graduate students. The number of undergraduate and graduate students in 2019 is nearly 10 times that of 20 years ago, accounting for 2.4 percent of the country's total population by the end of 2019. College students have gradually become an important part of urban population. It is of great practical value to study the characteristics of their travel behavior to improve the traffic condition around colleges and universities. On the other hand, the number of college students has increased sharply, and the existing land and building resources of colleges and universities are seriously insufficient. In order to seek for greater development space, colleges and universities generally build new campuses in the suburbs of cities or move their campuses directly to the suburbs of cities. College students gradually become the main force of the population in urban suburbs, so studying their travel characteristics is helpful to improve and optimize the traffic system in urban suburbs.

The location of the new campus is generally an undeveloped suburb with imperfect surrounding transportation facilities. The poor transportation facilities not only prevent college students from enjoying rich life in big cities, also limit their demands for social contact and communication, thus reducing their opportunities to participate in social practice. Therefore, this paper studies the factors influencing the choice of travel mode of college students in urban suburbs.

Researchers have done a large number of studies on urban residents' travel behavior, and these research results play an active role in easing the congestion of urban traffic and optimizing the urban passenger transport structure. However, compared with urban residents, college students have obvious differences in the travel modes choice. The study on the travel characteristics of college students living and studying in the new campus in the suburb is conducive to the further development of transportation planning and construction plan in the area where the new campus is located.

Taking the students of Lin-Gang University as the research object, this paper investigates and analyzes the factors that influence the travel behavior of the students of Lin-Gang University City. Through the online questionnaire, we investigate some college students from Shanghai Maritime University, Shanghai Ocean University, Shanghai Jian Qiao University and Shanghai DianJi University who have been in and out of the Lin-Gang area recently. Taking the last departure from Lin-Gang as the condition, relevant information is collected to analyze the influencing factors and potential inducements of college students' travel in Lin-Gang, so as to provide decision-making reference for the continuous improvement of the university or local transportation system.

2. LITERATURE REVIEW

The travel behavior research based on activity, which was first proposed abroad, has been favored by many researchers, among which the travel demand model is the basic model of traffic demand management measure analysis and transportation system planning. In the research field of students' choice of travel mode, Shannon T et al. [1] collected the travel data of 1,040 college students by means of network survey, and found the latent variables influencing the choice of college students' travel mode; Limanond et al. [2] used the survey method of travel log to study the influencing factors of college students' travel mode; Klockner A et al. [3] investigated 26,865 travel information of 3,660 college students and determined the influencing factors of college students' choice of travel mode; Whalen et al. [4] used the network survey method to study the influencing factors of college students' travel mode; Angelis M D et al. [5] studied how can commuting distance regulate the influence of psychological factors, situational influences, built environment characteristics and mobility constraints on mobile behavior; Aghaabbasi M et al. [6] used Random Forest technique and Bayesian network analysis to identify 10 most important factors influencing university students' use of ride-sourcing for different travel purposes.

The research based on activity about individual travel behavior analysis and travel demand prediction model in China has been developing for more than ten years.

Ma et al. [7] studied the characteristics of student travel choice based on family attribute and NL model, and believed that family vehicle ownership and the need for transport are the main factors affecting the choice of private transport mode; Mayila et al. [8] used Multivariate Logistic (MNL) Model to study the influence of family structure on students' choice of travel mode; Chen et al. [9]

took Nanhang Jincheng College as an example, and concluded that the transportation capacity of the travel mode around the campus cannot meet the normal travel needs of teachers and students; Cao [10] used empirical research method to explore the specific degree of correlation between college students' travel behavior and college location and transportation system; based on the theory of planned behavior, Wu [11] put forward several factors influencing the travel choice behavior of college students in mountain cities; Han et al. [12] verified that college students who travel long time will generally choose bus travel, while college students who travel short time will generally choose taxi travel.

3. METHODS

At present, there is little research on the choice of college students' travel mode, and most of the research objects of travel behavior are urban residents with individual units. In addition, researchers at home and abroad pay less attention to the research on the travel behavior of college students studying in suburban universities. By using the empirical research method, this paper studies the travel characteristics of college students in Lin-Gang area through the questionnaire survey. The questionnaire focuses exclusively on the recent travel behavior of college students studying in Lin-Gang University City, and the survey content includes personal basic information, last trip information, travel attitude, etc. This paper analyzes their attitude towards using various travel tools to leave port, and finds the factors that influence the choice of college students' travel.

Through factor analysis, this paper summarizes the main factors and potential inducements that influence the travel of college students in Lin-Gang, and construct Multivariate Logistic model for college students' choice of travel modes in Lin-Gang. By finding out the influencing factors of college students' travel choice in Lin-Gang, this paper helps the local government to optimize the transportation system, and raises the social attention to the suburbanization of colleges and universities and the suburban transportation construction.

4. THE PRESENT SITUATION OF LIN-GANG AREA TRAFFIC CONDITION

At present, the transportation facilities in Lin-Gang University City are single and deficient. The main means of public transport are buses, subways, bikes-sharing, a small number of regular direct buses and private cars. There are two universities in the Sharing Area, Shanghai Maritime University and Shanghai Ocean University, and the main bus lines are No.1043, No.1077, Shengang No.1, Shengang No.4, Longgang Express line, Longlin special line. The main bus line near Shanghai Jian Qiao University is No.1096. The main bus line near Shanghai DianJi University is No.1009.

At present, there is only Shanghai Metro Line 16 in the Lin-Gang area, starting from Longyang Road station in the north and ending at Dishui Lake Station in the south. The total length is 58.96 kilometers with 13 stations. The whole journey takes 45 minutes. As a municipal commuter railway, Shanghai Metro Line 16 links Nanhui New Town with the central city. To a large extent, it alleviates the travel difficulties of students and residents in the southeast of Shanghai as well as the traffic pressure of the public transportation system (as shown in Figure 1).

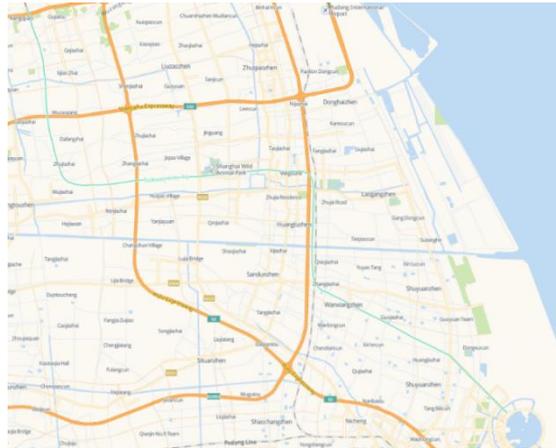


Figure 1. Shanghai Metro Line 16 route map

In the planning of Shanghai Metro Line 16, the establishment of large station subway was added. Some subways only stopped at 5 stations, which reduced the running time of ordinary subways by about 12 minutes. The establishment of large station subway combines the actual passenger flow characteristics and passengers' riding demands. At present, the establishment of large station subway greatly improves the travel convenience of local residents and college students.

In addition, there is only one Shanghai-Luchao Port Provincial Expressway in Nanhui New Town, and the road is mainly composed of two lanes, which is prone to congestion during rush hours (as shown in Figure 2).

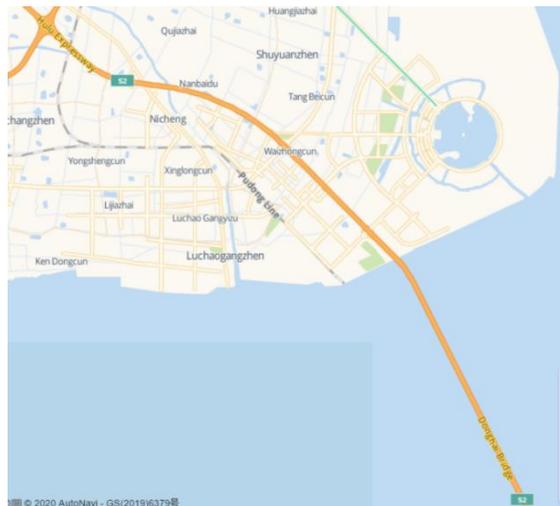


Figure 2. Shanghai-Luchao Port Provincial Expressway

5. QUESTIONNAIRE RESULTS

This paper uses online questionnaire to investigate the travel information of college students' last time left Lin-Gang (to Shanghai other area, but is not some other province or country) and students' satisfaction with Lin-Gang mainly three kinds of travel tools, bus, subway and Didi Taxi. A travel refers to the use of traffic tools to complete a travel purpose behavior, and may use a variety of modes of transport.

The questionnaire is divided into three modules: survey of basic personal information, survey of respondents' last trip out of Lin-Gang, and survey of respondents' satisfaction with all aspects of major travel tools.

A total of 345 questionnaires were received in the form of network transmission. After screening the questionnaires, 342 valid questionnaires were left after the invalid questionnaires were eliminated, the proportion of male students and female students is 33.63% and 66.37% respectively. Among the college students who have received this questionnaire, there are 50 freshmen, 109 sophomores, 69 juniors and 100 seniors. There are 7 graduate students who are going to the first and second graduate schools respectively. Of the 342 students, 62.28% are from Shanghai Maritime University, 31.58% from Shanghai Ocean University, and the rest are from Shanghai DianJi University and Shanghai Jian Qiao University. And 104 of them live in Shanghai and 202 live outside the city. The collected questionnaires constitute the first-hand data needed for this study and also the basis for the analysis of the problems in this study.

Among the 342 college students surveyed, 95.91% of them have a traffic card, and 59.06% of them have private cars at home.

The living expenses of the surveyed college students are shown in Table 1.

Table 1. The basic monthly living expenses of the surveyed college students.

Living expenses	Numbers	Proportion
< 1,000 yuan	25	7.31%
1,000- 1,500 yuan	148	43.27%
1,500- 2,000 yuan	106	30.99%
> 2,000 yuan	63	18.42%

In this study, to achieve a certain purpose, one or more modes of transportation are adopted to move from the place of origin to the destination, which is called a trip. An activity that takes a series of actions to the same destination, no matter how many or how few, counts as a trip. If a continuous trip is for multiple purposes, several purposes count as several trips. Movement on campus does not count as travel.

This questionnaire mainly investigates the travel information of college students in Lin-Gang who have recently left Lin-Gang (to Shanghai other area, but is not some other province or country).

Among the 342 college students who filled in the questionnaire this time, 18 of them spent more than 5 hours on their latest trip away from the Lin-Gang area, and the remaining 324 students spent less than 0 to 5 hours on their trip. In the survey, 87.72% of students chose to travel to the subway as the main tool to leave Lin-Gang, 5.56% of students chose to travel by bus as the main tool, 4.09% of students chose to travel by private cars as the main tool, 1.75% of students chose Didi Taxi travel tools for leave to Shanghai Lin-Gang area of each area county. The main destination is Pudong New Area, specific travel purposes are shown in Table 2. The main purpose of college students' travel in Lin-Gang area is to go out for leisure and entertainment and to go home. The second purpose is to go in and out of Lin-Gang area for internship and study.

Table 2. List of travel purposes of university students in Lin-Gang.

Travel Purposes	Proportion
Leisure and entertainment	23.10%
Shopping	6.43%
Learning (including training)	10.23%
Part-time job/Internship	12.57%
Transfer (to another place)	4.68%

Go home	33.04%
Socialize	5.56%
Go to a doctor	1.17%
Personal affairs	2.63%
Else	0.53%

6. ESTABLISHMENT AND ANALYSIS OF FACTOR ANALYSIS MODEL

In this paper, the Multivariate Logistic model based on factor analysis is used to establish and verify the collected data, so as to determine the degree of influence of each influencing factor on the choice of travel mode of college students in the Lin-Gang area.

6.1 Factor analysis model

With the rapid development of science and technology, the problem of environmental pollution has become one of the most important problems in the world. China incorporated green travel into its The Twelfth Five-Year Plan in 2012. With the strengthening of publicity on environmental issues, people's awareness of environmental protection is increasing. Relevant scholars also conducted relevant studies on the impact of green travel awareness on the choice of travel mode. Based on the above considerations, environmental awareness is incorporated into the influencing factors, but as environmental awareness factors can't be directly obtained through observation, this paper uses factor analysis model to extract several related factors — environmental awareness as latent variables.

This paper also extracts another latent variable — life attitude, for the following considerations:

Life attitudes, like environmental awareness, cannot be directly observed.

What is the psychological state of college students before choosing travel tools? Will positive optimism or negative pessimism affect college students' choice of travel tools?

6.2 Factor model of environmental awareness (EA)

6.2.1 Composition of environmental awareness factors

The following questions are the common factors that make up the higher correlation of environmental awareness and the variable names given:

- a. Environmental pollution can harm your personal health: EA1.
- b. Oil prices should be raised to reduce the use of private cars: EA2.
- c. Automobile exhaust emissions are the main cause of air pollution: EA3.
- d. For environmental protection, you are willing to do it yourself: EA4.
- e. I'm concerned about air pollution, noise and energy use: EA5.

6.2.2 Analysis of environmental awareness factor model

By establishing the factor model, the KMO value of environmental awareness is 0.782, and the significance level of Bartlett's sphericity test is 0.000, less than 0.05. There is a factor structure, and the correlation of each factor is relatively high, which is of statistical significance and can be used for factor analysis (as displayed in Table 3).

Table 3. KMO and Bartlett's tests a for environmental awareness.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.782
Bartlett's Test of Sphericity	Approx. Chi-Square	487.786
	df	10
	Sig.	.000
a. Based on the related.		

The cumulative total variance is 52.294%. If common factor 1 is extracted by default, it can explain 52% of latent variables (as displayed in Table 4).

Table 4. Total variance for environmental awareness interpretation.

Component		Initial Eigenvalues a			Extraction Sums of Squared Loadings		
		Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Original	1	1.722	50.681	50.681	1.722	50.681	50.681
	2	.794	23.369	74.050			
	3	.395	11.626	85.676			
	4	.275	8.100	93.776			
	5	.211	6.224	100.000			
				.000			
Rescale	1	1.722	50.681	50.681	2.615	52.294	52.294
	2	.794	23.369	74.050			
	3	.395	11.626	85.676			
	4	.275	8.100	93.776			
	5	.211	6.224	100.000			
				.000			

Extraction method: Principal Component Analysis.

a. When the covariance matrix is analyzed, the initial eigenvalues are the same throughout the original solution and the rescaled solution.

Finally, the corresponding latent variable value calculated by the composition matrix is the score of environmental awareness of each respondent (as displayed in Table 5).

Table 5. Environmental awareness component matrix.

	Original	Rescale
	Component	Component
	1	1
EA1	.557	.717
EA2	.510	.540
EA3	.695	.793
EA4	.579	.774
EA5	.577	.762

Extraction method: principal component.

a. One component has been extracted.

6.3 Factor model of life attitude (LA)

6.3.1 Composition of life attitude factors

The following questions are the common factors that make up the high correlation of life attitudes and the variable names given:

You enjoy going to social activities: LA1.

When you dine out, you are willing to try new dishes: LA2.

You always try different routes for the same destination: LA3.

You like to explore and study new things: LA4.

You like to take public transportation because you can meet all kinds of people: LA5.

You exercise regularly: LA6.

You are outgoing and enjoy communicating with others: LA7.

6.3.2 Analysis of life attitude factor model

In the same calculation steps as above for environmental awareness, the KMO value of life attitude is 0.772, and the significance level of Bartlett's sphericity test is 0.000, less than 0.05. There is a factor structure, and the correlation of each factor is relatively high, which is of statistical significance and can be used for factor analysis (as displayed in Table 6).

Table 6. KMO and Bartlett tests a for life attitudes.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.772
Bartlett's Test of Sphericity	Approx. Chi-Square	487.786
	df	10
	Sig.	.000
a. Based on the related.		

According to the total variance explained by life attitude in Table 7, it can be seen that the total variance is 48.083%. By default, common factor 1 is extracted, which can explain 48% of the latent variables.

Table 7. Total variance for life attitude interpretation.

Component		Initial Eigenvalues a			Extraction Sums of Squared Loadings		
		Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Original	1	2.420	47.648	47.648	2.420	47.648	47.648
	2	.839	16.532	64.180			
	3	.549	10.815	74.995			
	4	.419	8.243	83.237			
	5	.380	7.489	90.726			
			.299	5.879	96.605		
Rescale	1	.172	3.395	100.000	3.366	48.083	48.083
	2	2.420	47.648	47.648			
	3	.839	16.532	64.180			
	4	.549	10.815	74.995			

	5	.419	8.243	83.237			
		.380	7.489	90.726			

Extraction method: Principal Component Analysis.
a. When the covariance matrix is analyzed, the initial eigenvalues are the same throughout the original solution and the rescaled solution.

Accordingly, through the component matrix, the corresponding latent variable value is the life attitude score of each respondent, and the higher the score, the more positive the life attitude is (as displayed in Table 8).

Table 8. Life attitude component matrix.

	Original	Rescale
	Component	Component
	1	1
LA1	.618	.763
LA2	.514	.632
LA3	.667	.708
LA4	.576	.743
LA5	.608	.644
LA6	.519	.610
LA7	.599	.738

Extraction method: principal component.
a. One component has been extracted.

7. MULTIVARIATE LOGISTIC MODEL ESTABLISHMENT AND ANALYSIS

7.1 Dependent variables, independent variables and covariables

This paper mainly investigates the influencing factors of college students' travel mode choice and the degree of influence of each factor on college students' travel mode choice, so the travel mode is regarded as the dependent variable in the modeling process.

In this paper, the main factors to be considered are the public transport card ownership, the monthly basic living expenses of college students, the travel distance, the convenience level, comfort, safety and cost of each means of transportation. In this paper, travel distance is classified into covariables (As an independent variable in experimental design, covariate is not controlled by the actor, but can still influence experimental results). In addition, there is only one characteristic is sufficient to explain the influence that comfort can cause, so the comfort of various kinds of vehicles is included in the covariable. The other influencing factors are used as independent variables of the Multivariate Logistic model.

7.2 Model establishment

In this paper, the Multivariate Logistic model is established using IBM SPSS Statistics software version 20.0.

7.3 Analysis of model results

The dependent variables, independent variables and covariables used in the Multivariate Logistic model are shown in Table 9 below:

Table 9. Model variable factors and assignments.

		N	Marginal Percentage
Travel Mode	1 Bus	342	33.3%
	2 Subway	342	33.3%
	3 Didi Taxi	342	33.3%
Public transport card holding	1 Yes	984	95.9%
	2 No	42	4.1%
Monthly living expenses	1 < 1,000 yuan	75	7.3%
	2 1,000- 1,500 yuan	444	43.3%
	3 1,500- 2,000 yuan	318	31.0%
	4 > 2,000 yuan	189	18.4%
Convenient level	1 Very inconvenient	31	3.0%
	2 Inconvenient	103	10.0%
	3 General	493	48.1%
	4 Convenient	288	28.1%
	5 Very convenient	111	10.8%
Security	1 Very unsafe	28	2.7%
	2 Unsafe	59	5.8%
	3 General	486	47.4%
	4 Safe	347	33.8%
	5 Very safe	106	10.3%
Cost	1 Very expensive	36	3.5%
	2 expensive	116	11.3%
	3 General	499	48.6%
	4 Cheap	278	27.1%
	5 Very cheap	97	9.5%
Effective		1,026	100.0%
Missing		0	
Total		1,026	
Subpopulation		808	

As shown in Table 10, the significance level of the model fitting this time is 0.000, which is less than 0.05. The model has statistical significance, and the model passes the test.

Table 10. Model fitting information.

Model	Model fitting criteria	Likelihood ratio test		
	Minus 2 log likelihood	chi-square	df	Significant level
Only intercept	1,898.928			
Final	1,283.484	615.444	40	.000

Table 11 shows that Cox, Snell, Nagelkerke and McFadden, the three pseudo R square values are 0.507 at the highest and 0.273 at the lowest, which is low, indicating that the interpretation degree of the original variable variation of the model is general and some information cannot be explained.

Table 11. Pseudo R square.

Pseudo R square	
Cox and Snell	.451
Nagelkerke	.507
McFadden	.273

It can be seen from the likelihood ratio test of Table 12 that environmental awareness, comfort, cost, safety and convenience level have significant contributions to the model composition, and it is meaningful to study them. However, the significance level of life attitude, travel distance, public transport holding and monthly living expenses are all greater than 0.05, so these variables don't contribute significantly to the model.

Table 12. Model likelihood ratio test.

Effect	Model fitting criteria	Likelihood ratio test		
	minus 2 times the logarithmic likelihood of the simplified model	chi-square	df	significant level
Intercept	1,283.484	.000	0	.
EP	1,325.245	41.761	2	.000
LA	1,284.604	1.121	2	.571
Travel distance	1,283.724	.240	2	.887
Comfort	1,344.939	61.456	2	.000
Public transport card holding	1,284.232	.749	2	.688
Monthly living expenses	1,286.285	2.801	6	.833
Convenient level	1,347.017	63.533	8	.000
Security	1,414.600	131.116	8	.000
Cost	1,524.100	240.616	8	.000

The reference object of the Logistic model in this paper is to choose Didi Taxi car as the travel tool. Compare the choice of bus with the choice of Didi Taxi as a way of travel, the more environmentally conscious people are, the more likely they are to choose Didi Taxi. The higher college students' perception of the comfort level of Didi Taxi, the more they are willing to choose Didi Taxi. The safer it is, the more people will choose buses. When considering the cost, the cheaper the cost, the more college students prefer to choose public transportation.

Compare the choice of subway with the choice of Didi Taxi, students with stronger environmental awareness tend to choose Didi Taxi. In the same way, the higher college students' perception of the comfort level of Didi Taxi, the more they are willing to choose Didi Taxi. Considering the convenience of the selected travel tool, according to the parameter estimation table of the model, college students believe that the convenience of subway is much higher than that of Didi Taxi, so they prefer subway travel. The safer it is, the more likely college students are to take the subway. In the case of the same cost, college students are more willing to choose Didi Taxi. However, with the decrease of the cost, college students prefer to choose subway (as displayed in Table 13).

Table 13. Model parameter estimation.

Travel Mode	B	Std. Error	Wald	df	Significance level	Exp(B)	The 95% confidence interval for Exp(B)	
							lower	upper
1 Intercept	8.330	1.237	45.332	1	.000			
EP	-.611	.132	21.605	1	.000	.543	.419	.702
LA	.015	.116	.017	1	.895	1.015	.810	1.273
Travel distance	.002	.004	.205	1	.650	1.002	.994	1.009
comfort	-1.293	.184	49.428	1	.000	.274	.191	.394
[Public transport card holding=1]	-.217	.481	.204	1	.652	.805	.314	2.065
[Public	0	.	.	0	.	.	.	.

transport card holding=2]								
[Monthly living expenses=1]	.356	.411	.753	1	.385	1.428	.639	3.193
[Monthly living expenses=2]	.300	.278	1.161	1	.281	1.350	.782	2.329
[Monthly living expenses=3]	.306	.298	1.058	1	.304	1.359	.758	2.436
[Monthly living expenses=4]	0	.	.	0	.	.	.	.
[Convenient level=1]	-.605	.879	.473	1	.492	.546	.097	3.062
[Convenient level=2]	.438	.567	.597	1	.440	1.549	.510	4.703
[Convenient level=3]	.179	.472	.144	1	.704	1.196	.475	3.017
[Convenient level=4]	.274	.465	.347	1	.556	1.315	.529	3.273
[Convenient level=5]	0	.	.	0	.	.	.	.
[Security=1]	-4.686	1.100	18.130	1	.000	.009	.001	.080
[Security=2]	-2.692	.725	13.779	1	.000	.068	.016	.281
[Security=3]	-1.730	.531	10.607	1	.001	.177	.063	.502
[Security=4]	-.465	.509	.837	1	.360	.628	.232	1.701
[Security=5]	0	.	.	0	.	.	.	.
[Cost=1]	-5.160	.854	36.547	1	.000	.006	.001	.031
[Cost=2]	-6.225	.729	72.855	1	.000	.002	.000	.008
[Cost=3]	-3.775	.547	47.628	1	.000	.023	.008	.067
[Cost=4]	-1.271	.558	5.179	1	.023	.281	.094	.838
[Cost=5]	0	.	.	0	.	.	.	.
2 Intercept	8.086	1.191	46.062	1	.000			
EP	-.784	.129	36.952	1	.000	.457	.355	.588
LA	-.085	.111	.590	1	.442	.918	.738	1.142
Travel distance	.000	.004	.013	1	.910	1.000	.993	1.008
comfort	-.993	.175	32.131	1	.000	.371	.263	.522
[Public transport card holding=1]	.158	.468	.114	1	.736	1.171	.468	2.928
[Public transport card holding=2]	0	.	.	0	.	.	.	.
[Monthly living expenses=1]	-.153	.408	.140	1	.708	.858	.386	1.908
[Monthly living expenses=2]	-.010	.269	.001	1	.971	.990	.584	1.678
[Monthly living expenses=3]	-.010	.288	.001	1	.972	.990	.563	1.739
[Monthly living expenses=4]	0	.	.	0	.	.	.	.

[Convenient level =1]	-2.482	.825	9.048	1	.003	.084	.017	.421
[Convenient level =2]	-2.032	.534	14.477	1	.000	.131	.046	.373
[Convenient level =3]	-1.646	.393	17.529	1	.000	.193	.089	.417
[Convenient level =4]	-.440	.372	1.398	1	.237	.644	.310	1.336
[Convenient level =5]	0	.	.	0	.	.	.	.
[Security=1]	-6.013	1.183	25.844	1	.000	.002	.000	.025
[Security=2]	-4.290	.693	38.302	1	.000	.014	.004	.053
[Security=3]	-3.308	.487	46.053	1	.000	.037	.014	.095
[Security=4]	-1.293	.458	7.970	1	.005	.274	.112	.673
[Security=5]	0	.	.	0	.	.	.	.
[Cost=1]	-2.775	.808	11.802	1	.001	.062	.013	.304
[Cost=2]	-2.928	.625	21.970	1	.000	.054	.016	.182
[Cost=3]	-1.397	.560	6.221	1	.013	.247	.082	.741
[Cost=4]	-.103	.579	.032	1	.859	.902	.290	2.808
[Cost=5]	0	.	.	0	.	.	.	.
The reference category is: 3. a								
Because this parameter is redundant, set it to zero. b								

8. CONCLUSION

Through analyzing the model, the main factors influencing the choice of travel mode for college students in Lin-Gang area are environmental awareness, comfort of travel tools, safety and cost. Whether it is bus versus Didi Taxi, or subway versus Didi Taxi, people who are more environmentally conscious are more likely to choose Didi Taxi, which is contrary to most people's cognition. It may be due to the influence of some factors not taken into account, such as the popularity of Didi Taxi just started, many college students are in the early stage.

In addition, the monthly cost of living has no significant contribution to the travel mode of college students, this paper argues that it is because of the family. At present, China has entered a well-off society. In Lin-Gang University City, most of them are students with ordinary and superior family circumstances, or earn pocket money by going out for internships or part-time jobs. Therefore, the amount of fixed living expenses does not restrict college students, nor will it become one of the factors affecting their choice of travel mode. Whether the claim is true remains to be further investigated.

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