

Analysis of Influencing Factors on College Students' Gathering Market from the Perspective of Behavioral Economics

A Case Study of Universities in Dalian

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Abstract—With the improvement of living standards, daily communication activities have not only been limited to chatting or dining with friends, a variety of party activities have also entered the life of college students. However, the increasing complexity of consumer behavior and rapid changes in the external environment make it difficult for merchants to get hold of market changes. Therefore, we conducted market researches on the gathering market (ten people or more) of college students in Dalian using questionnaires and interviews. Results are based on statistics, consumer behavior, marketing and other theories, using correlation analysis, cross analysis, chi-square test, and the marketing theory of 4Cs, the marketing theory of 4Ps and other analysis methods. The results also clearly indicate the status quo and potential of the gathering market of college students in Dalian make reasonable market forecasts and provide merchants with suggestions for improvement and innovation.

Keywords—college gathering market; cross analysis; market forecast; development proposals

I. INTRODUCTION

Professor Richard Thaler, 2017 Nobel Prize winner in economics, is the representative figure in the field of behavioral economics. He proposes various irrational behavior theories such as psychological accounts and endowment effects, and explains many consumer behavior which traditional economic theories are difficult to explain. From the perspective of college students, we find that with the development of the economy and the continuous diversification of the leisure and entertainment industry, college students have more and more colorful after-school life. One of the main areas of consumption is the gathering activity market. Therefore, we launch a comprehensive survey on college students' gathering consumption behavior.

In order to facilitate the investigation, we choose the best tourist city, Dalian, which has a unique geography and humanities advantage in the gathering service industry. The gathering industry makes use of seascape to develop including daily/night renting on the seashore, sea-burning, camping and other gathering activities which are deeply loved by college students. Therefore, how to grasp college students as the main consumer groups and make the service industry better developed is of great significance to research. In Dalian, there are 30 general colleges and many ace universities. We have selected seven representative universities located in different regions of Dalian to conduct surveys. The main purpose of the survey is to make reasonable decisions based on the status and insufficiency of the college student gathering market. Also, we make reasonable forecast and provide merchants with suggestions for improvement and innovation.

We conduct market research from consumers and merchants respectively. For consumers, we take a random sample survey to increase the credibility of the survey results, issue online and offline questionnaires, and adopt interviews for some college students; for businesses, we choose a typical survey method and choose to interview some merchants lively. Finally, we use some basic analytical tools like pie chart, line chart, and bar chart, independent analysis of factors and 3C, 4P analysis methods for college students' survey data. Also, we use statistical software SPSS and graphing tool Excel to help us conduct data analysis.

II. LITERATURE REVIEW

A. Identification of Influential Factors

In the article "Analysis on Costs and Influencing Factors of Contemporary Chinese College Students' Reunions"

published in 2007, [1]Zekui Ning pointed out that family background, grades of students, frequency of parties, meeting time, and sources of spending have a significant impact on the cost of college students' gathering markets. While gender, party content, and party size have no significant effect. However, since the domestic economic environment and the service industry were not developed at the time, the constraints on the family background were no longer significant, so it is unnecessary to consider it.

In the article "Analysis of the Consumption of Chinese University Students" [5] published in 2017, the author mainly analyzes the consumption of college students from the aspects of the college students' monthly expenses, consumer's grade, and consumer personality. However, what we are involved in the study is a collective gathering of 10 people or more, and there is a certain difference from the individual consumption situation.

Based on the relevant literature reviewed, we decided to analyze consumer demand from the frequency, costs, channels, types, and conditions of gathering.

B. Methods of Current Research

1) *Descriptive statistics*: Professor Yaning Xie points out in the book "Psychostatics" [6] that descriptive research is the most basic research method. It was originally used to study epidemiology and further investigated by describing the distribution of diseases or health conditions. Nowadays, it has not only been restricted to the category of medicine and psychology, but has been broadly defined as a statistical method used to summarize and describe the overall state of affairs and related relationships, and has been widely used in social investigations. Therefore, through investigation and statistics, we first use descriptive statistical methods to provide the basis and guidance for follow-up analysis.

2) *Correlation analysis*: In statistics, we know that correlation analysis uses correlation coefficient to measure the correlation between two or more variables. The most commonly used is the Pearson correlation coefficient proposed by Pearson in 1985. It is also called the range correlation coefficient:

$$\rho = \frac{\text{Cov}(X, Y)}{\sqrt{\text{Var}(X) \cdot \text{Var}(Y)}} = \frac{E(X - \bar{X})(Y - \bar{Y})}{\sqrt{E(X - \bar{X})^2 E(Y - \bar{Y})^2}} \quad (1)$$

For multiple variables, there are multivariate correlation coefficient calculation methods, such as partial correlation coefficients, multiple correlation coefficients, etc. There are Pearson correlation coefficient optimization methods too, such as the typical correlation coefficient. We can use SPSS to directly derive the correlation table and analysis that results in the process of analyzing data, simplifying the complex calculation steps.

3) *3C analysis*: Japanese strategic research master Daisaku I. puts forward that in the formulation of any business strategy, we must consider the company itself, customers, and competitors. It is called "strategic 3C". Now, there has been a lot of evolution in the strategic triangle model.

For example, Philip Kotler, the father of modern marketing in the United States, proposed the STV triangle model in 2000 and divided the original marketing system into corporate strategy, corporate strategy, and corporate value. Then there is the additional macroeconomic environment of the industry, the formation of the 4C theory. In our investigation and research, we need to fully consider the market factors. Therefore, based on the original 3C model, we analyze industry and competition, market and consumers and internal environment of the industry.

4) *4P analysis*: The 4P theory originated from the six factors of marketing decision created by American market theorist Alderson. In the 1960s, McKinsey first proposed the 4C combination marketing strategy, including products, prices, channels, and promotions. In the article "Comparative Study of 4P and 4C Marketing Theory", the 4C strategy is consumer-oriented, and the 4P strategy is producer-oriented. Therefore, this paper analyzes customer demand through 3C theory, and then puts forward reasonable suggestions for merchants through 4P theory.

III. MARKET RESEARCH AND ANALYSIS

A. Demand Analysis of the Respondents

1) Frequency of gathering per semester

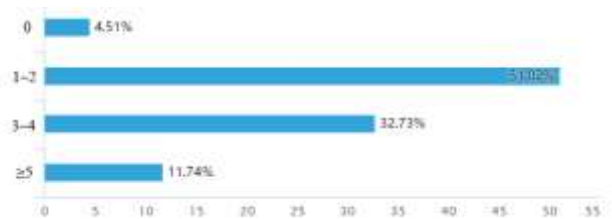


Fig. 1. Frequency of gathering per semester.

As shown in "Fig. 1", the survey participants who gather more than 5 times per semester account for 11.74%, 32.73% three or four times per semester, and no more than twice per semester account for 51.02%; 4.51% did not participate in parties in each semester. It can be seen that the presence of college students' gathering market is necessary, but various factors make different individuals gather in different frequencies. It is of great significance to explore these potential factors for the development of college students' gathering market.

2) Expenses in gathering per semester

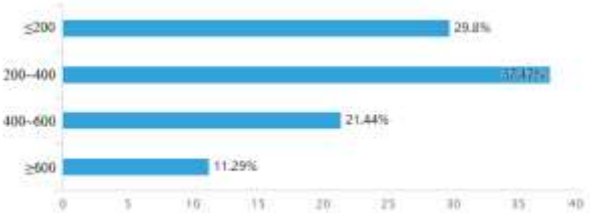


Fig. 2. Expenses in gathering per semester.

As shown in "Fig. 2", the participants accounted for 11.29% of the total sample size in the 600 yuan or more, 21.44% for 400 to 600 yuan, and 37.47% for 200 to 400 yuan. It is the 200 yuan account for 29.8%. From this, it can be seen that most of the respondents' spending allowance for party activities is RMB 400 or less per semester. Businesses can reasonably formulate prices based on the college student's number of meetings per semester and expenses.

3) Inclined forms of gathering

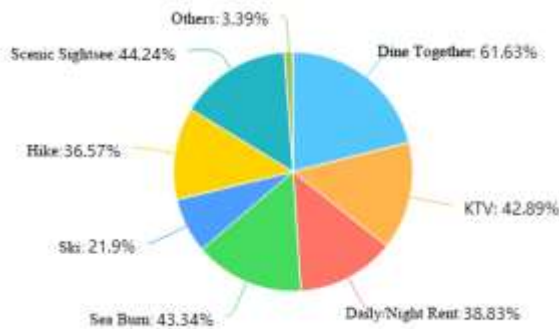


Fig. 3. Inclined forms of gathering.

As shown in "Fig. 3", the proportion of various types of parties is relatively balanced. Among them, the most popular gathering form is restaurant gatherings, which account for 61.63%. The inclination of other gathering forms like KTV, daily /night renting, sea burning, scenic sightseeing is not very obvious, and it is basically around 40%. The sporting parties, such as hiking and skiing, receive less attention, accounting for 36.57% and 21.9% of the sample size. For these forms of meeting, businesses may need to focus on how to retain their old customers and introduce some Innovative elements.

4) Value of conditions for gathering

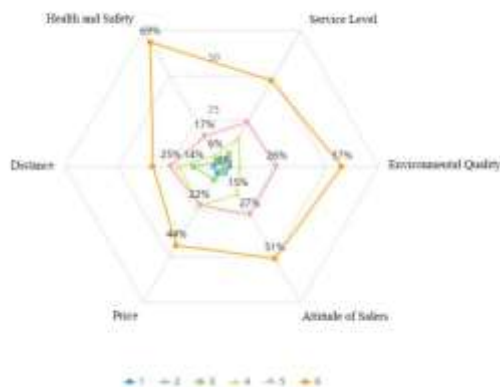


Fig. 4. Value of Conditions for gathering.

As shown in "Fig. 4" the most valued by the respondents is the safety and health of the party, and 69% of the respondents state that they have the greatest degree of security (yellow line) and only 3% (blue line) say that they do not value the safety and health. Followed by the quality of the environment, 57% of the respondents state that they have the greatest degree of

the environmental quality (yellow line). However, the factor of the distance is not been valued much. The difference between the unimportant proportions is not large. This shows that the first thing businesses need to consider when improving their services is safety and hygiene and environmental quality.

5) Channel analysis of gathering market

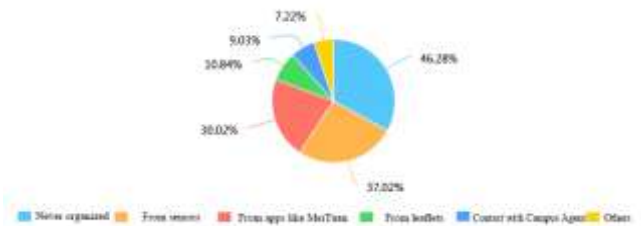


Fig. 5. Channel analysis of gathering market.

As shown in "Fig. 5", party organizers know about channels mainly through the recommendation of the senior and apps like MeiTuan, respectively accounted for 39% and 32%. This shows that for the merchants, word-of-mouth communication and app mediation are the important method of occupying market.

B. Cross-analysis of Survey Respondents

1) Cross-analysis between school and frequency

TABLE I. SCHOOL* FREQUENCY CROSS TABULATION

			Frequency per semester				Total
			0	1-2	3-4	≥5	
School	DUL	Accounting	2	25	13	10	50
		School %	4.0%	50.0%	26.0%	20.0%	100.0%
		Frequency %	10.0%	11.1%	9.0%	19.2%	11.3%
	DLMU	Accounting	4	25	17	10	56
		School %	7.1%	44.6%	30.4%	17.9%	100.0%
		Frequency %	20.0%	11.1%	11.7%	19.2%	12.6%
	DLUT	Accounting	0	57	35	15	107
		School %	0%	53.3%	32.7%	14.0%	100.0%
		Frequency %	0%	25.2%	24.1%	28.8%	24.2%
	DUFL	Accounting	3	25	11	3	42
		School %	7.1%	59.5%	26.2%	7.1%	100.0%
		Frequency %	15.0%	11.1%	7.6%	5.8%	9.3%
	DUFE	Accounting	3	38	33	4	78
		School %	3.8%	48.7%	42.3%	5.1%	100.0%
		Frequency %	15.0%	16.8%	22.8%	7.7%	17.6%
	LNNU	Accounting	1	28	12	5	46
		School %	2.2%	60.9%	26.1%	10.9%	100.0%
		Frequency %	5.0%	12.4%	8.3%	9.6%	10.4%
	Others	Accounting	7	28	24	5	64
		School %	10.9%	43.8%	37.5%	7.8%	100.0%
		Frequency %	35.0%	12.4%	16.6%	9.6%	14.4%
	Total	Accounting	20	226	145	52	443
		School %	4.5%	51.0%	32.7%	11.7%	100.0%
		Frequency %	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE II. CHI-SQUARE TEST 1

	value	df	sig.
Pearson	29.905a	18	.038
Likelihood Ratio	33.107	18	.016
Effective Case N	443		

Using the chi-square test, the table shows that the value is less than the calculated value $\chi^2_{0.05}(18) = 28.8693$, indicating that the school and frequency are related to a 95% confidence level, that is, the effect of different schools on the average frequency per semester is obvious significant, but the overall distribution is 1~4 times in each semester. So merchants can carry out the same number of promotional activities at the right time according to the average number of frequency per student.

2) Cross-analysis between school and expenses

TABLE III. SCHOOL* EXPENSES CROSS TABULATION

			Expenses				Total
			≤200 yuan	200-400 yuan	400-600 yuan	≥600 yuan	
School	DUL	Accounting	12	17	7	14	50
		School %	24.0%	34.0%	14.0%	28.0%	100.0%
		Expenses %	9.1%	10.2%	7.4%	28.0%	11.3%
	DLMU	Accounting	13	17	18	8	56
		School %	23.2%	30.4%	32.1%	14.3%	100.0%
		Expenses %	9.8%	10.2%	18.9%	16.0%	12.6%
	DLUT	Accounting	31	46	21	9	107
		School %	29.0%	43.0%	19.6%	8.4%	100.0%
		Expenses %	23.5%	27.7%	22.1%	18.0%	24.2%
	DUFL	Accounting	15	16	8	3	42
		School %	35.7%	38.1%	19.0%	7.1%	100.0%
		Expenses %	11.4%	9.6%	8.4%	6.0%	9.5%
	DUFE	Accounting	18	32	24	4	78
		School %	23.1%	41.0%	30.8%	5.1%	100.0%
		Expenses %	13.6%	19.3%	25.3%	8.0%	17.6%
	LNNU	Accounting	19	14	8	5	46
		School %	41.3%	30.4%	17.4%	10.9%	100.0%
		Expenses %	14.4%	8.4%	8.4%	10.0%	10.4%
	Others	Accounting	24	24	9	7	64
		School %	37.5%	37.5%	14.1%	10.9%	100.0%
		Expenses %	18.2%	14.5%	9.5%	14.0%	14.4%
Total	Accounting	132	166	95	50	443	
		School %	29.8%	37.5%	21.4%	11.3%	100.0%
		Expenses %	100.0%	100.0%	100.0%	100.0%	100.0%

TABLE IV. CHI-SQUARE TEST 2

	value	df	sig.
Pearson	35.638a	18	.008
Likelihood Ratio	32.380	18	.020
Effective Case N	443		

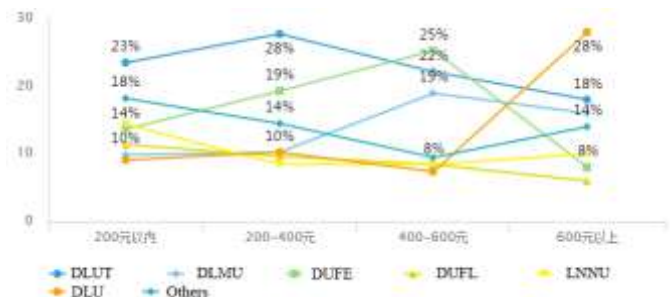


Fig. 6. School* Expenses Line Chart.

Using the Chi-square test, the table shows that the figure is 28.8693, which is less than the calculated value. This shows that schools and expenses are related to a 95% confidence level, that is, the effect of different schools on the average expenses per semester is significant.

Relatively speaking, students from Dalian University of Technology, Liaoning Normal University, and Dalian University of Foreign Languages have relatively evenly distributed spending. The students of Dongbei University of Finance and Economy and Dalian Maritime University spend mainly between 200 and 400 yuan per semester in gathering. Students spend more than 600 yuan in Dalian University.

3) Analysis of value in different factors for gathering in different schools

TABLE V. AVERAGE VALUE IN DIFFERENT FACTORS FOR GATHERING IN DIFFERENT SCHOOLS

	DLU	DLMU	DLUT	DUFL	DUFE	LNNU	Others	Total
Health and Safety	5	5.48	5.51	5.71	5.31	5.28	5.16	37.43
Service Level	4.78	5.02	5.08	5.55	4.85	4.85	4.77	34.9
Environmental Quality	5.06	5.18	5.42	5.64	5.12	5.28	4.92	36.62
Prices	4.84	4.75	4.9	5.19	4.78	4.78	4.77	34.01
Distance	4.64	4.77	4.54	5.05	4.36	4.34	4.32	32.12
Attitude of Sellers	4.94	5.41	5.19	5.55	4.99	5.02	4.89	35.99
Total	29.26	30.59	30.64	32.69	29.41	29.45	29.03	211.1

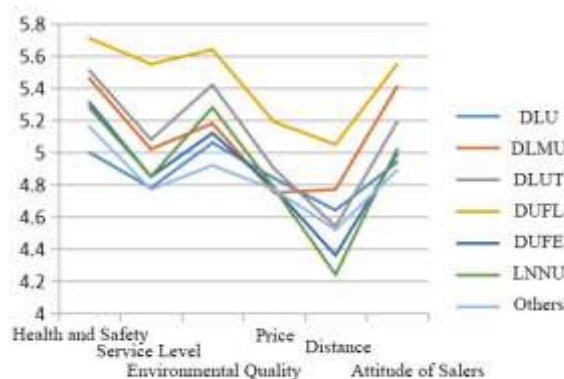


Fig. 7. Schools * Values Line Chart.

From the figure above, we can see that the most important respect for all college students is safety and health, followed by the quality of the environment, but the requirements of distance are not very strict. From the above comparison, we

find that foreign language schools are more highly valued than other schools in every respect.

IV. IDENTIFICATION OF INFLUENCING FACTORS BASED ON 3C ANALYSIS

A. Analysis of Market and Consumer

1) *Hobbies and interests*: We can analyze from the perspective of consumers' hobbies and interests. From our interviews with students, it is found that most universal gathering forms is dinning with departments or clubs, and fewer gathering is with classmates. However, every college student has his own class but does not necessarily participate in the departmental associations. Therefore, in the large-scale gathering, there will be some students who do not have departmental associations to withdraw from this market. For the entire market, this part of the population is in the minority. More often than not, it will be those who join with the small group of the community rather than gathering with class. The reason is very simple: the hobbies are similar in a department or club. Therefore, how to design differentiated products for different hobbies and seize the majority of market is a problem that businesses should consider.

2) *Financial differences*: Although college students are financially independent, they were very clear about their living expenses. Therefore, merchants should provide more options for consumers to choose, so as to retain customers at all levels. Among the merchants we surveyed, basically all merchants have their own set of pricing packages that are used by consumers with different needs, so most merchants are aware of this point.

3) *Consumer psychology*: The group of university students is a market that all businesses have attached great importance and favor to. First, college students have just gained financial controlling rights, they are often not so mature when making purchasing decisions. This allows merchants to take advantage. From the psychology of comparison, college students have just started living independently, and they are eager to be respected and admired by classmates and friends. When they are dressed in luxury goods, what they need is a place and environment that can reflect their richness. Like high-class restaurants, KTV and scenic spots becomes their best choice.

Students who have entered the university not only have autonomy in their lives, they also have opportunities to express emotions. University students falling in love is a very common phenomenon, and the emotional life of the two people is also usually maintained by a date. Therefore, college students in love are also holding a considerable share of the market.

In addition, there is a consumer psychology called herd mentality. When the students and friends around you are all share what food in the restaurant is delicious, where the landscape is amazing, where there is a good ski slope, etc., everyone would like to experience it urgently. Therefore, this kind of herd mentality is also a marketing opportunity that

should be seized by merchants, and they should make use of other people's propaganda to draw more potential customers.

B. Analysis of Industry and Competition

In the industry of college student gathering market, the service products provided have certain similarities and the competition is fierce. How to use the core competitiveness to stand out or turn competition into a win-win situation is a problem that merchants should consider.

Various party companies such as Utopiay don't regularly carry out some promotional activities. In the beginning of the school season, they also enter large universities and colleges to send flyers to increase their awareness. However, during the interview with the merchants, we learn that there is an alliance of merchants in the gathering market in Dalian. Through a company, we can learn more about good companies and connect with them. In this channel, they will give consumers a certain discount. For example, merchants of daily/night renting will give students the contact information for renting a bus when they are in need. They will also use their own promotions to promote another project. This is beneficial to the development of the entire industry. In the meanwhile, this kind of healthy competition has reduced the differentiation of the market, increased the homogeneity to a certain extent. But restrict the innovative development of a certain company. Because every improvement of every member of the alliance is for the sake of the interests of the entire alliance, it limits its own development. If we say that one company has a more advanced and innovative idea, he can't use it privately to some extent, otherwise it will be jointly rejected by other businesses. Therefore, this alliance also limits the development of personalization to some extent.

C. Analysis of Internal Environment

As a gathering market, the business philosophy is to serve customers, be more professional, and let customers have fun. This is also the business philosophy of most service industries. Most merchants will ask the customer's opinions after the consumption is completed and consider whether to improve it. When it comes to whether or not it is necessary to provide transportation to consumers, the merchants said that when they took on the traffic, they also assumed relevant safety responsibilities and there was a chain reaction. Therefore, they were far less focused on their own work.

We understand that there will be certain institutions providing party services near each university. Their organizational structure is a head office. There are many branch offices throughout Dalian, and each branch office has a dedicated campus agent. Therefore, the internal control mechanism of the company is very important. It needs to be extended to the bottom of every operating chain. There is also the issue of the importance of the company's performance appraisal system. Some companies may also find agencies to conduct commissioned publicity, which also requires internal communication and consultation. As the types of gathering markets involved are distributed throughout Dalian, the company's internal environment needs to be much better than the average one or two small restaurants, which also involves the designation of the company's strategic goals, etc.

Therefore, relative to the more dispersed gathering market, the internal operation and control of the enterprise is also in a very important position.

V. SUGGESTIONS AND STRATEGIES BASED ON 4P ANALYSIS

A. Products

1) *Improve safety, health and service levels:* One of the most significant changes brought by the improvement of people's living standards is the demand for the service industry. As a service industry, college students' gathering consumption market should pay special attention to safety and health, improve the quality of environment, and improve service levels. Prices and distances are not decisive aspects, and merchants should strive for service satisfaction first.

2) *Details should be paid attention to during service:* In addition to safety, health, environmental quality, and price, our survey found that consumers disgust gambling or pornographic vulgar game props. This is indeed a point that businesses should pay attention to. For consumers who are college students, merchants should consider suitability.

3) *Add personalized products:* For example, providing theme services, merchants should develop different topics of products and services, increase diversity and provide consumers with a variety of choices according to different market segments and consumer interests.

4) *Consider carefully whether to provide additional services:* Providing additional services means taking on the responsibility, so businesses should carefully consider whether to provide additional services. However, additional services, that is, complementary products in the party market, such as providing transportation, are also promising markets. Since consumers do not attach much importance to the distance of the meeting place, it also shows that quick transportation provided is better in line with consumer psychology.

5) *Provide new entertainment:* Our survey is aimed at the gathering market of college students in Dalian. There are some mature gathering methods in the market include daily/night renting, sea burning, skiing, walking, KTV, and scenic sightseeing. Through the way of brainstorming, we discovered that there are fishing parties, farmhouse huts, cocktail parties, and mountain climbing and other entertainment that can be developed. Merchants can further explore and expand the market.

B. Channels

1) *Centralize channels:* Through our investigation, the contact channels for gathering activities are relatively scattered. There are Meituan, WeChat platforms, Taobao, advertising flyers, and campus agents. These channels are not perfect, nor are they professional, and have certain limitations. The business alliance can design an app that is specially designed for university students to gather and play, and

centralize all major businesses on a platform for consumers to choose freely.

2) *Increase publicity and establish a good reputation:* The publicity and promotion methods that exist today have indeed played a certain role. The online promotion of the APP, such as the Meituan, WeChat, and Taobao, has brought convenience. In the meanwhile, advertising flyers and campus agents have also played a role. Recently, a new form of promotion comes into being and if you spread the advertisement in circle of friends, you can enjoy discounts and indeed attract customers then. However, the effect of word of mouth outweigh any other initiative promotion methods. Most people are willing to believe in the evaluation of acquaintances, and they are more willing to believe in the introduction of their seniors. Merchants should establish their own reputation so that they have a competitive advantage, and the most fundamental thing is to do a good service and increase regular customers.

C. Price

1) *Use price discrimination:* The use of different prices for consumers with different spending power is not a universal way to reduce prices, but can provide some means to reduce prices, such as sharing methods to enjoy the benefits after the consumption is completed, they can use this method to reduce the amount of expenses.

2) *Provide preferential policies according to holidays:* The peak period of gathering always take place in holidays. Lowering the price can increase the purchasing power of consumers and increase the demand for gathering. With this approach, merchants can attract more customers and generate more revenue.

D. Promotions

1) *Segment market and position uniquely:* Prior to marketing, market segmentation should be carried out based on some differences. Then different marketing models and product positioning should be made for each market segment. For example, in our survey, we find that schools have a certain correlation with the frequency of gathering, spending, and transportation. Therefore, we can conduct market segmentation based on school differences and implement different marketing strategies for each school.

2) *Improve old marketing models:* For some of the less popular forms of gathering, such as sports, merchants can target their marketing activities in a relatively concentrated sports industry. For example, sports and fitness industries can work together to promote. In this way, consumers are more concentrated and the effectiveness of publicity will be increased. In addition, merchants need to learn how to retain their old customers, for example by developing team development activities to excavate the market.

3) *Develop promotional plans for less popular activities:* According to the cross-over analysis of school and frequency, merchants can formulate their own promotion plans according to the number of per-person semester gatherings in different

schools. For example, in school starting season, graduation season, and holidays, etc. Merchants should carry out appropriate promotions, which can not only reduce the cost of promotion, but also improve the efficiency and effectiveness of promotions.

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