

RESEARCH SOME FACTORS INFLUENCING THE FAVORITE OF “HAO HAO” INSTANT NOODLE OF STUDENTS AT INDUSTRIAL UNIVERSITY OF HO CHI MINH CITY

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Abstract

Acecook Vietnam Joint Stock Company has been developing dramatically and becomes a leading manufacturer of foodstuffs in Vietnam. Acecook company obtained a strong position in the market while providing instant processed products with high quality and nutritional values, especially instant noodle with the famous brand name “Hao Hao”. Some product belong to this brand name was suitable for all class, especially popular class with cheap price and best quality. From the first test showed that most students prefer to use “Hao Hao” instant noodle of Acecook brand. Based on the research model of service quality and loyalty of staff, this subject research the factors influencing the favorites of “Hao Hao” noodle of students at HCM University of Industry. The model was adjusted through: Reliability coefficient Cronbach's alpha, Exploratory Factor Analysis (EFA) and linear regression analysis. The model proposed consists of four observed variables are: quality, price, marketing and branding. After adjusting for the remaining 3 observed variables: quality, price and brand. In that, the “Brand” is the most powerful factor and the “Marketing” do not affect to consumers. For this reason, it can explain that this brand name was very popular in Vietnam and Vietnamese always believes this brand name.

Keywords: Brand, Exploratory Factor Analysis (EFA), linear regression analysis, price, quality

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1. INTRODUCTION

For general, consumer in the world has used instant noodle at least once. They consumed 100 billion pack in 2012 and the most food scientist thought that it can save the whole world (Chinh, 2013). In Vietnam, the instant noodle was used very popular, especially worker and student because it was low price and user-friendly (PV, 2012; Hoi *et al.*, 2007). On the other hand, instant noodle had the high nutrition and it was absolutely suitable for some body do not have time. Student living away from home is limited economic conditions, so a diet with instant noodle is often. The kitchen of families often have instant noodle, as a popular storage food (Wikipedia, 2013). According to preliminary statistics of the research team, “Hao Hao” instant noodle (product of Acecook Viet Nam) is liked and used by students. Therefore, in this research, we analyzed the factors, affect to

“Hao Hao” instant noodle favorite of Industry university Ho Chi Minh city students.

2. MATERIAL AND METHOD

2.1 Data collection method

Data of research was collected by random sampling method. The survey was conducted in May/2012 with 150 people. Subjects of survey were Industry university Ho Chi Minh city students, The questionnaire was designed based on four components with 21 observed variables. Likert scale of 5 grades was used: grade 1 corresponds to strongly disagree level and grade 5 corresponding to strongly agree (Likert, 1932).

2.2 Data analysis methods

This research used SPSS software to analysis data. Data analysis methods were used in research: Reliability coefficient Cronbach's alpha, Exploratory Factor Analysis (EFA) and linear regression analysis.

2.3 Proposed research model

After the group discussion and research based on the model of service quality (Tam, 2011), the group came up with the proposed model of factors may affect the favorite noodle “Hao Hao”: Product quality, price, brand, marketing strategy. These factor was described in table 1 and figure 1.

3. RESULTS AND DISCUSSION

105 samples is appropriated with 21 observed variables (number of observations is usually 4-5 times the number of variables) (Hair, 1998), the number of surveyed customers 150 samples ensure 105 compliance. After survey, 118 answers were satisfactory.

3.1. Scale testing

Cronbach's Alpha was used to test the reliability of the measurement variables and help to eliminate the inappropriate observed variables. The correlation coefficient of variables - total (item-total correlation) is less than 0.3 will be disqualified and Cronbach's

Alpha coefficient have to be greater than 0.6 (Nunnally, 1978). Chu Hoang Trong and Nguyen Mong Ngoc (2008): "Many researchers agree that the Cronbach's Alpha coefficient from 0.8 to nearly 1, the scale of measurement as well, from 0.7 to 0.8 is used. The researchers also suggested that Cronbach's Alpha of 0.6 or more can be used in the case of working on new concepts or new to the respondents in the context of research. "

Quality variable

Cronbach's alpha coefficient = 0.640 > 0.6. Cronbach's alpha coefficient if Item Deleted of Q1 variable = 0.689 > 0.640 and Corrected Item-Total Correlation coefficient = 0.132 < 0.3 => Q1 variable was removed.

Price variable

Cronbach's Alpha coefficient = 0.540 < 0.6. However, the Cronbach's alpha coefficient if Item Deleted of P4 variable = 0.752 > 0.540 and Corrected Item-Total Correlation coefficient = 0.064 < 0.3 => P4 variable was removed.

Table 1. The interpretation of the observed variables in the research

Factors	Observed variables
Product quality (5 Observed variables)	<ul style="list-style-type: none"> - Beautiful packing (Q1) - Attractive color of noodle (Q2) - noodle before cooking is crisp (Q3) - the tough of noodle is suitable when using (Q4) - Delicious soup (Q5)
Price (4 Observed variables)	<ul style="list-style-type: none"> - The price matches the quality of instant noodle (P1) - The price matches students (P2) - Price is cheaper than other instant noodle (P3) - Annual price fluctuations (P4)
Marketing (3 Observed variables)	<ul style="list-style-type: none"> - Many promotions (M1) - Good advertising (M2) - Retail system is wide (M3)
Brand (4 Observed variables)	<ul style="list-style-type: none"> - Acecook is famous brand of instant noodle in Vietnam (B1) - Acecook has many high quality products (B2) - You can identify exactly the logo of Acecook (B3) - You can identify some products of Acecook (B4)
Favorite (5 Observed variables)	<ul style="list-style-type: none"> - You will continue to use “Hao Hao” in future (F1) - If new instant noodle is cheaper than “Hao Hao”, you will still buy “Hao Hao” (F2) - You will introduce “Hao Hao” to your acquaintance (F3) - If “Hao Hao” has a new product, you will buy it (F4) - You are satisfied with the quality of “Hao Hao” instant noodle (F5)

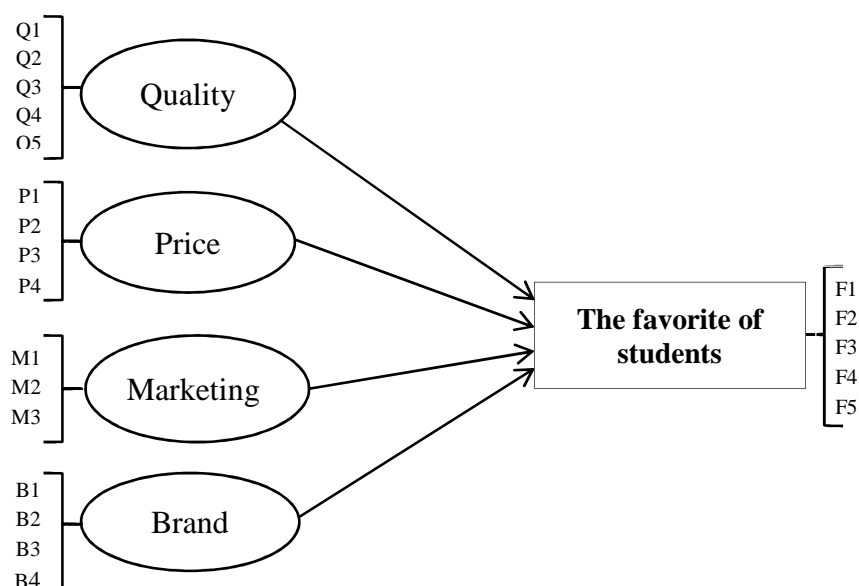


Figure 1: The suggested research model

Run the factor after P4 variable was removed, Cronbach's Alpha coefficients moment=0.752. P3 variable had Cronbach's Alpha if Item Deleted=0.804 > 0.752 but Corrected Item-Total Correlation coefficient=0.461 > 0.3 => P3 variable was considered.

Marketing variable

Marketing variable had Cronbach's alpha coefficient=0.208 < 0.6 => Removed all the marketing variables.

Brand variable

Cronbach's Alpha coefficient=0.731 > 0.6. The observed variables there are no variables with a coefficient of Cronbach's Alpha if Item Deleted > 0.731 => accepted all the variables.

Favorite variable.

Cronbach's alpha coefficient=0.755 > 0.6. Observed variables F2 with Cronbach's Alpha if Item Deleted =0.759 > 0.755 but Corrected Item-Total Correlation coefficient=0.428 > 0.3 => considered F2 variable.

3.2. Exploratory Factor Analysis (EFA)

When factor analysis, researchers are often interested in a number of criteria: the KMO coefficient ≥ 0.5 , the Barlett test sig ≤ 0.05 , the coefficient of loading factor (factor loading) > 0.3 and total variance extract $\geq 50\%$ (Trong and Ngoc, 2008; Hair et al, 1998; Gerbing and Anderson, 1988).

Exploratory Factor Analysis for the observed variables

Results of factor analysis showed that KMO=0.655 > 0.5, sig=0.000 < 0.05 => qualify to run factor of analysis.

Extracted variance=60.2% means that 11 observed variables explained 60.2% of the variability of the data. The remaining 39.8% was explained by other observed variables not exist in this model.

System load factor = 0.3, but the variables were still running and on the factor should eliminate variables doubt. There are only variable suspected P3 => P3 variable was removed.

Exploratory Factor Analysis 2nd, KMO=0.637 > 0.5, sig=0.000 < 0.05, extracted variance 62.4%, loading factor=0.3, but the variable and the factor should still continue to type variables Comfort doubt. However, all variables should suspect to group the factors we adjusted coefficient "suppress absolute values less than = 0.49"

In second time, results showed that the observed variables were satisfied. After analysis EFA factor, the observed variables were assembled into three factors with the following components:

- Factor 1: including B1, B2, B3, B4 named "brand".
- Factor 2: including Q2, Q3, Q4, Q5 named "Quality".

- Factor 3: including P2, P3 named "Price"
The second Cronbach's Alpha evaluated new scale with new components after factor analysis and result was:

- Factor "Brand" (including four observed variables) with Cronbach's alpha coefficient=0.731, the observed variables were satisfied.

- Factor "Quality" (including four observed variables) with Cronbach's alpha coefficient=0.689, the observed variables were satisfied.

- Factor "Price" (including two observed variables) with Cronbach's alpha coefficient=0.804, the observed variables were satisfied.

Exploratory Factor Analysis for favorite factor

Results of factor analysis showed that KMO=0.750>0.5, sig = 0.000<0.05 => qualify to run factor analysis.

Extracted variance=51.8% means that 5 observed variables explained 51.8% of the variability of the data set. The remaining 48.2% was explained by other observed variables not exist in this model. Although F2 variable was doubted, however when running the exploratory factor analysis was not mixed into the factor therefore accept F2.

3.3. Regression analysis

To run the regression, combined the average of the variables together with the compute function with the formula:

$$\text{Quality} = \text{Mean} (Q2 + Q3 + Q4 + Q5)$$

$$\text{Price} = \text{Mean} (P1 + P2)$$

$$\text{Brand} = \text{Mean} (B1 + B2 + B3 + B4)$$

$$\text{Favorite} = \text{Mean} (F1 + F2 + F3 + F4 + F5)$$

Regression analysis conducted to test the causality, the effects of three independent variables (quality, price, brand) the dependent variable (Favorite). Research model after testing the proposed model are as follows figure 2.

Results of the regression.

In the ANOVA table, sig=0.000 <0.05 => variables regression eligible to run.

Table coefficients, sig<0.05 => the variables are satisfied. VIF<5 => no the phenomenon of multi-collinear.

R² coefficient (R-square)=0.3. This means that the variation of the favorite 30% is due to the factors of quality, price and brand. Moreover, 70% of the variation was due to other factors that were not in this model.

The regression equation:

$$\text{The favorite} = 1.115 + 0.198 * \text{quality} + 0.163 * \text{price} + 0.324 * \text{brand}$$

The regression equation showed that there were three factors affected the favorite of student "Hao Hao": product quality, price and brand. In particular, the brand is the most influential factor (Beta coefficient of the variable was 0.352, the price variable was 0.236, the quality was 0.206). That showed Acecook is a strong brand.

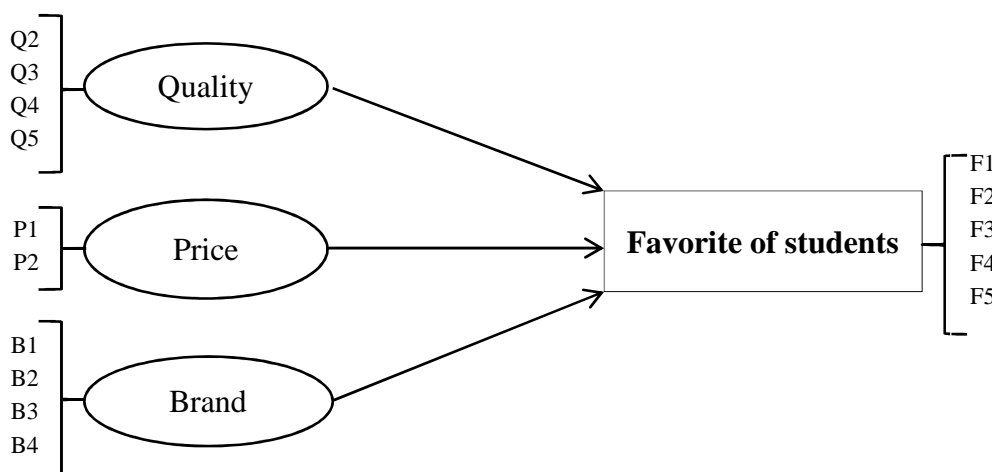


Figure 2. Model of research

Acecook products are high-quality products and “Hao Hao” is a successful product Acecook. In addition, the product quality factor and price factor were the reason of noodle brand favorite. Reasonable price with students, product quality was relatively good so “Hao Hao” won the hearts of students. The elements of marketing such as advertising, promotion or retail system not affected the students' favorite.

4. CONCLUSIONS

Research results found the scale of 15 observations (including 5 variables observed measure favorites). Thereby, there were three factors that affected to the student favorite: quality, price and brand. "Brand" was the most powerful factor to favorite of students. Some comments and recommendations for Acecook based on the regression equation to be able to consolidate and improve the students' favorite for “Hao Hao” product of the company:

- Product quality: the quality elements that make the student- color attractive color of noodle, crispy noodles before cooking, the tough of noodle and delicious soups. In general, the quality of the “Hao Hao” has met the needs of students and the basic elements to help “Hao Hao” attracted the students' use.

- Price: this was also a strong impact on the elements for students favorite brand bread. The product in accordance with quality and affordable student so they love this product is a necessity. Price a “Hao Hao” package on the market today range about 3500-4000 VND/package (0.175- 0.2 USD). This price is nearly equal to the students suggested price for a packet of noodles 4000-4500 VND (0.2-0.225 USD). Students can accept the retail price higher than the market price from 500-1000 VND/package (0.025-0.05 USD). If a price increase, product should increase quality as tough noodle improvement, soups taste and packaging more attractive as an explanation to customers. However, the rise of price will make students reluctant to buy the product and tend to purchase products have lower quality but the price was lower. “Hao Hao” has an

advantage on price, the company should grasp this advantage and they will have the appropriate sales strategies for each stage.

- Brand: according to the survey, this was the most influential factor to a student favorite for this product. Acecook is the famous brand in the noodle industry in Vietnam. The company has many high-quality products should be known to many students and “Hao Hao” is a successful product of the company when they took the majority of the trust of the students (118/150 students surveyed use instant noodles “Hao Hao” 78.7%). Thus, the product “Hao Hao” in particular and brand Acecook said general have a certain place for a student market segment, a small part of Vietnamese consumers.

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