**GCM 614**

# POSITIONING OF THE CIGARETTE BRANDS IN THE STUDENT SEGMENT

**NEAR EAST UNIVERSITY**
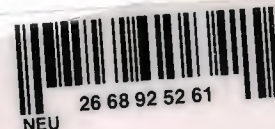
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## 1. INTRODUCTION

In the marketing sense the very basic aim of the companies especially in competitive markets in making profit through long range consumer satisfaction.

Identifying the market is the beginning step in the marketing process. The purpose here is to see and understand what the customers want and what the company can do to satisfy them. An accurate marketing mix could be set only after that step, which is analysing customers needs and preferences.

The concepts of "Segmenting the market" and "Positioning the products accordingly" are very essential issues for marketers during that step.

In that study the target population was the set consisting of students who consume cigarette. Actually this is only a segment or in other words a subset of the whole cigarette market. Primary data for that study was collected only from the studens.

First a short study on secondary data was carried out. To find out consumer characteristics and their brand perception a questionnaire was designed and 110 students consuming cigarette were asked for their opinions. Data obtained from the respodents helped us more or less to understand some characteristics of the target population. Their opinions on their favourite brands enabled us to position different brands with respect to several product characteristics such as taste, blend of tobacco, burning, smoke, content of nicotine and etc.

Finally with the interpretation of the results it was searched for opportunities and niches in the market which a company could exploit.

This research project is more application oriented than theoretical issues. The analysis techniques such as statistical tests are not explained in the text. Only their results have been used. The essence of that project was how the accumulated data and the tets results obtained from this raw data would be interpreted, how these interpretations could be transformed into managerial decisions.

## 2. GENERAL INFORMATION ABOUT THE TOPIC

In the international cigarette market we see a very tight competition among American and English originated companies. For example an English originated firm Rothmans International is continiuing its activities in 160 countries under 246 brands and in 46 factories. Well known brands of Rothmans International are Rothmans International, Rothmans Kingsize,

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Cartier, Lord Extra, Best (in Turkey). Other gigantic tobacco companies have also numerous brands and factories all over the world. An other big brother is Philip Morris with Marlboro and Parliament, R.J. Reynolds with Camel.[1]

Some of these companies are using horizontal diversification policies because of the negative trends in cumulative sales. In the long range many of them are likely to shift other profitable areas. For example Philip Morris bought oft Craft in food industry. Rothmans have many types of luxury consumption goods in its product portfolio other than tobacco (Cartier and Dunhill lighters, Cross and Mont-Blanc Pens, parfumes and etc.).

While cumulative cigarette sales are declining in western countries, in Turkey the sales trend in upward sloped. The cause for the negative sales trend in other countries could be explained trough the powerfull anti-smoke and health care compaigns. On the other hand many of the medical investigations on the "Tobacco and Health" issues are sponsered by the firms in that industry. Inspite all of that conflicts the cigarette industry in the world is still making profit.[2]

Cigarette industry in Turkey differs from the world in terms of competitive techniques. Because TEKEL is a monopoly in Turkey which is being protected by the government very tightly. Othervise TEKEL would have no chance to survive among the other international brands. TEKEL is constraining the competitive activies of the foreign tobacco firms by setting price and distribution regulations.

Since having no right on distribution and price foreign companies have no chance for forward integnation. But the way for backward integration is open. (For example: Best is being produced in Turkey.)

Yearly cigarette consumption rate for cigarette consumers in Turkey was 1257 pieces per person. That was arround 2500 in U.S.A. and Germany, 2400 pieces in Switzerland.[3]

After that short information about the topic let us turn back to the research procedure.

## 3. PROBLEM FORMULATION
As stated in the introduction stage the purpose of the study was to

[1] .) O. Akbayir, N. Aksoy, "Competitive Strategies INC. Cigarette Industry", Term Project in B.U., p.35, 1990.

[2] .) Cummings K Michael, Sciandra Russel "What Sientists Funded by the Tobacco Industry Believe About the Hazards of Cigarette Smoking", American Journal of Public Health, p.895, July 1991, Vol.81, No.7.

[3] .) Akbayir, Aksoy, p.36.

obtain data about consumer and product characteristics in the cigarette market. The target consumer population was selected as students.

The variables measured in that study were as follows:
- Brand loyality                Question no : 1, 4
- Consumption frequency     Question no : 2
- Brand selection criteria      Question no : 3
- Brand first choice            Question no : 5
           second choice          Question no : 6
- Smoking time (years)       Question no : 7
- Product features             Question no : 8, 9, 10, 11, 12, 13
- Demographic characteristics    Question no : 14, 15, 16, 17, 18, 19

The original questionnaire was prepared in Turkish. The questionnaire and the results are then translated into English. Both English and Turkish questionnaires are available in Appendix A.

## 4. SAMPLING PROCEDURE

In that study a convenience sampling plan was employed.

The size of the sample was determined from the standart deviation. The following formula was used:

$$n = \frac{z^2}{r^2} * \frac{\sigma^2}{\mu^2}$$

n = number of elements in the sample
r = desired relative precision
σ = standart deviation
μ = average score of the observations
z = the value obtained from the standart normal distribution table

Since    r = 0.1     (relative precision level),
         z = 1.96   (Obtained from the normal distribution curve for the
                      assumed confidence interval)
         μ = 3       (Expected value of the scale midpoint as average score
                      because a 5 point scale is being used to determine the
                      features of the product),
                         $\underline{1}\ \underline{2}\ \underline{3}\ \underline{4}\ \underline{5}$
         σ = 1.6    (Average standart deviation obtained from a table
                      displaying the variance ranges for several numbers of
                      scale points),[4]

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[4].) Gilbert A., Churchill Jr., "Marketing Research", p.588.

$$n = \frac{1,96^2}{0,1^2} * \frac{1,6^2}{3^2} = 109$$

110 respodents were asked for their opinions. 50 of the participants were from the Istanbul University, 40 from the Technical University of Istanbul and finally 20 students from Bosphorus University were interviewed.

## 5. RESULTS OF THE RESEARCH

After the questionnaires are collected back they have been tabulated and have been entered into the computer for analysis. At the data entry level the type of questionnaire has been kept as the same except the brand selection criteria question (Question # 4). This question has been divided into 3 questions as first criteria of brand choice, second criteria of brand choice, third criteria of brand choice. That is why the numbers of the questions on the computer are different from the numbers on paper beginning from the 4th question (# 4 on paper is  # 6 on the output, # 5 is  # 7  etc.). The questionnaire text file, the questionnaire definition file  and the tabulated pure observations are at the Appendix B.

### 5.1. FREQUENCY DISTRIBUTIONS

Now let us examine what opinions do the respondents have on each individual question.

QUESTION NUMBER : 1
Q1. WHEN YOU ARE OFFERED A CIGARETTE SOMEWHERE

FREQUENCY  DISTRIBUTION

| | FREQUENCY | % IN TOTAL | % IN RESPONSE |
|---|---|---|---|
| 0. Null | 1 | 0.01 | |
| 1. If not fav. reject | 56 | 0.51 | 0.51 |
| 2. Accept | 40 | 0.36 | 0.37 |
| 3. Other | 13 | 0.12 | 0.12 |
| TOTAL | 110 | 1.00 | 1.00 |

| | | |
|---|---|---|
| 0 | 1 | % 1 |
| 1 | 56 | % 51 |
| 2 | 40 | % 36 |
| 3 | 13 | % 12 |
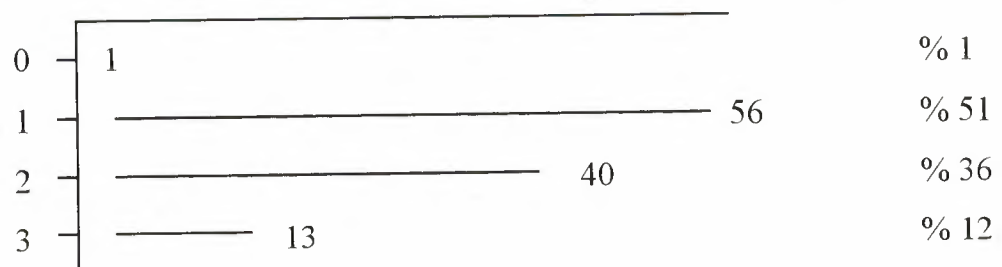
For the first question we see that 51 percent of the respondents do not accept any cigarette if it is not their brand. 40 percent of the respondents accept the cigarette without taking care on the brand. Third option "other" includes responses such as "it depends on the situation" or simply "I do not accept from anyone".

QUESTION NUMBER : 2
Q2. YOUR CIGARETTE CONSUMPTION FREQUENCY

FREQUENCY DISTRIBUTION

|  | FREQUENCY | % IN TOTAL | % IN RESPONSE |
|---|---|---|---|
| 0. Null | 0 | 0.00 | |
| 1. More than 1 pack | 20 | 0.18 | 0.18 |
| 2. One pack per day | 31 | 0.28 | 0.28 |
| 3. Half pack per day | 30 | 0.27 | 0.27 |
| 4. 1 pack in 3/4 days | 21 | 0.19 | 0.19 |
| 5. One pack per week | 8 | 0.07 | 0.07 |
| TOTAL | 110 | 1.00 | 1.00 |

| | | |
|---|---|---|
| 0 — 0 | | % 0 |
| 1 — ———————— 20 | | % 18 |
| 2 — ———————————— 31 | | % 28 |
| 3 — ——————————— 30 | | % 27 |
| 4 — ———————— 21 | | % 19 |
| 5 — ———— 8 | | % 7 |
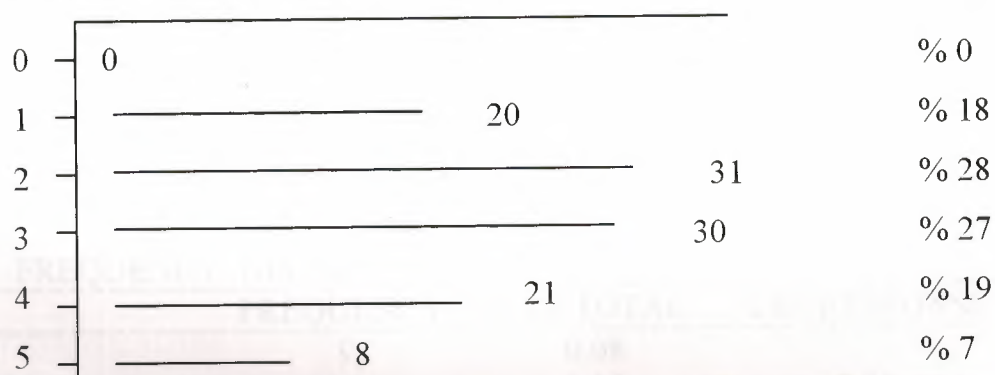
QUESTION NUMBER : 3
Q3 . FIRST CRITERIA OF CHOICE

FREQUENCY DISTRIBUTION

|  | FREQUENCY | % IN TOTAL | % IN RESPONSE |
|---|---|---|---|
| 0. Null | 2 | 0.02 | |
| 1. Its burn | 10 | 0.09 | 0.09 |
| 2. Taste in the mouth | 55 | 0.50 | 0.51 |
| 3. Its smell | 13 | 0.12 | 0.12 |
| 4. Its price | 6 | 0.05 | 0.06 |
| 5. Its filter | 3 | 0.03 | 0.03 |
| 6. Blend | 18 | 0.16 | 0.17 |
| 7. Bandage of paper | 1 | 0.01 | 0.01 |
| 8. Other | 2 | 0.02 | 0.02 |
| TOTAL | 110 | 1.00 | 1.00 |

When the respondents are asked for their first criteria of cigarette choice the dominant criteria is found as taste in mouth which is followed by the "blend of tobacco" and "smell" respectively.

| | | |
|---|---|---|
| 0 | — 2 | % 2 |
| 1 | —— 10 | % 9 |
| 2 | ———————— 55 | % 50 |
| 3 | ——— 13 | % 12 |
| 4 | —— 6 | % 5 |
| 5 | — 3 | % 3 |
| 6 | ————— 18 | % 16 |
| 7 | — 1 | % 1 |
| 8 | — 2 | % 2 |
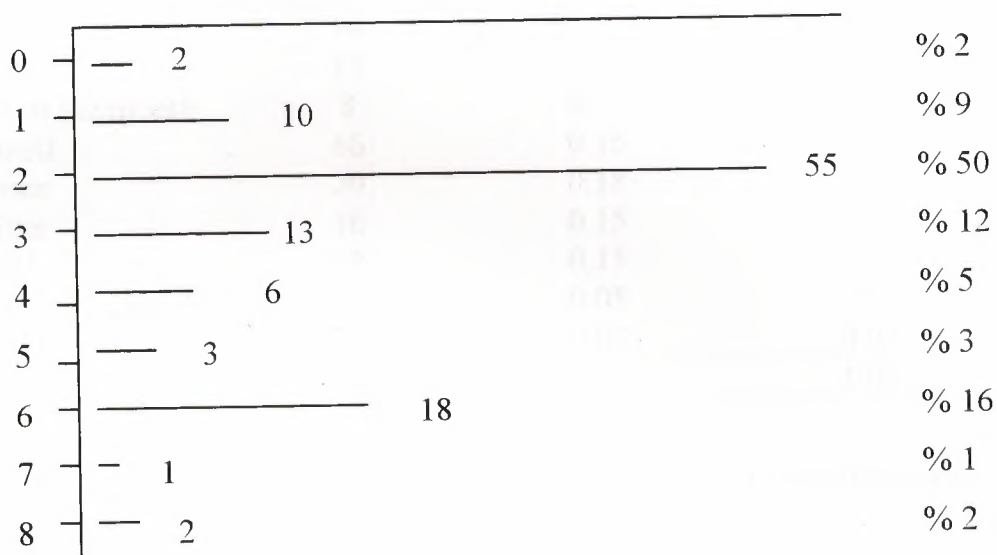
QUESTION NUMBER : 4
Q4 . SECOND CRITERIA OF CHOICE

FREQUENCY DISTRIBUTION

| | FREQUENCY | % IN TOTAL | % IN RESPONSE |
|---|---|---|---|
| 0. Null | 9 | 0.08 | |
| 1. Its burn | 6 | 0.05 | 0.06 |
| 2. Taste in the mouth | 20 | 0.18 | 0.20 |
| 3. Its smell | 26 | 0.24 | 0.26 |
| 4. Its price | 19 | 0.17 | 0.19 |
| 5. Its filter | 7 | 0.06 | 0.07 |
| 6. Blend | 19 | 0.17 | 0.19 |
| 7. Bandage of paper | 3 | 0.03 | 0.03 |
| 8. Other | 1 | 0.01 | 0.01 |
| TOTAL | 110 | 1.00 | 1.00 |

In the second criteria we do not see any dominat response as in the previous question.

QUESTION NUMBER : 5
Q5 . THIRD CRITERIA OF CHOICE

FREQUENCY  DISTRIBUTION

| | FREQUENCY | % IN TOTAL | % IN RESPONSE |
|---|---|---|---|
| 0. Null | 14 | 0.13 | |
| 1. Its burn | 17 | 0.15 | 0.18 |
| 2. Taste in the mouth | 8 | 0.07 | 0.08 |
| 3. Its smell | 16 | 0.15 | 0.17 |
| 4. Its price | 20 | 0.18 | 0.21 |
| 5. Its filter | 16 | 0.15 | 0.17 |
| 6. Blend | 12 | 0.11 | 0.12 |
| 7. Bandage of paper | 5 | 0.05 | 0.05 |
| 8. Other | 2 | 0.02 | 0.02 |
| TOTAL | 110 | 1.00 | 1.00 |

If we combine the last three questions we see that the most important criteria for their choice is "the taste in mouth" second is "the smell of the cigarette" third is "slend of tobacco". Price was expected to be in the first three criteria but it was not. Only 45 respondents marked price as one of the three criteria. So we can conclude that price was not so important as expected. With a rough interpretation we can say that price elasticity of demand should be quite low.

QUESTION NUMBER : 6
Q6 . WHEN  I  BY  A CIGARETTE

FREQUENCY  DISTRIBUTION

| | FREQUENCY | % IN TOTAL | % IN RESPONSE |
|---|---|---|---|
| 0. Null | 1 | 0.01 | |
| 1. Insist on favourite | 44 | 0.40 | 0.40 |
| 2. Not insist on | 63 | 0.57 | 0.58 |
| 3. Brand not important | 2 | 0.02 | 0.02 |
| 4. Other | 0 | 0.00 | 0.00 |
| TOTAL | 110 | 1.00 | 1.00 |

The rate 40 percent of the respondents insisting on their favorite brand shows that the brand loyality is not much. But most of the respondents are likely to buy a similar brand in terms of product specifications.

Now question # 7 shows the market share of the brands in the student segment.

## FREQUENCY DISTRIBUTION

| | FREQUENCY | % IN TOTAL | % IN RESPONSE |
|---|---|---|---|
| 0. Null | 0 | 0.00 | |
| 1. Marlboro | 14 | 0.13 | 0.13 |
| 2. Marlboro (short) | 0 | 0.00 | 0.00 |
| 3. Marlboro Light | 2 | 0.02 | 0.02 |
| 4. Camel (short) | 12 | 0.11 | 0.11 |
| 5. Camel (long) | 1 | 0.01 | 0.01 |
| 6. Camel Light | 1 | 0.01 | 0.01 |
| 7. Best | 2 | 0.02 | 0.02 |
| 8. Kansas | 2 | 0.02 | 0.02 |
| 9. Maltepe (short) | 14 | 0.13 | 0.13 |
| 10. Maltepe (long) | 3 | 0.03 | 0.03 |
| 11. Tekel 2000 | 51 | 0.46 | 0.46 |
| 12. Samsun (short) | 1 | 0.01 | 0.01 |
| 13. Samsun (long) | 1 | 0.01 | 0.01 |
| 14. Other | 6 | 0.05 | 0.05 |
| TOTAL | 110 | 1.00 | 1.00 |

| | | |
|---|---|---|
| 0 | 0 | % 0 |
| 1 | 14 | % 13 |
| 2 | 0 | % 0 |
| 3 | 2 | % 2 |
| 4 | 12 | % 11 |
| 5 | 1 | % 1 |
| 6 | 1 | % 1 |
| 7 | 2 | % 2 |
| 8 | 2 | % 2 |
| 9 | 14 | % 13 |
| 10 | 3 | % 3 |
| 11 | 51 | % 46 |
| 12 | 1 | % 1 |
| 13 | 1 | % 1 |
| 14 | 6 | % 5 |
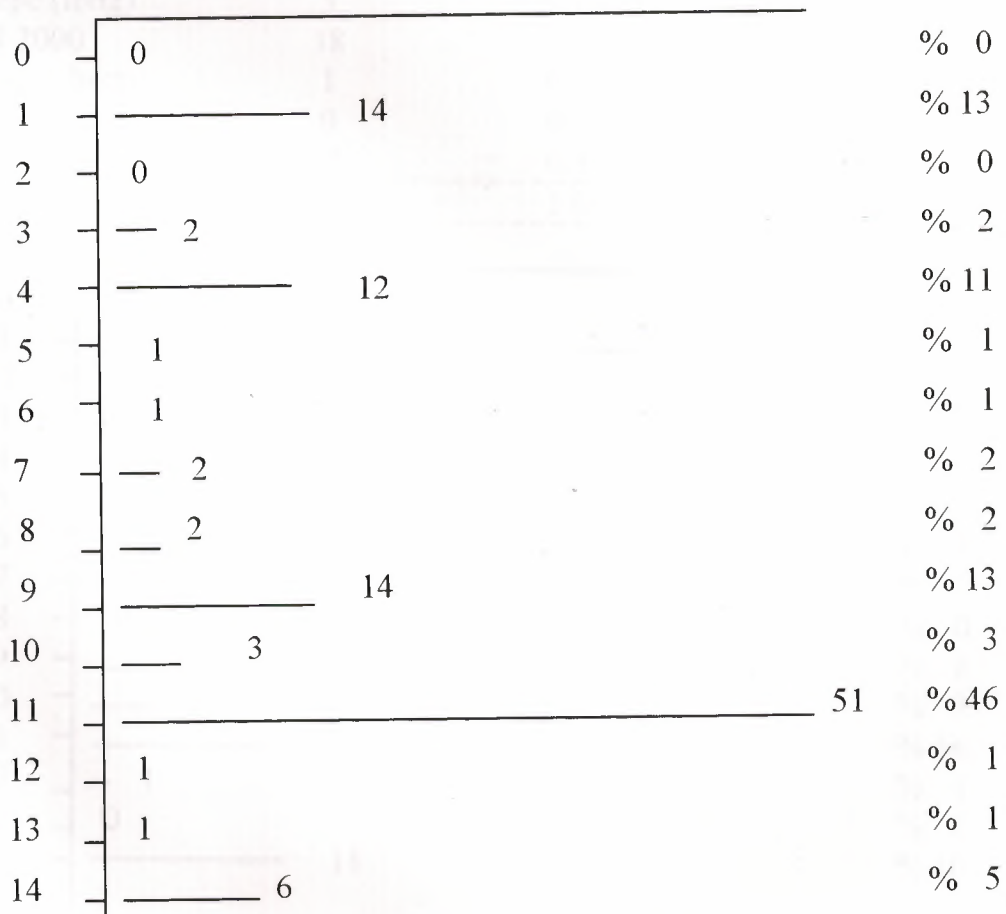
As displayed in the graph Tekel 2000 is the dominating brand in the market with % 45 market share. Tekel 2000 is being followed by Marlboro, Maltepe (short) and Camel (short) with market shares of 12 to 14 percent.

## Q8 . SECOND BRAND CHOICE

### FREQUENCY DISTRIBUTION

|  | FREQUENCY | % IN TOTAL | % IN RESPONSE |
|---|---|---|---|
| 0. Null | 0 | 0.00 | |
| 1. Marlboro | 28 | 0.25 | 0.25 |
| 2. Marlboro (short) | 3 | 0.03 | 0.03 |
| 3. Marlboro Light | 8 | 0.07 | 0.07 |
| 4. Camel (short) | 13 | 0.12 | 0.12 |
| 5. Camel (long) | 11 | 0.10 | 0.10 |
| 6. Camel Light | 3 | 0.03 | 0.03 |
| 7. Best | 2 | 0.02 | 0.02 |
| 8. Kansas | 0 | 0.00 | 0.00 |
| 9. Maltepe (short) | 9 | 0.08 | 0.08 |
| 10. Maltepe (long) | 3 | 0.03 | 0.03 |
| 11. Tekel 2000 | 18 | 0.16 | 0.16 |
| 12. Samsun (short) | 1 | 0.01 | 0.01 |
| 13. Samsun (long) | 0 | 0.00 | 0.00 |
| 14. Other | 11 | 0.10 | 0.10 |
| TOTAL | 110 | 1.00 | 1.00 |

| | | |
|---|---|---|
| 0 | 0 | % 0 |
| 1 | 28 | % 25 |
| 2 | 3 | % 3 |
| 3 | 8 | % 7 |
| 4 | 13 | % 12 |
| 5 | 11 | % 11 |
| 6 | 3 | % 3 |
| 7 | 2 | % 2 |
| 8 | 0 | % 0 |
| 9 | 9 | % 8 |
| 10 | 3 | % 3 |
| 11 | 18 | % 16 |
| 12 | 1 | % 1 |
| 13 | 0 | % 0 |
| 14 | 11 | % 10 |

9
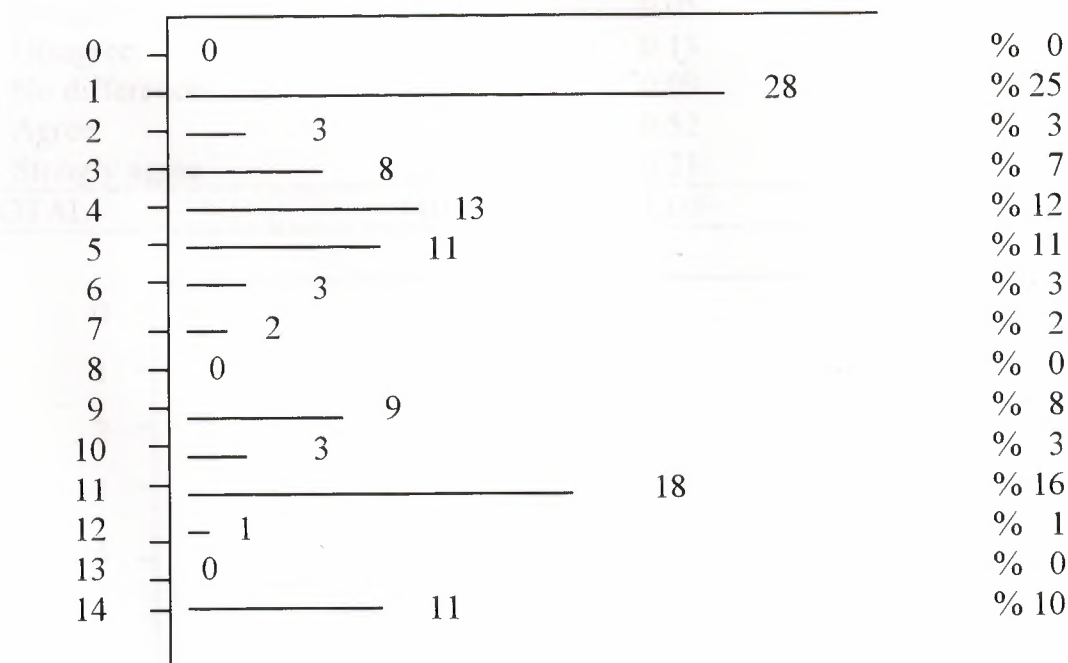
Most of the respondents favourite as the second choice is Marlboro and Tekel 2000.

QUESTION NUMBER : 9
Q9 . HOW LONG HAVE BEEN SMOKING ?

FREQUENCY   DISTRIBUTION

|  | FREQUENCY | % IN TOTAL | % IN RESPONSE |
|---|---|---|---|
| 0. Null | 0 | 0.00 | |
| 1. Less than 1 year | 9 | 0.08 | 0.08 |
| 2. 1 - 3 years | 34 | 0.31 | 0.31 |
| 3. 3 - 5 years | 28 | 0.25 | 0.25 |
| 4. More than 5 years | 39 | 0.35 | 0.35 |
| TOTAL | 110 | 1.00 | 1.00 |

Questions  #10  to  #15  were propositions on a five point scale. General frequency distributions without considering their brand are below.

QUESTION NUMBER : 10
Q10 . THE BRAND TASTES PLEASENTLY IN MY MOUTH

FREQUENCY   DISTRIBUTION

|  | FREQUENCY | % IN TOTAL | % IN RESPONSE |
|---|---|---|---|
| 0. Null | 0 | 0.00 | |
| 1. Stongly disagree. | 6 | 0.05 | 0.05 |
| 2. Disagree. | 14 | 0.13 | 0.13 |
| 3. No difference. | 10 | 0.09 | 0.09 |
| 4. Agree | 57 | 0.52 | 0.52 |
| 5. Stongly agree | 23 | 0.21 | 0.21 |
| TOTAL | 110 | 1.00 | 1.00 |

| | | |
|---|---|---|
| 0 | 0 | % 0 |
| 1 | 6 | % 5 |
| 2 | 14 | % 13 |
| 3 | 10 | % 9 |
| 4 | 57 | % 52 |
| 5 | 23 | % 21 |
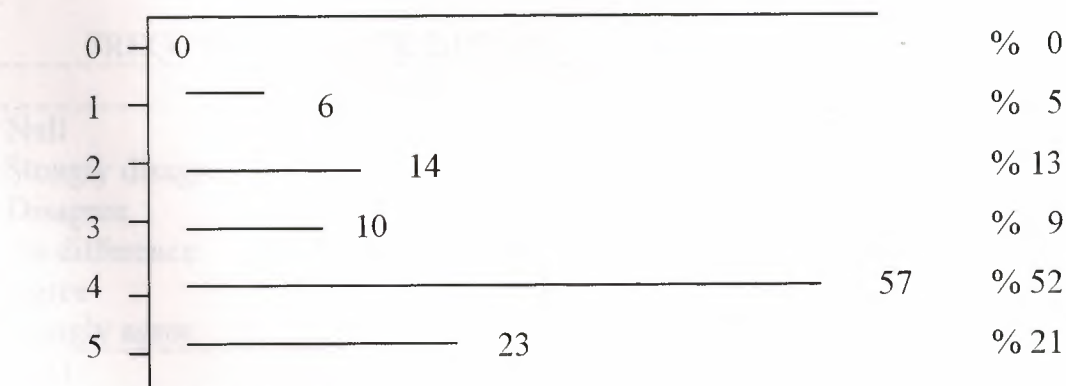
## QUESTION NUMBER : 11
## Q11 . THE SMELL OF THE FAVOURITE BRAND IS LIGHT

### FREQUENCY   DISTRIBUTION

|  | FREQUENCY | % IN TOTAL | % IN RESPONSE |
|---|---|---|---|
| 0. Null | 0 | 0.00 | |
| 1. Stongly disagree. | 9 | 0.08 | 0.08 |
| 2. Disagree. | 20 | 0.18 | 0.18 |
| 3. No difference. | 9 | 0.08 | 0.08 |
| 4. Agree | 59 | 0.54 | 0.54 |
| 5. Stongly agree | 13 | 0.12 | 0.12 |
| TOTAL | 110 | 1.00 | 1.00 |

| | | |
|---|---|---|
| 0 | 0 | % 0 |
| 1 | 9 | % 8 |
| 2 | 20 | % 18 |
| 3 | 9 | % 8 |
| 4 | 59 | % 54 |
| 5 | 13 | % 12 |
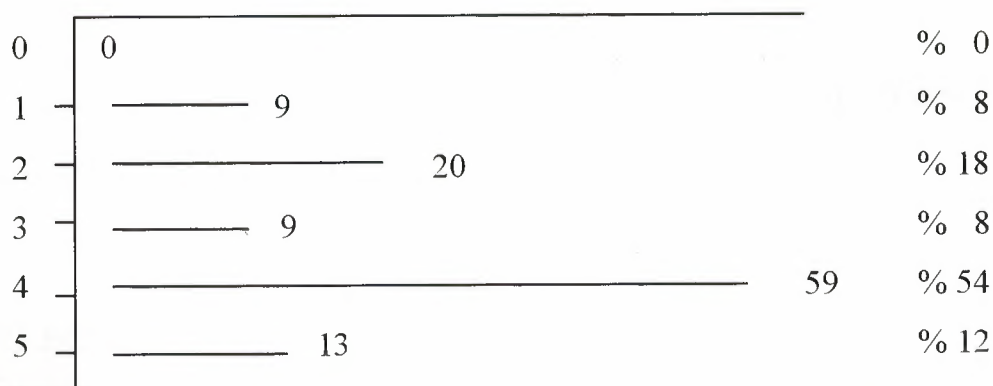
## QUESTION NUMBER : 12
## Q12 . THE NICOTINE AND TAR CONTENT IS LOW

### FREQUENCY   DISTRIBUTION

|  | FREQUENCY | % IN TOTAL | % IN RESPONSE |
|---|---|---|---|
| 0. Null | 0 | 0.00 | |
| 1. Stongly disagree. | 18 | 0.16 | 0.16 |
| 2. Disagree. | 41 | 0.37 | 0.37 |
| 3. No difference. | 26 | 0.24 | 0.24 |
| 4. Agree | 18 | 0.16 | 0.16 |
| 5. Stongly agree | 7 | 0.06 | 0.06 |
| TOTAL | 110 | 1.00 | 1.00 |

| | | | |
|---|---|---|---|
| 0 | 0 | | % 0 |
| 1 | ————— 18 | | % 16 |
| 2 | —————————— 41 | | % 37 |
| 3 | ———————— 26 | | % 24 |
| 4 | ————— 18 | | % 16 |
| 5 | ——— 7 | | % 6 |
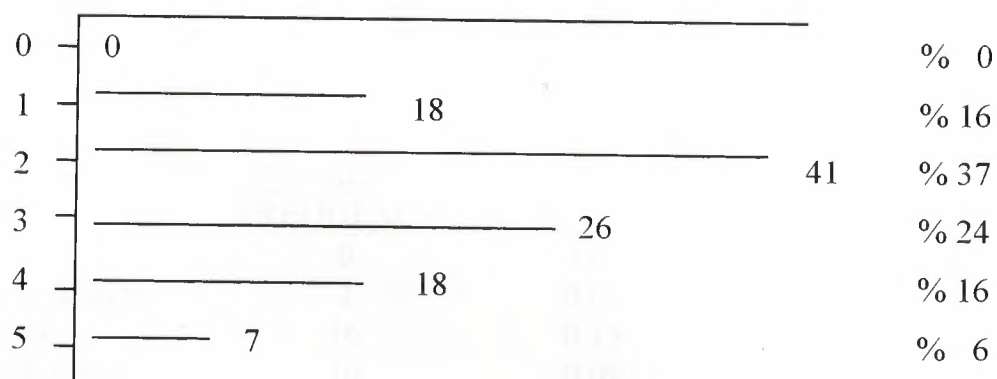
QUESTION NUMBER : 13
Q13 . THE PRICE OF THE FAVOURITE BRAND IS LOW

FREQUENCY   DISTRIBUTION

| | FREQUENCY | % IN TOTAL | % IN RESPONSE |
|---|---|---|---|
| 0. Null | 0 | 0.00 | |
| 1. Stongly disagree. | 28 | 0.25 | 0.25 |
| 2. Disagree. | 45 | 0.41 | 0.41 |
| 3. No difference. | 13 | 0.12 | 0.12 |
| 4. Agree | 17 | 0.15 | 0.15 |
| 5. Stongly agree | 7 | 0.06 | 0.06 |
| TOTAL | 110 | 1.00 | 1.00 |

| | | | |
|---|---|---|---|
| 0 | 0 | | % 0 |
| 1 | —————————— 28 | | % 25 |
| 2 | ———————————— 45 | | % 41 |
| 3 | ———— 13 | | % 12 |
| 4 | —————— 17 | | % 15 |
| 5 | ——— 7 | | % 6 |
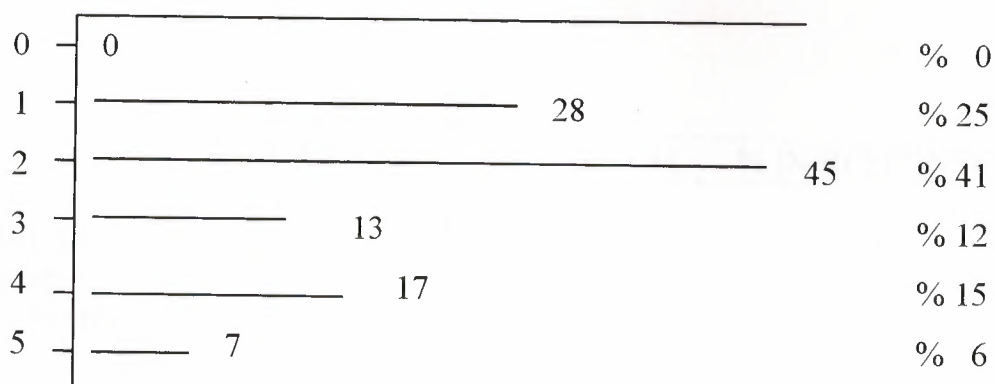
QUESTION NUMBER : 14
Q14 . THE QUALITY OF THE BLEND IS HIGH

### FREQUENCY DISTRIBUTION

|  | FREQUENCY | % IN TOTAL | % IN RESPONSE |
|---|---|---|---|
| 0. Null | 0 | 0.00 | |
| 1. Stongly disagree. | 2 | 0.02 | 0.02 |
| 2. Disagree. | 16 | 0.15 | 0.15 |
| 3. No difference. | 10 | 0.09 | 0.09 |
| 4. Agree | 59 | 0.54 | 0.54 |
| 5. Stongly agree | 23 | 0.21 | 0.21 |
| TOTAL | 110 | 1.00 | 1.00 |

| | | | |
|---|---|---|---|
| 0 | 0 | | % 0 |
| 1 | 2 | | % 2 |
| 2 | 16 | | % 15 |
| 3 | 10 | | % 9 |
| 4 | | 59 | % 54 |
| 5 | 23 | | % 21 |
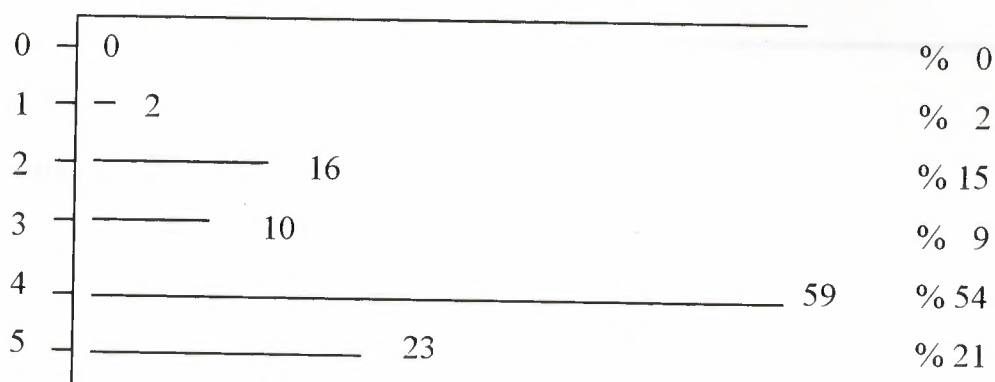
QUESTION NUMBER : 15
Q15 . THE CIGARETTE BURNS SMOOTHLY

### FREQUENCY DISTRIBUTION

|  | FREQUENCY | % IN TOTAL | % IN RESPONSE |
|---|---|---|---|
| 0. Null | 0 | 0.00 | |
| 1. Stongly disagree. | 1 | 0.01 | 0.01 |
| 2. Disagree. | 15 | 0.14 | 0.14 |
| 3. No difference. | 5 | 0.05 | 0.05 |
| 4. Agree | 58 | 0.53 | 0.53 |
| 5. Stongly agree | 31 | 0.28 | 0.28 |
| TOTAL | 110 | 1.00 | 1.00 |

13

| | | | |
|---|---|---|---|
| 0 | 0 | | % 0 |
| 1 | 1 | | % 1 |
| 2 | ——— 15 | | % 14 |
| 3 | —— 5 | | % 5 |
| 4 | ————————— 58 | | % 53 |
| 5 | ——————— 31 | | % 28 |
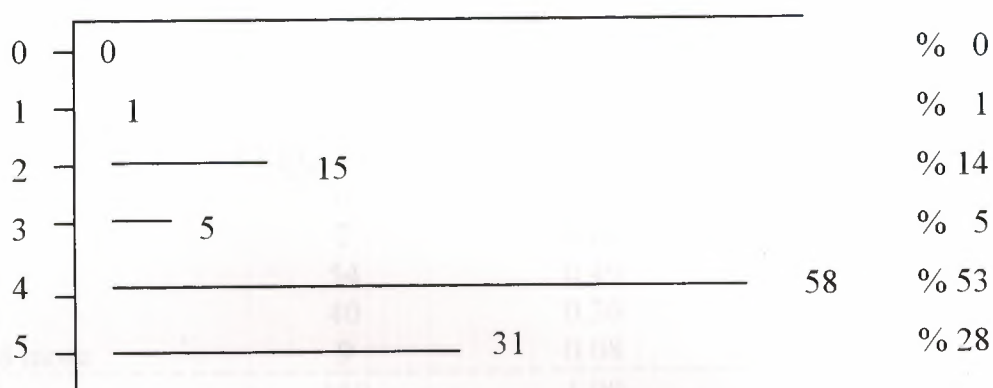
The last part of the questionnaire was consisting of demographic features of the respondents. They are #16 to #21.

QUESTION NUMBER : 16
Q16 . AGE

### FREQUENCY DISTRIBUTION

| | FREQUENCY | % IN TOTAL | % IN RESPONSE |
|---|---|---|---|
| 0. Null | 0 | 0.00 | |
| 1. - 18 | 1 | 0.01 | 0.01 |
| 2. 18 - 20 | 15 | 0.14 | 0.14 |
| 3. 21 - 23 | 56 | 0.51 | 0.51 |
| 4. 24 - 26 | 29 | 0.26 | 0.26 |
| 5. 27 - 29 | 6 | 0.05 | 0.05 |
| 6. 29 - 31 | 3 | 0.03 | 0.03 |
| TOTAL | 110 | 1.00 | 1.00 |

QUESTION NUMBER : 17
Q17 . SEX

### FREQUENCY DISTRIBUTION

| | FREQUENCY | % IN TOTAL | % IN RESPONSE |
|---|---|---|---|
| 0. Null | 0 | 0.00 | |
| 1. Male | 61 | 0.55 | 0.55 |
| 2. Female | 49 | 0.45 | 0.45 |
| TOTAL | 110 | 1.00 | 1.00 |

QUESTION NUMBER : 18
Q18 . SIZE OF THE FAMILY

### FREQUENCY DISTRIBUTION

|  | FREQUENCY | % IN TOTAL | % IN RESPONSE |
|---|---|---|---|
| 0. Null | 0 | 0.00 | |
| 1. 1 - 2 | 7 | 0.06 | 0.06 |
| 2. 3 - 4 | 54 | 0.49 | 0.49 |
| 3. 5 - 6 | 40 | 0.36 | 0.36 |
| 4. 7 and more | 9 | 0.08 | 0.08 |
| TOTAL | 110 | 1.00 | 1.00 |

QUESTION NUMBER : 19
Q19 . YOUR RESIDENTIAL HOUSE/FLAT

### FREQUENCY DISTRIBUTION

|  | FREQUENCY | % IN TOTAL | % IN RESPONSE |
|---|---|---|---|
| 0. Null | 0 | 0.00 | |
| 1. Is self owned | 58 | 0.53 | 0.53 |
| 2. Is rented | 27 | 0.25 | 0.25 |
| 3. Residence | 3 | 0.03 | 0.03 |
| 4. Dormitory | 22 | 0.20 | 0.20 |
| 5. Other | 0 | 0.00 | 0.00 |
| TOTAL | 110 | 1.00 | 1.00 |

QUESTION NUMBER : 20
Q20 . TYPE OF RESIDENCE

### FREQUENCY DISTRIBUTION

|  | FREQUENCY | % IN TOTAL | % IN RESPONSE |
|---|---|---|---|
| 0. Null | 0 | 0.00 | |
| 1. With family | 58 | 0.53 | 0.53 |
| 2. Live alone | 8 | 0.07 | 0.07 |
| 3. With friends | 17 | 0.15 | 0.15 |
| 4. At dormitory | 25 | 0.23 | 0.23 |
| 5. Other | 2 | 0.02 | 0.02 |
| TOTAL | 110 | 1.00 | 1.00 |

QUESTION NUMBER : 21
Q21 . MONTHLY INCOME OF FAMILY

FREQUENCY  DISTRIBUTION

| | FREQUENCY | % IN TOTAL | % IN RESPONSE |
|---|---|---|---|
| 0. Null | 2 | 0.02 | |
| 1.                    - 20.000.000 | 10 | 0.09 | 0.09 |
| 2.  20.000.001- 40.000.000 | 27 | 0.25 | 0.25 |
| 3.  40.000.001- 60.000.000 | 24 | 0.22 | 0.22 |
| 4.  60.000.001- 80.000.000 | 25 | 0.23 | 0.23 |
| 5.  80.000.001-100.000.000 | 10 | 0.09 | 0.09 |
| 6. 100.000.001-        + | 12 | 0.11 | 0.11 |
| TOTAL | 110 | 1.00 | 1.00 |

These were the results of the one way tabulation. Now let us examin the two way (cross) tabulations.

## 5.2. CROSS TABULATIONS

In that part of the project it was searched for the relation between two variables. For that purpose first cross tables consisting of pure observations and second normalised cross tables (by rows and by columns) have been obtained from the software package. Actually chi-square, r, F and several other statistics could be calculated to justify the hypotheses. But the aim here was not tofill the papers with numbers.

Since these are only tools to make the final judgement we rely on the observations rather than their statistical results that should not be understood as the statistics are totally unreliable. All we want to emphisize is that the statistical tests are useful but sensitive tools, their underlying assumptions should be understood well before employing these techniques to make final judgements.

For example in the chi-square test when the number of observations in a particular cell is less than five that is a threaten on the reliability of the test results.

The list below consists of relationships that we are searching for their justification. In each hypothesis we argue that the observations are occuring as a result of randomness or simply by chance. After the calculation of the statistics we will test each hypothesis whether we will be able to reject the hypothesis (That will mean : The observations are not distributed only by chance there must be a reason.) or we will accept the null hypothesis.

Ho : There is no significant relationship between Question A and Question B.

Ha : Alternative hypothesis is that there may be a reason for the nonrandom characteristic of the distribution.

We do the same hypothesis testing for all of the following cross tabulations.

Although the availabilty of the F and t statistics in the cross tabulation chi-square test is thought to be enough to interpret the results. On the other hand the value of "r" (correlation coefficient) shows the strength and the direction of the relation which is searched to find out.

The list of the hypotheses tests and the two way tabulations is as follows :

| Question A. | Question B. |
|---|---|
| 1. Q1. When cigarette offered and | Q2. Consumption frequency |
| 2. Q1. When cigarette offered and | Q6. Brand insistance |
| 3. Q2. Consumption frequency and | Q9. Smoking time |
| 4. Q2. Consumption frequency and | Q10. Opinion on taste in mouth |
| 5. Q2. Consumption frequency and | Q11. Opinion on smell |
| 6. Q2. Consumption frequency and | Q12. Opinion on nicotine rate |
| 7. Q2. Consumption frequency and | Q13. Opinion on price |
| 8. Q2. Consumption frequency and | Q14. Opinion on the blend |
| 9. Q1. When cigarette offered and | Q17. Sex |
| 10. Q2. Consumption frequency and | Q17. Sex |
| 11. Q2. Consumption frequency and | Q20. Type of residence |
| 12. Q2. Consumption frequency and | Q21. Income |
| 13. Q6. Brand insistance and | Q17. Sex |
| 14. Q6. Brand insistance and | Q21. Income |
| 15. Q6. Brand insistance and | Q7. Favourite Brand |

If the calculated chi-square value is less than the critical value obtained from the table (for a specified degree of freedom and confidence level) Ho will be accepted othervise rejected. Confidence level is taken as %95.

If Calculated Chi-Square > Critical Value then reject Ho. and vice versa.

Now let us examine the cross tabulations.

CROSS QUESTION 1 BY 2
Q1. WHEN YOU ARE OFFERED A CIGARETTE SOMEWHERE
Q2. YOUR CIGARETTE CONSUMPTION FREQUENCY

0. Null
   1. More than 1 pack
      2. One pack per day
         3. Half pack per day
            4. 1 pack in 3/4 days
               5. One pack per week
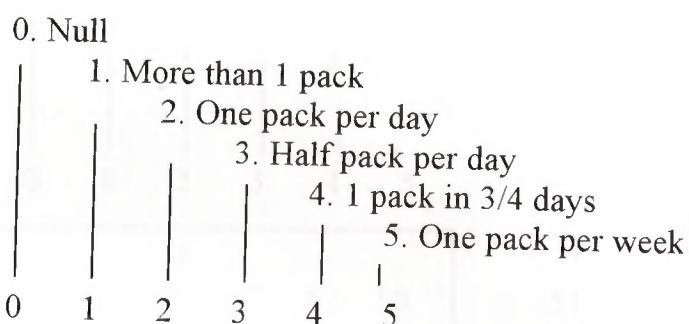
|  | 0 | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|---|
| 0. Null |  | 1 |  |  |  |  | 1 |
| 1. If not fav. reject |  | 8 | 13 | 20 | 11 | 4 | 56 |
| 2. Accept |  | 10 | 14 | 7 | 6 | 3 | 40 |
| 3. Other |  | 2 | 3 | 3 | 4 | 1 | 13 |
|  | 0 | 20 | 31 | 30 | 21 | 8 | 110 |

CROSS QUESTION 1 BY 2                   PERCENTAGES IN ROWS

0. Null
   1. More than 1 pack
      2. One pack per day
         3. Half pack per day
            4. 1 pack in 3/4 days
               5. One pack per week
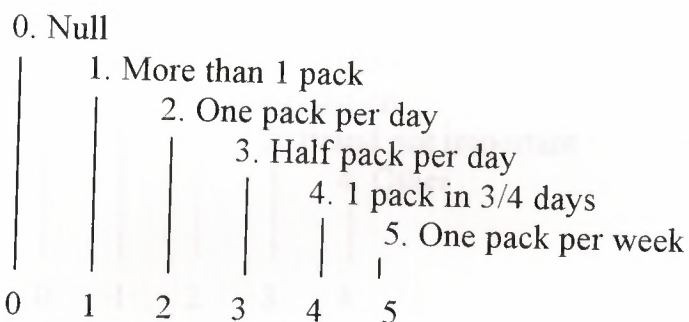
|  | 0 | 1 | 2 | 3 | 4 | 5 |  |
|---|---|---|---|---|---|---|---|
| 0. Null |  |  | 100 |  |  |  | 100 |
| 1. If not fav. reject |  | 14 | 23 | 36 | 20 | 7 | 100 |
| 2. Accept |  | 25 | 35 | 18 | 15 | 8 | 100 |
| 3. Other |  | 15 | 23 | 23 | 31 | 8 | 100 |
|  | 0 | 18 | 28 | 27 | 19 | 7 | 100 |

18

# CROSS QUESTION 1 BY 2 — PERCENTAGES IN COLUMNS

0. Null
1. More than 1 pack
2. One pack per day
3. Half pack per day
4. 1 pack in 3/4 days
5. One pack per week
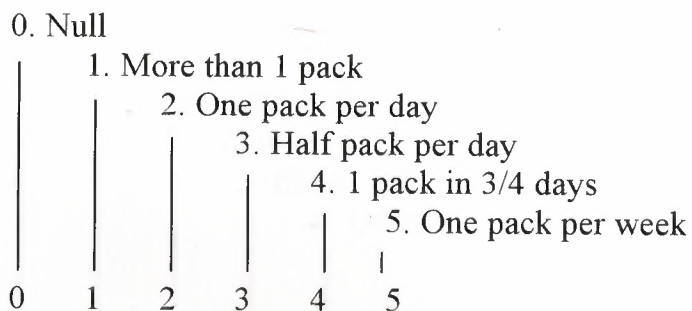
| | 0 | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|---|
| 0. Null | | | 3 | | | | 1 |
| 1. If not fav. reject | | 40 | 42 | 67 | 52 | 50 | 51 |
| 2. Accept | | 50 | 45 | 23 | 29 | 38 | 36 |
| 3. Other | | 10 | 10 | 10 | 19 | 12 | 12 |
| | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

# CROSS QUESTION 1 BY 6

Q1. WHEN YOU ARE OFFERED A CIGARETTE SOMEWHERE
Q2. WHEN I BUY A CIGARETTE

0. Null
1. Insist on favourite
2. Not insist on
3. Brand not important
4. Other
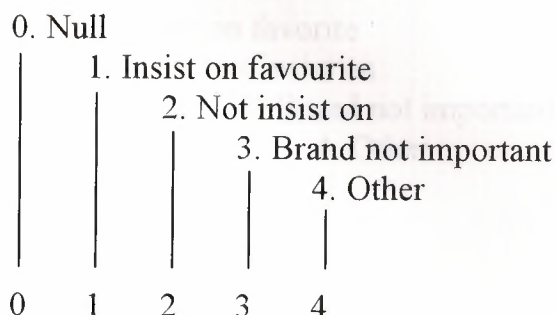
| | 0 | 1 | 2 | 3 | 4 | |
|---|---|---|---|---|---|---|
| 0. Null | | | 1 | | | 1 |
| 1. If not fav. reject | | 25 | 31 | | | 56 |
| 2. Accept | 1 | 11 | 26 | 2 | | 40 |
| 3. Other | | 8 | 5 | | | 13 |
| | 1 | 44 | 63 | 2 | 0 | 110 |

CROSS QUESTION 1 BY 6          PERCENTAGES IN ROWS

```
              0. Null
                 | 1. Insist on favourite
                 |    | 2. Not insist on
                 |    |    | 3. Brand not important
                 |    |    |    | 4. Other
                 |    |    |    |    |
                 0    1    2    3    4
```
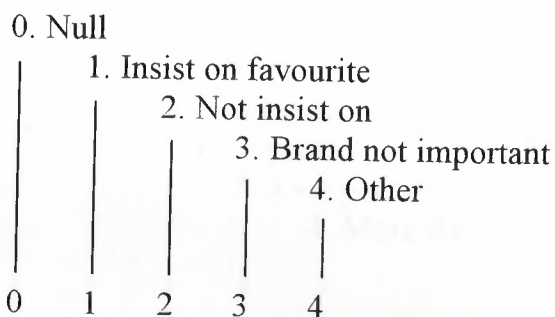
| | 0 | 1 | 2 | 3 | 4 | |
|---|---|---|---|---|---|---|
| 0. Null | | | 100 | | | 100 |
| 1. If not fav. reject | | 45 | 55 | | | 100 |
| 2. Accept | 2 | 28 | 65 | 5 | | 100 |
| 3. Other | | 62 | 38 | | | 100 |
| | 1 | 40 | 57 | 2 | 0 | 100 |

CROSS QUESTION 1 BY 6          PERCENTAGES IN COLUMNS

```
              0. Null
                 | 1. Insist on favorite
                 |    | 2. Not insist on
                 |    |    | 3. Brand not important
                 |    |    |    | 4. Other
                 |    |    |    |    |
                 0    1    2    3    4
```
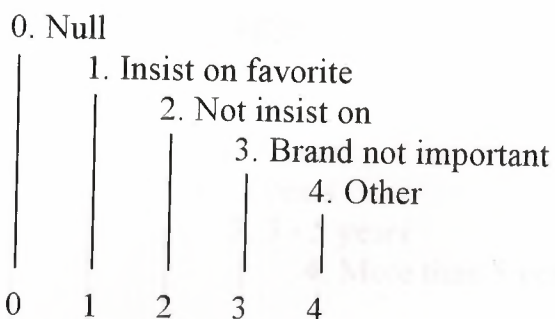
| | 0 | 1 | 2 | 3 | 4 | |
|---|---|---|---|---|---|---|
| 0. Null | | | 2 | | | 1 |
| 1. If not fav. reject | | 57 | 49 | | | 51 |
| 2. Accept | 100 | 25 | 41 | 100 | | 36 |
| 3. Other | | 18 | 8 | | | 12 |
| | 100 | 100 | 100 | 100 | 100 | 100 |

CROSS QUESTION  2  BY  9
Q2. YOUR CIGARETTE CONSUMPTION FREQUENCY
Q9. HOW LONG HAVE BEEN SMOKING
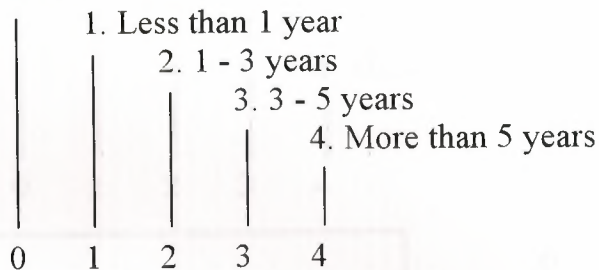
| | 0. Null | 1. Less than 1 year | 2. 1 - 3 years | 3. 3 - 5 years | 4. More than 5 years | |
|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | |
| 0. Null | | | | | | 0 |
| 1. More than 1 pack | | 1 | 2 | 2 | 15 | 20 |
| 2. One pack per day | | | 10 | 13 | 8 | 31 |
| 3. Half pack per day | | 2 | 13 | 5 | 10 | 30 |
| 4. 1 pack in 3/4 days | | 3 | 6 | 7 | 5 | 21 |
| 5. One pack per week | | 3 | 3 | 1 | 1 | 8 |
| | 0 | 9 | 34 | 28 | 39 | 110 |

CROSS QUESTION  2  BY  9          PERCENTAGES IN ROWS

| | 0. Null | 1. Less than 1 year | 2. 1 - 3 years | 3. 3 - 5 years | 4. More than 5 years | |
|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | |
| 0. Null | | | | | | 100 |
| 1. More than 1 pack | | 5 | 10 | 10 | 75 | 100 |
| 2. One pack per day | | | 32 | 42 | 26 | 100 |
| 3. Half pack per day | | 7 | 43 | 17 | 33 | 100 |
| 4. 1 pack in 3/4 days | | 14 | 29 | 33 | 24 | 100 |
| 5. One pack per week | | 38 | 38 | 12 | 12 | 100 |
| | 0 | 8 | 31 | 25 | 35 | 100 |

|  | 0. Null | 1. Less than 1 year | 2. 1 - 3 years | 3. 3 - 5 years | 4. More than 5 years |  |
|---|---|---|---|---|---|---|
|  | 0 | 1 | 2 | 3 | 4 |  |
| 0. Null |  |  |  |  |  | 0 |
| 1. More than 1 pack |  | 11 | 6 | 7 | 38 | 18 |
| 2. One pack per day |  |  | 29 | 46 | 21 | 28 |
| 3. Half pack per day |  | 22 | 38 | 18 | 26 | 27 |
| 4. 1 pack in 3/4 days |  | 33 | 18 | 25 | 13 | 19 |
| 5. One pack per week |  | 33 | 9 | 4 | 3 | 7 |
|  | 100 | 100 | 100 | 100 | 100 | 100 |

CROSS QUESTION 2 BY 10
Q2. YOUR CIGARETTE CONSUMPTION FREQUENCY
Q10. THE BRAND TASTES PLEASENTLY IN MY MOUTH

|  | 0. Null | 1. Stongly disagree | 2. Disagree | 3. No difference | 4. Agree | 5. Stongly agree |  |
|---|---|---|---|---|---|---|---|
|  | 0 | 1 | 2 | 3 | 4 | 5 |  |
| 0. Null |  |  |  |  |  |  | 0 |
| 1. More than 1 pack |  | 1 | 2 | 3 | 8 | 6 | 20 |
| 2. One pack per day |  | 2 | 5 | 3 | 15 | 6 | 31 |
| 3. Half pack per day |  | 2 | 4 | 3 | 15 | 6 | 30 |
| 4. 1 pack in 3/4 days |  |  | 2 | 1 | 15 | 3 | 21 |
| 5. One pack per week |  | 1 | 1 |  | 4 | 2 | 8 |
|  | 0 | 6 | 14 | 10 | 57 | 23 | 110 |

| | 0. Null | 1. Stongly disagree | 2. Disagree | 3. No difference | 4. Agree | 5. Stongly agree | |
|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | |
| 0. Null | | | | | | | 100 |
| 1. More than 1 pack | | 5 | 10 | 15 | 40 | 30 | 100 |
| 2. One pack per day | | 6 | 16 | 10 | 48 | 19 | 100 |
| 3. Half pack per day | | 7 | 13 | 10 | 50 | 20 | 100 |
| 4. 1 pack in 3/4 days | | | 10 | 5 | 71 | 14 | 100 |
| 5. One pack per week | | 12 | 12 | | 50 | 25 | 100 |
| | 0 | 5 | 13 | 9 | 52 | 21 | 100 |

| | 0. Null | 1. Stongly disagree | 2. Disagree | 3. No difference | 4. Agree | 5. Stongly agree | |
|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | |
| 0. Null | | | | | | | 0 |
| 1. More than 1 pack | | 17 | 14 | 30 | 14 | 26 | 18 |
| 2. One pack per day | | 33 | 36 | 30 | 26 | 26 | 28 |
| 3. Half pack per day | | 33 | 29 | 30 | 26 | 26 | 27 |
| 4. 1 pack in 3/4 days | | | 14 | 10 | 26 | 13 | 19 |
| 5. One pack per week | | 17 | 7 | | 7 | 9 | 7 |
| | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

CROSS QUESTION 2 BY 11
Q2. YOUR CIGARETTE CONSUMPTION FREQUENCY
Q11. THE SMELL OF THE FAVOURITE BRAND IS LIGHT
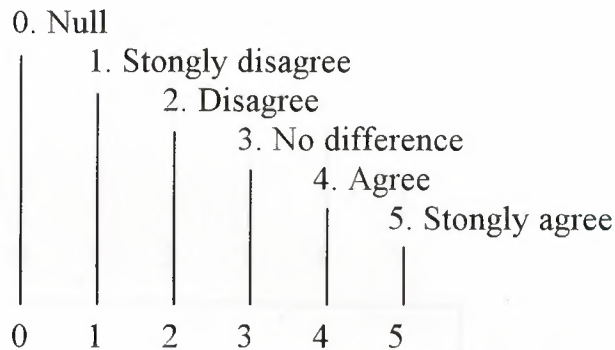
|  | 0. Null | 1. Stongly disagree | 2. Disagree | 3. No difference | 4. Agree | 5. Stongly agree |  |
|---|---|---|---|---|---|---|---|
|  | 0 | 1 | 2 | 3 | 4 | 5 |  |
| 0. Null |  |  |  |  |  |  | 0 |
| 1. More than 1 pack |  | 3 | 2 | 4 | 9 | 2 | 20 |
| 2. One pack per day |  | 3 | 10 | 1 | 12 | 5 | 31 |
| 3. Half pack per day |  | 1 | 2 | 3 | 19 | 5 | 30 |
| 4. 1 pack in 3/4 days |  | 1 | 5 |  | 15 |  | 21 |
| 5. One pack per week |  | 1 | 1 | 1 | 4 | 1 | 8 |
|  | 0 | 9 | 20 | 9 | 59 | 13 | 110 |

CROSS QUESTION 2 BY 11                PERCENTAGES IN ROWS
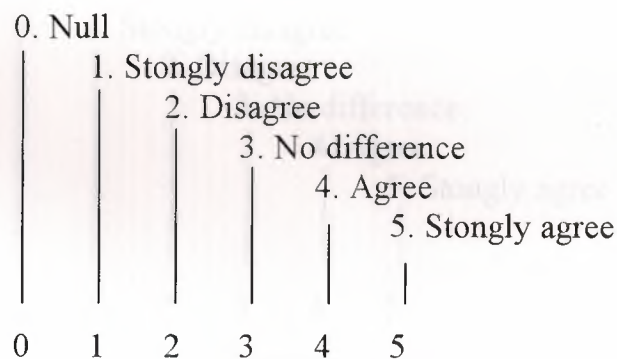
|  | 0. Null | 1. Stongly disagree | 2. Disagree | 3. No difference | 4. Agree | 5. Stongly agree |  |
|---|---|---|---|---|---|---|---|
|  | 0 | 1 | 2 | 3 | 4 | 5 |  |
| 0. Null |  |  |  |  |  |  | 100 |
| 1. More than 1 pack |  | 15 | 10 | 20 | 45 | 10 | 100 |
| 2. One pack per day |  | 10 | 32 | 3 | 39 | 16 | 100 |
| 3. Half pack per day |  | 3 | 7 | 10 | 63 | 17 | 100 |
| 4. 1 pack in 3/4 days |  | 5 | 24 |  | 71 |  | 100 |
| 5. One pack per week |  | 12 | 12 | 12 | 50 | 12 | 100 |
|  | 0 | 8 | 18 | 8 | 54 | 12 | 100 |

0. Null
1. Stongly disagree
2. Disagree
3. No difference
4. Agree
5. Stongly agree
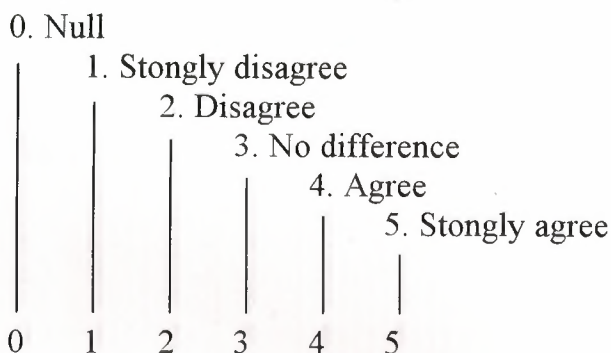
| | 0 | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|---|
| 0. Null | | | | | | | 0 |
| 1. More than 1 pack | | 33 | 10 | 44 | 15 | 15 | 18 |
| 2. One pack per day | | 33 | 50 | 11 | 20 | 38 | 28 |
| 3. Half pack per day | | 11 | 10 | 33 | 32 | 38 | 27 |
| 4. 1 pack in 3/4 days | | 11 | 25 | | 25 | | 19 |
| 5. One pack per week | | 11 | 5 | 11 | 7 | 8 | 7 |
| | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

CROSS QUESTION 2 BY 12
Q2. YOUR CIGARETTE CONSUMPTION FREQUENCY
Q12. THE NICOTINE AND TAR CONTENT IS LOW

0. Null
1. Stongly disagree
2. Disagree
3. No difference
4. Agree
5. Stongly agree
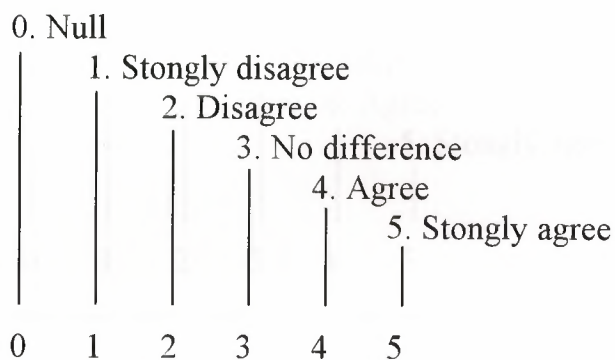
| | 0 | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|---|
| 0. Null | | | | | | | 0 |
| 1. More than 1 pack | | 3 | 5 | 7 | 4 | 1 | 20 |
| 2. One pack per day | | 8 | 10 | 7 | 2 | 4 | 31 |
| 3. Half pack per day | | 2 | 16 | 5 | 6 | 1 | 30 |
| 4. 1 pack in 3/4 days | | 3 | 8 | 4 | 5 | 1 | 21 |
| 5. One pack per week | | 2 | 2 | 3 | 1 | | 8 |
| | 0 | 18 | 41 | 26 | 18 | 7 | 110 |

|  | 0. Null | 1. Stongly disagree | 2. Disagree | 3. No difference | 4. Agree | 5. Stongly agree |  |
|---|---|---|---|---|---|---|---|
|  | 0 | 1 | 2 | 3 | 4 | 5 |  |
| 0. Null |  |  |  |  |  |  | 100 |
| 1. More than 1 pack |  | 15 | 25 | 35 | 20 | 5 | 100 |
| 2. One pack per day |  | 26 | 32 | 23 | 6 | 13 | 100 |
| 3. Half pack per day |  | 7 | 53 | 17 | 20 | 3 | 100 |
| 4. 1 pack in 3/4 days |  | 14 | 38 | 19 | 24 | 5 | 100 |
| 5. One pack per week |  | 25 | 25 | 38 | 12 |  | 100 |
|  | 0 | 16 | 37 | 24 | 16 | 6 | 100 |

|  | 0. Null | 1. Stongly disagree | 2. Disagree | 3. No difference | 4. Agree | 5. Stongly agree |  |
|---|---|---|---|---|---|---|---|
|  | 0 | 1 | 2 | 3 | 4 | 5 |  |
| 0. Null |  |  |  |  |  |  | 0 |
| 1. More than 1 pack |  | 17 | 12 | 27 | 22 | 14 | 18 |
| 2. One pack per day |  | 44 | 24 | 27 | 11 | 57 | 28 |
| 3. Half pack per day |  | 11 | 39 | 19 | 33 | 14 | 27 |
| 4. 1 pack in 3/4 days |  | 17 | 20 | 15 | 28 | 14 | 19 |
| 5. One pack per week |  | 11 | 5 | 12 | 6 |  | 7 |
|  | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
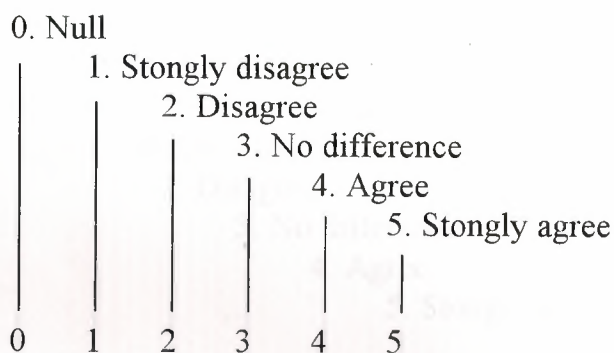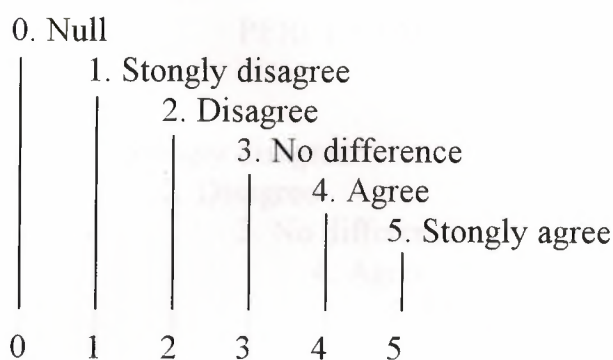
CROSS QUESTION  2  BY  13
Q2. YOUR CIGARETTE CONSUMPTION FREQUENCY
Q13. THE PRICE OF THE FAVOURITE BRAND IS LOW

0. Null
1. Stongly disagree
2. Disagree
3. No difference
4. Agree
5. Stongly agree
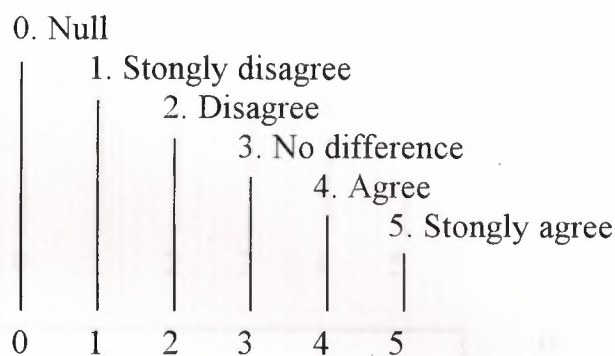
| | 0 | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|---|
| 0. Null | | | | | | | 0 |
| 1. More than 1 pack | | 5 | 7 | 4 | 2 | 2 | 20 |
| 2. One pack per day | | 12 | 10 | 3 | 4 | 2 | 31 |
| 3. Half pack per day | | 4 | 17 | 4 | 4 | 1 | 30 |
| 4. 1 pack in 3/4 days | | 5 | 9 | 1 | 4 | 2 | 21 |
| 5. One pack per week | | 2 | 2 | 1 | 3 | | 8 |
| | 0 | 28 | 45 | 13 | 17 | 7 | 110 |

CROSS QUESTION  2  BY  13                    PERCENTAGES IN ROWS

0. Null
1. Stongly disagree
2. Disagree
3. No difference
4. Agree
5. Stongly agree
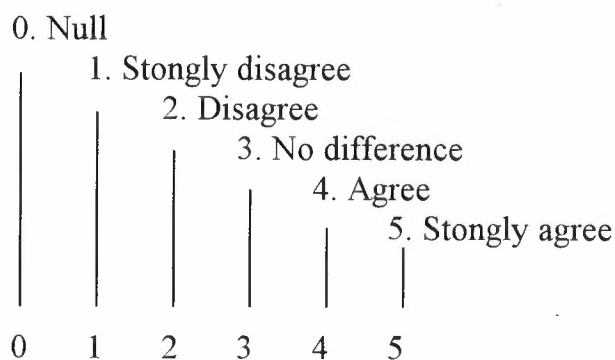
| | 0 | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|---|
| 0. Null | | | | | | | 100 |
| 1. More than 1 pack | | 25 | 35 | 20 | 10 | 10 | 100 |
| 2. One pack per day | | 39 | 32 | 10 | 13 | 6 | 100 |
| 3. Half pack per day | | 13 | 57 | 13 | 13 | 3 | 100 |
| 4. 1 pack in 3/4 days | | 24 | 43 | 5 | 19 | 10 | 100 |
| 5. One pack per week | | 25 | 25 | 12 | 38 | | 100 |
| | 0 | 25 | 41 | 12 | 15 | 6 | 100 |

27

0. Null
1. Stongly disagree
2. Disagree
3. No difference
4. Agree
5. Stongly agree
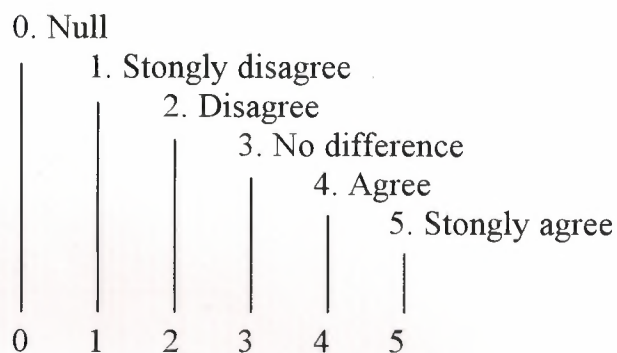
| | 0 | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|---|
| 0. Null | | | | | | | 0 |
| 1. More than 1 pack | | 18 | 16 | 31 | 12 | 29 | 18 |
| 2. One pack per day | | 43 | 22 | 23 | 24 | 29 | 28 |
| 3. Half pack per day | | 14 | 38 | 31 | 24 | 14 | 27 |
| 4. 1 pack in 3/4 days | | 18 | 20 | 8 | 24 | 29 | 19 |
| 5. One pack per week | | 7 | 4 | 8 | 18 | | 7 |
| | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

CROSS QUESTION 2 BY 14
Q2. YOUR CIGARETTE CONSUMPTION FREQUENCY
Q14. THE QUALITY OF THE BLEND IS HIGH

0. Null
1. Stongly disagree
2. Disagree
3. No difference
4. Agree
5. Stongly agree
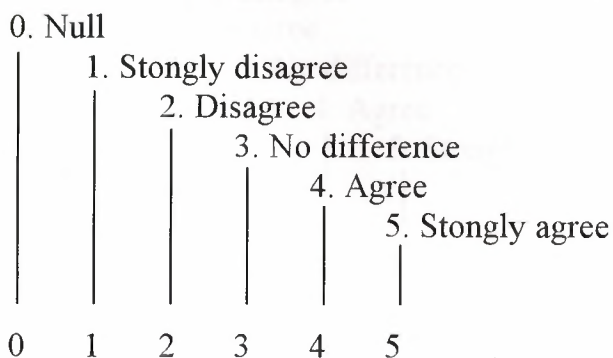
| | 0 | 1 | 2 | 3 | 4 | 5 | |
|---|---|---|---|---|---|---|---|
| 0. Null | | | | | | | 0 |
| 1. More than 1 pack | | 1 | 3 | 4 | 10 | 2 | 20 |
| 2. One pack per day | | | 3 | 2 | 19 | 7 | 31 |
| 3. Half pack per day | | | 6 | 3 | 14 | 7 | 30 |
| 4. 1 pack in 3/4 days | | 1 | 2 | 1 | 12 | 5 | 21 |
| 5. One pack per week | | | 2 | | 4 | 2 | 8 |
| | 0 | 2 | 16 | 10 | 59 | 23 | 110 |

CROSS QUESTION  2  BY  14                    PERCENTAGES IN ROWS

|  | 0. Null | 1. Stongly disagree | 2. Disagree | 3. No difference | 4. Agree | 5. Stongly agree | |
|---|---|---|---|---|---|---|---|
|  | 0 | 1 | 2 | 3 | 4 | 5 | |
| 0. Null |  |  |  |  |  |  | 100 |
| 1. More than 1 pack |  | 5 | 15 | 20 | 50 | 10 | 100 |
| 2. One pack per day |  |  | 10 | 6 | 61 | 23 | 100 |
| 3. Half pack per day |  |  | 20 | 10 | 47 | 23 | 100 |
| 4. 1 pack in 3/4 days |  | 5 | 10 | 5 | 57 | 24 | 100 |
| 5. One pack per week |  |  | 25 |  | 50 | 25 | 100 |
|  | 0 | 2 | 15 | 9 | 54 | 21 | 100 |

CROSS QUESTION  2  BY  14                    PERCENTAGES IN COLUMNS

|  | 0. Null | 1. Stongly disagree | 2. Disagree | 3. No difference | 4. Agree | 5. Stongly agree | |
|---|---|---|---|---|---|---|---|
|  | 0 | 1 | 2 | 3 | 4 | 5 | |
| 0. Null |  |  |  |  |  |  | 0 |
| 1. More than 1 pack |  | 50 | 19 | 44 | 17 | 9 | 18 |
| 2. One pack per day |  |  | 19 | 20 | 32 | 30 | 28 |
| 3. Half pack per day |  |  | 38 | 30 | 24 | 30 | 27 |
| 4. 1 pack in 3/4 days |  | 50 | 12 | 10 | 20 | 32 | 19 |
| 5. One pack per week |  |  | 12 |  | 7 | 9 | 7 |
|  | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

CROSS QUESTION 1 BY 17
Q1. WHEN YOU ARE OFFERED A CIGARETTE SOMEWHERE
Q17. SEX

|  | 0. Null | 1. Male | 2. Female | |
|---|---|---|---|---|
|  | 0 | 1 | 2 | |
| 0. Null |  | 1 |  | 1 |
| 1. If not fav. reject |  | 30 | 26 | 56 |
| 2. Accept |  | 22 | 18 | 40 |
| 3. Other |  | 9 | 4 | 13 |
|  | 0 | 61 | 49 | 110 |

CROSS QUESTION 1 BY 17                    PERCENTAGES IN ROWS

|  | 0. Null | 1. Male | 2. Female | |
|---|---|---|---|---|
|  | 0 | 1 | 2 | |
| 0. Null |  |  | 100 | 100 |
| 1. If not fav. reject |  | 54 | 46 | 100 |
| 2. Accept |  | 55 | 45 | 100 |
| 3. Other |  | 69 | 31 | 100 |
|  | 0 | 55 | 45 | 100 |

CROSS QUESTION 1 BY 17                    PERCENTAGES IN COLUMNS

|  | 0. Null | 1. Male | 2. Female | |
|---|---|---|---|---|
|  | 0 | 1 | 2 | |
| 0. Null |  |  | 2 | 1 |
| 1. If not fav. reject |  | 49 | 53 | 51 |
| 2. Accept |  | 36 | 37 | 36 |
| 3. Other |  | 15 | 8 | 12 |
|  | 100 | 100 | 100 | 100 |

30

CROSS QUESTION 2 BY 17
Q2. YOUR CIGARETTE CONSUMPTION FREQUENCY
Q17. SEX

|  | 0. Null | 1. Male | 2. Female |  |
|---|---|---|---|---|
|  | 0 | 1 | 2 |  |
| 0. Null |  | 0 | 0 |  |
| 1. More than 1 pack |  | 18 | 2 | 20 |
| 2. One pack per day |  | 14 | 17 | 31 |
| 3. Half pack per day |  | 17 | 13 | 30 |
| 4. 1 pack in 3/4 days |  | 8 | 13 | 21 |
| 5. One pack per week |  | 4 | 4 | 8 |
|  | 0 | 61 | 49 | 110 |

CROSS QUESTION 2 BY 17                    PERCENTAGES IN ROWS

|  | 0. Null | 1. Male | 2. Female |  |
|---|---|---|---|---|
|  | 0 | 1 | 2 |  |
| 0. Null |  |  |  | 100 |
| 1. More than 1 pack |  | 90 | 10 | 100 |
| 2. One pack per day |  | 45 | 55 | 100 |
| 3. Half pack per day |  | 57 | 43 | 100 |
| 4. 1 pack in 3/4 days |  | 38 | 62 | 100 |
| 5. One pack per week |  | 50 | 50 | 100 |
|  | 0 | 55 | 45 | 100 |

|                      | 0. Null | 1. Male | 2. Female |     |
|----------------------|:---:|:---:|:---:|:---:|
|                      | 0 | 1 | 2 |   |
| 0. Null              |   |    |    | 0   |
| 1. More than 1 pack  |   | 30 | 4  | 18  |
| 2. One pack per day  |   | 23 | 35 | 28  |
| 3. Half pack per day |   | 28 | 27 | 27  |
| 4. 1 pack in 3/4 days|   | 13 | 27 | 19  |
| 5. One pack per week |   | 7  | 8  | 7   |
|                      | 100 | 100 | 100 | 100 |

CROSS QUESTION 2 BY 20
Q2. YOUR CIGARETTE CONSUMPTION FREQUENCY
Q20. TYPE OF RESIDENCE

|                      | 0. Null | 1. With family | 2. Live alone | 3. With friends | 4. At dormitory | 5. Other |     |
|----------------------|:---:|:---:|:---:|:---:|:---:|:---:|:---:|
|                      | 0 | 1 | 2 | 3 | 4 | 5 |   |
| 0. Null              |   |    |   |   |   |   | 0  |
| 1. More than 1 pack  |   | 8  | 3 | 6 | 3 |   | 20 |
| 2. One pack per day  |   | 19 | 1 | 3 | 8 |   | 31 |
| 3. Half pack per day |   | 18 | 2 | 4 | 5 | 1 | 30 |
| 4. 1 pack in 3/4 days|   | 10 | 2 | 3 | 6 | 1 | 21 |
| 5. One pack per week |   | 3  | 1 | 1 | 3 |   | 8  |
|                      | 0 | 58 | 8 | 17 | 25 | 2 | 110 |

## CROSS QUESTION 2 BY 20  PERCENTAGES IN ROWS

| | 0. Null | 1. With family | 2. Live alone | 3. With friends | 4. At dormitory | 5. Other | |
|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | |
| 0. Null | | | | | | | 100 |
| 1. More than 1 pack | | 40 | 15 | 30 | 15 | | 100 |
| 2. One pack per day | | 61 | 3 | 10 | 26 | | 100 |
| 3. Half pack per day | | 60 | 7 | 13 | 17 | 3 | 100 |
| 4. 1 pack in 3/4 days | | 48 | 5 | 14 | 29 | 5 | 100 |
| 5. One pack per week | | 38 | 12 | 12 | 38 | | 100 |
| | 0 | 53 | 7 | 15 | 23 | 2 | 100 |

## CROSS QUESTION 2 BY 20  PERCENTAGES IN COLUMNS

| | 0. Null | 1. With family | 2. Live alone | 3. With friends | 4. At dormitory | 5. Other | |
|---|---|---|---|---|---|---|---|
| | 0 | 1 | 2 | 3 | 4 | 5 | |
| 0. Null | | | | | | | 0 |
| 1. More than 1 pack | | 14 | 38 | 35 | 12 | | 18 |
| 2. One pack per day | | 33 | 12 | 18 | 32 | | 28 |
| 3. Half pack per day | | 31 | 25 | 24 | 20 | 50 | 27 |
| 4. 1 pack in 3/4 days | | 17 | 12 | 18 | 24 | 50 | 19 |
| 5. One pack per week | | 5 | 12 | 6 | 12 | | 7 |
| | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
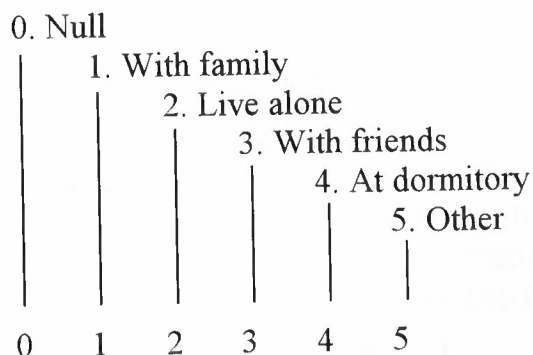
CROSS QUESTION  2  BY  21
Q2. YOUR CIGARETTE CONSUMPTION FREQUENCY
Q21. MONTHLY INCOME OF FAMILY

0. Null
1.           - 20.000.000
2. 20.000.001 - 40.000.000
3. 40.000.001 - 60.000.000
4. 60.000.001 - 80.000.000
5. 80.000.001-100.000.000
6. 100.000.000 -      +

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | |
|---|---|---|---|---|---|---|---|---|
| 0. Null | | | | | | | | 0 |
| 1. More than 1 pack | 1 | 4 | 4 | 3 | 5 | 2 | 1 | 20 |
| 2. One pack per day | | 1 | 9 | 8 | 7 | 4 | 2 | 31 |
| 3. Half pack per day | 1 | 1 | 5 | 8 | 8 | 2 | 5 | 30 |
| 4. 1 pack in 3/4 days | | 3 | 5 | 5 | 3 | 2 | 3 | 21 |
| 5. One pack per week | | 1 | 4 | | 2 | | 1 | 8 |
| | 2 | 10 | 27 | 24 | 25 | 10 | 12 | 110 |

CROSS QUESTION  2  BY  21                PERCENTAGES IN ROWS

0. Null
1.           - 20.000.000
2. 20.000.001 - 40.000.000
3. 40.000.001 - 60.000.000
4. 60.000.001 - 80.000.000
5. 80.000.001-100.000.000
6. 100.000.000 -      +

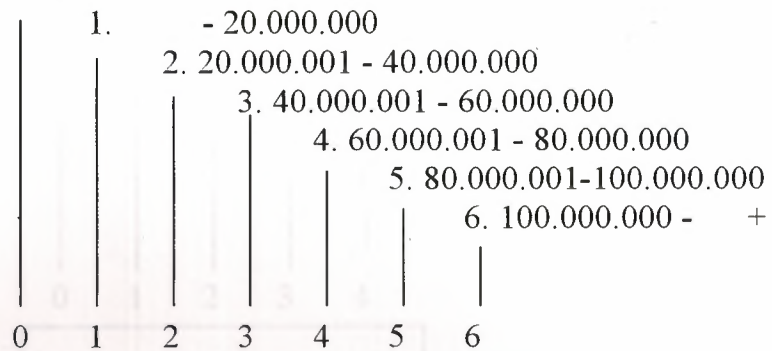| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | |
|---|---|---|---|---|---|---|---|---|
| 0. Null | | | | | | | | 100 |
| 1. More than 1 pack | 5 | 20 | 20 | 15 | 25 | 10 | 5 | 100 |
| 2. One pack per day | | 3 | 29 | 26 | 23 | 13 | 6 | 100 |
| 3. Half pack per day | 3 | 3 | 17 | 27 | 27 | 7 | 17 | 100 |
| 4. 1 pack in 3/4 days | | 14 | 24 | 24 | 14 | 10 | 14 | 100 |
| 5. One pack per week | | 12 | 50 | | 25 | | 12 | 100 |
| | 2 | 9 | 25 | 22 | 23 | 9 | 11 | 100 |
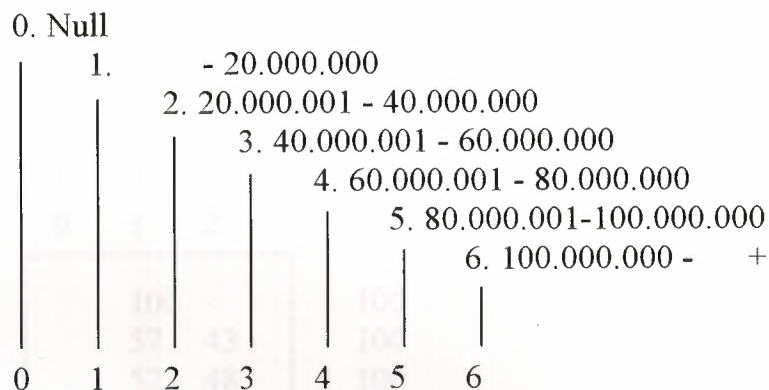
CROSS QUESTION 2 BY 21          PERCENTAGES IN COLUMNS

0. Null
1.       - 20.000.000
2. 20.000.001 - 40.000.000
3. 40.000.001 - 60.000.000
4. 60.000.001 - 80.000.000
5. 80.000.001-100.000.000
6. 100.000.000 -     +

|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 |  |
|---|---|---|---|---|---|---|---|---|
| 0. Null |  |  |  |  |  |  |  | 0 |
| 1. More than 1 pack | 50 | 40 | 15 | 12 | 20 | 20 | 8 | 18 |
| 2. One pack per day |  | 10 | 33 | 33 | 28 | 40 | 17 | 28 |
| 3. Half pack per day | 50 | 10 | 19 | 33 | 32 | 20 | 42 | 27 |
| 4. 1 pack in 3/4 days |  | 30 | 19 | 21 | 12 | 20 | 25 | 19 |
| 5. One pack per week |  | 10 | 15 |  | 8 |  | 8 | 7 |
|  | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

CROSS QUESTION 6 BY 17
Q6. WHEN I BUY A CIGARETTE
Q17. SEX

0. Null
1. Male
2. Female

|  | 0 | 1 | 2 |  |
|---|---|---|---|---|
| 0. Null |  | 1 |  | 1 |
| 1. Insist on favourite |  | 25 | 19 | 44 |
| 2. Non insist on |  | 33 | 30 | 63 |
| 3. Brand not important |  | 2 |  | 2 |
| 4. Other |  |  |  | 0 |
|  | 0 | 61 | 49 | 110 |

CROSS QUESTION 6 BY 17        PERCENTAGES IN ROWS

| | 0. Null | 1. Male | 2. Female | |
|---|---|---|---|---|
| | 0 | 1 | 2 | |
| 0. Null | | 100 | | 100 |
| 1. Insist on favourite | | 57 | 43 | 100 |
| 2. Not insist on | | 52 | 48 | 100 |
| 3. Brand not important | | 100 | | |
| 4. Other | | | | 100 |
| | 0 | 55 | 45 | 100 |

CROSS QUESTION 6 BY 17        PERCENTAGES IN COLUMNS

| | 0. Null | 1. Male | 2. Female | |
|---|---|---|---|---|
| | 0 | 1 | 2 | |
| 0. Null | | 2 | | 1 |
| 1. Insist on favourite | | 41 | 39 | 40 |
| 2. Not insist on | | 54 | 61 | 57 |
| 3. Brand not important | | 3 | | 2 |
| 3. Other | | | | 0 |
| | 100 | 100 | 100 | 100 |

CROSS QUESTION 6 BY 21
Q6. WHEN I BUY A CIGARETTE
Q21. MONTHLY INCOME OF FAMILY

0. Null
1.          - 20.000.000
2. 20.000.001 - 40.000.000
3. 40.000.001 - 60.000.000
4. 60.000.001 - 80.000.000
5. 80.000.001-100.000.000
6. 100.000.000 -     +

|                        | 0 | 1 | 2  | 3  | 4  | 5  | 6  |     |
|------------------------|---|---|----|----|----|----|----|-----|
| 0. Null                |   | 1 |    |    |    |    |    | 1   |
| 1. Insist on favourite | 1 | 3 | 15 | 5  | 6  | 7  | 7  | 44  |
| 2. Not insist on       | 1 | 6 | 11 | 19 | 18 | 3  | 5  | 63  |
| 3. Brand not important |   |   | 1  |    | 1  |    |    | 2   |
| 4. Other               |   |   |    |    |    |    |    | 0   |
|                        | 2 | 10| 27 | 24 | 25 | 10 | 12 | 110 |

CROSS QUESTION 6 BY 21          PERCENTAGES IN ROWS

0. Null
1.          - 20.000.000
2. 20.000.001 - 40.000.000
3. 40.000.001 - 60.000.000
4. 60.000.001 - 80.000.000
5. 80.000.001-100.000.000
6. 100.000.000 -     +

|                        | 0 | 1   | 2  | 3  | 4  | 5  | 6  |     |
|------------------------|---|-----|----|----|----|----|----|-----|
| 0. Null                |   | 100 |    |    |    |    |    | 100 |
| 1. Insist on favourite | 2 | 7   | 34 | 11 | 14 | 16 | 16 | 100 |
| 2. Not insist on       | 2 | 10  | 17 | 30 | 29 | 5  | 8  | 100 |
| 3. Brand not important |   |     | 50 |    | 50 |    |    | 100 |
| 4. Other               |   |     |    |    |    |    |    | 100 |
|                        | 2 | 9   | 25 | 22 | 23 | 9  | 11 | 100 |

CROSS QUESTION 6 BY 21          PERCENTAGES IN COLUMNS

0. Null
1.        - 20.000.000
2. 20.000.001 - 40.000.000
3. 40.000.001 - 60.000.000
4. 60.000.001 - 80.000.000
5. 80.000.001-100.000.000
6. 100.000.000 -     +

| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | |
|---|---|---|---|---|---|---|---|---|
| 0. Null | | 10 | | | | | | 1 |
| 1. Insist on favourite | 50 | 30 | 56 | 21 | 24 | 70 | 58 | 40 |
| 2. Not insist on | 50 | 60 | 41 | 79 | 72 | 30 | 42 | 57 |
| 3. Brand not important | | | 4 | | 4 | | | 2 |
| 4. Other | | | | | | | | 0 |
| | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

Q7. THE BRAND CONSUMED MOST
Q6. WHEN I BUY A CIGARETTE

0. Null
1. Insist on favourite
2. Not insist on
3. Brand not important
4. At Other

| | 0 | 1 | 2 | 3 | 4 | |
|---|---|---|---|---|---|---|
| 0. Null | | | | | | 0 |
| 1. Marlboro | | 5 | 9 | | | 14 |
| 2. Marlboro (short) | | | | | | 0 |
| 3. Marlboro Light | | 1 | 1 | | | 2 |
| 4. Camel (short) | | 5 | 7 | | | 12 |
| 5. Camel (long) | | 1 | | | | 1 |
| 6. Camel Light | | 1 | | | | 1 |
| 7. Best | | 1 | | 1 | | 2 |
| 8. Kansas | | 1 | 1 | | | 2 |
| 9. Maltepe (short) | 1 | 2 | 11 | | | 14 |
| 10. Maltepe (long) | | 3 | | | | 3 |
| 11. Tekel 2000 | | 20 | 30 | 1 | | 51 |
| 12. Samsun (short) | | 1 | | | | 1 |
| 13. Samsun (Long) | | | 1 | | | 1 |
| 14. Other | | 3 | 3 | | | 6 |
| | 1 | 44 | 63 | 2 | 0 | 110 |

0. Null
   1. Insist on favourite
      2. Not insist on
         3. Brand not important
            4. At Other

| | 0 | 1 | 2 | 3 | 4 | |
|---|---|---|---|---|---|---|
| 0. Null | | | | | | 100 |
| 1. Marlboro | | 36 | 64 | | | 100 |
| 2. Marlboro (short) | | | | | | 100 |
| 3. Marlboro Light | | 50 | 50 | | | 100 |
| 4. Camel (short) | | 42 | 58 | | | 100 |
| 5. Camel (long) | | 100 | | | | 100 |
| 6. Camel Light | | 100 | | | | 100 |
| 7. Best | | 50 | | 50 | | 100 |
| 8. Kansas | | 50 | 50 | | | 100 |
| 9. Maltepe (short) | 7 | 14 | 79 | | | 100 |
| 10. Maltepe (long) | | 100 | | | | 100 |
| 11. Tekel 2000 | | 39 | 59 | 2 | | 100 |
| 12. Samsun (short) | | 100 | | | | 100 |
| 13. Samsun (Long) | | | 100 | | | 100 |
| 14. Other | | 50 | 50 | | | 100 |
| | 1 | 40 | 57 | 2 | 0 | 100 |

In the hypothesis list given before we had 15 propositions to test for. Only two propositions in fifteen could be identified as containing significant relatonship.

    r       stands for correlation coefficient,
    DF    stands for degree of freedom,
    CS    stands for chi-square
    -       means that there is no relation found between the two variables. Accept Ho:
    +      means that Ho is rejected this distribution can not be a result of randomness. There should be a significant cause of the distribution.

The following table shows the hypothesis test results.

| Test | Cross ques. | r | DF | Calculated CS | Critical CS | |
|------|-------------|------|----|---------------|-------------|---|
| 1 | 1 by 2 | - 0.03 | 8 | 7.01 | 15.51 | - |
| 2 | 1 by 6 | - 0.02 | 6 | 8.06 | 12.59 | - |
| 3 | 2 by 9 | - 0.36 | 12 | 35.52 | 21.03 | + |
| 4 | 2 by 10 | 0.01 | 16 | 8.09 | 26.30 | - |
| 5 | 2 by 11 | 0.08 | 16 | 22.71 | 26.30 | - |
| 6 | 2 by 12 | - 0.03 | 16 | 16.05 | 26.30 | - |
| 7 | 2 by 13 | 0.06 | 16 | 14.15 | 26.30 | - |
| 8 | 2 by 14 | 0.06 | 16 | 11.63 | 26.30 | - |
| 9 | 1 by 17 | - 0.10 | 2 | 1.07 | 5.99 | - |
| 10 | 2 by 17 | 0.23 | 4 | 13.67 | 9.49 | + |
| 11 | 2 by 20 | 0.07 | 16 | 12.87 | 28.85 | - |
| 12 | 2 by 21 | - 0.03 | 20 | 16.36 | 21.03 | - |
| 13 | 6 by 17 | 0.02 | 3 | 1.86 | 7.81 | - |
| 14 | 6 by 21 | - 0.02 | 15 | 16.98 | 25.00 | - |
| 15 | 6 by 6 | 0.00 | 39 | 41.15 | 55.76 | - |

In the third proposition it was found that the longer they have been smoking the more they smoke daily. Or in other words old smokers are also likely to be heavy smokers.

In the 10 th hypothesis it was found that mens are smoking more than the women respondents. Or again with different words we can conclude that men are consuming cigarette more than women.

## 6. POSITIONING MAPS

How are the positioning maps drawn?

Mc. Carthy and Perrault state that the graphs for positioning are obtained by asking product users to make judgements about their ideal brands.[5]

Positioning maps are shortly obtained as a result of three dimentional cross tabulation. In the previous part only two questions were matched together and their intersection set was actually the cross table. Now with a similar approach the brand option is being held constant and the cross table is obtained by matching the two product feature scales. The average scores of the scale questions are the coordinates in the positioning map.

For example in the previous part we were matching the income question with the brand question to see how many people of different income classes were buying a particular brand. Now we are matching the taste scale

---

[5] .) Mc. Carthy E Jerome, Perrault William D. "Basic Marketing" p.90.

with the price scale holding for example the third option in the brand question constant. So the average scores for the variables are actually the coordinates in the price-taste space for Marlboro Lights. The number of observations are not displayed on positioning graphs. We did not found it so much necessary. But if necessary, the number of observations could be also screened with a circle of an appropriate size arround the point.

One major restriction to the study occured when the frequency distributins were examined. In the question #7 the respondents were asked for their favourite brands. There was Tekel 2000 dominating the market. But the surprising results was that only 4 brands were able to accumulate enough data to make positioning judgement on them. The response rate for the remainder brands was so low that (sometimes 1 or 2) it was meaningless to use them in positioning calculations.

The brands and their frequencies, which were selected to plot on positioning maps were as follows.

| Code (in question 7) | Name | Frequency |
|---|---|---|
| 1 | Marlboro | 14 |
| 4 | Camel (short) | 12 |
| 9 | Maltepe (short) | 14 |
| 11 | Tekel 2000 | 51 |

The axes of the graphs are also the product features stated in scale format. (question 10 to 15). When thought in two dimension it is possible to obtain a whole batch of graphs.

Maximum number of possible graphs is equal to the combination where N is the number of the product features.

$$\# \text{ of graphs} = \frac{N!}{2! * (N-2)!}$$

But it is not necessary to plot all possible combinations. The purpose here is to set the brands in their appropriate positions and search for niches in the market which a company could exploit.

Now let us examine these graphs.

```
                          smell light

                 5.0 ┤

          .4      4.0 ┤              .1

bad taste                       .11      good taste in mouth
      ├────┬────┬────┬────┼────┬────┬────┬────
     1.0      2.0   .9   3.0       4.0      5.0
                 2.0 ┤

                 1.0 ┤

                          smell heavy
```
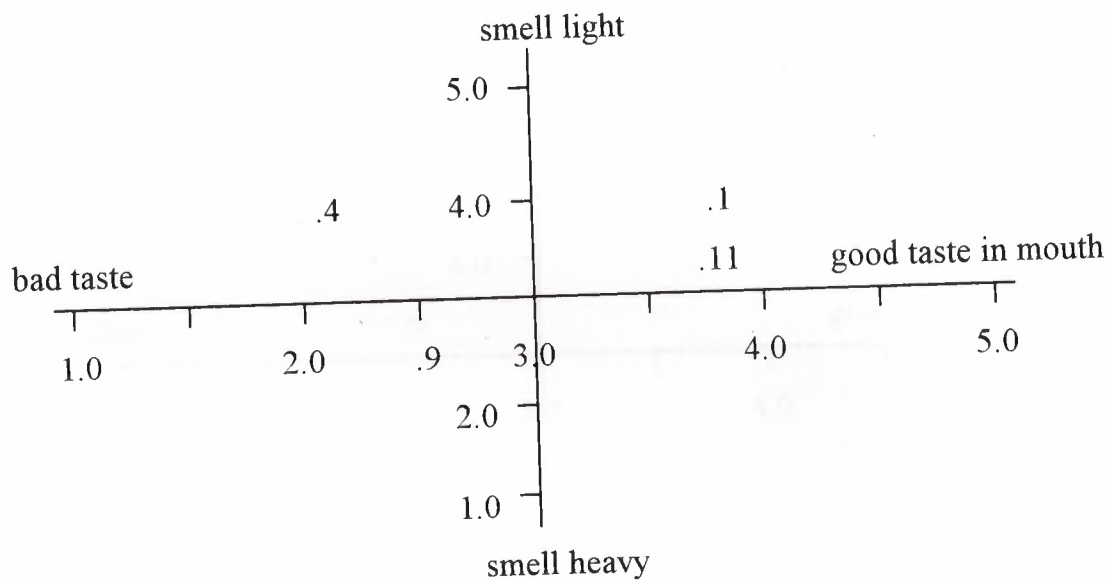
Marlboro and Tekel 2000 are found good in taste and light in smell. Camel is found as light in smell and bad in taste. Tekel 2000 captures also Marlboro their spesification are close to each other. Maltepe is found negative both in taste and smell.

Now let us consider graphes for other product features.

```
                          nicotine low

                 5.0 ┤

          .4      4.0 ┤

bad taste                                good taste in mouth
      ├────┬────┬────┬────┼────┬────┬────┬────
     1.0      2.0   .9   3.0       4.0      5.0
          .4     2.0 ┤          .11

                 1.0 ┤          .1

                          nicotine high
```
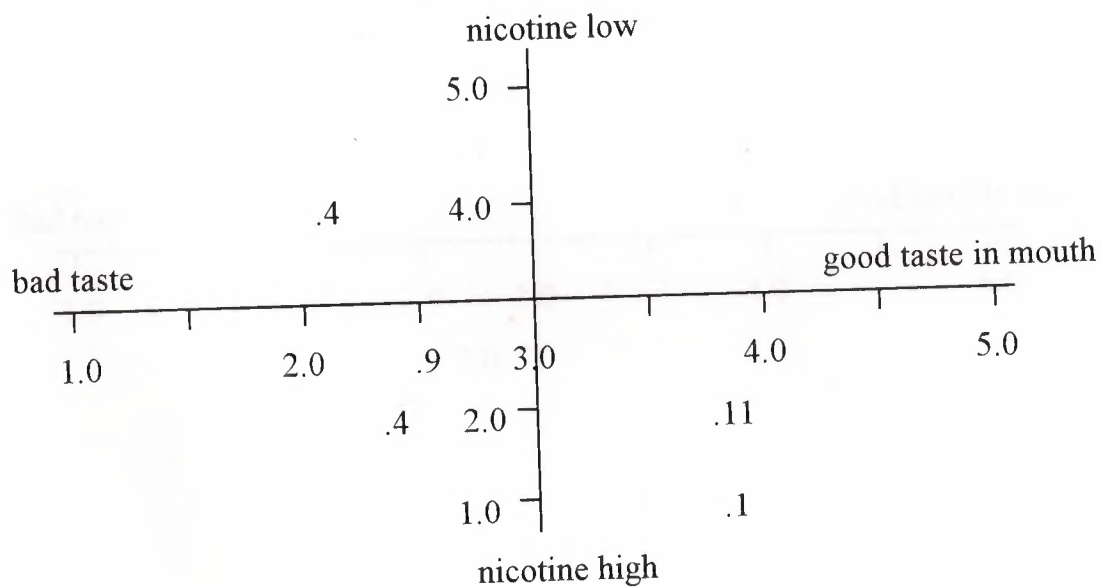
No one of the four brand are appreciated as containing low nicotine. We clearly see a market niche for good tasting and low nicotine containing brands.

```
                          price low
                   5.0  ┤

                   4.0  ┤
                   .9
bad taste        ─────────────────────────        good taste in mouth
         ┬     ┬     ┬        ┬     ┬     ┬     ┬
        1.0         2.0      3│0        4.0         5.0
                   2.0  ┤         .11
         .4        1.0  ┤         .1
                         price high
```
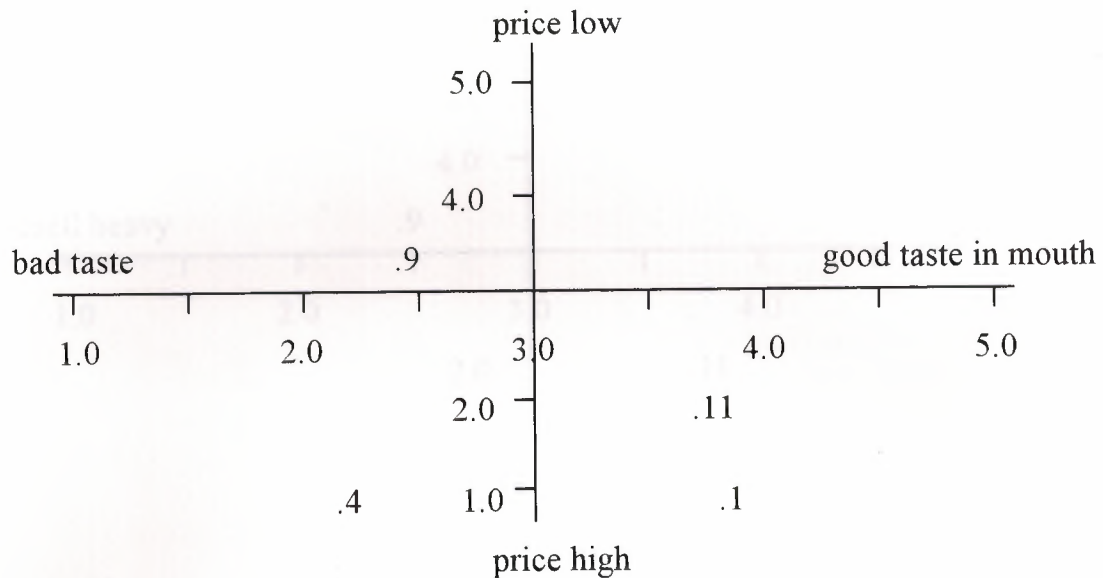
Marlboro and Camel are found expensive whereas Maltepe is found cheap. That reflects exactly the position in the market.

```
                      blend quality high
                   5.0  ┤

         .4        4.0  ┤         .1
                                  .11
bad taste        ─────────────────────────        good taste in mouth
         ┬     ┬     ┬     ┬        ┬     ┬     ┬     ┬
        1.0         2.0  .9  3│0      4.0         5.0
                   2.0  ┤

                   1.0  ┤
                      blend quality low
```

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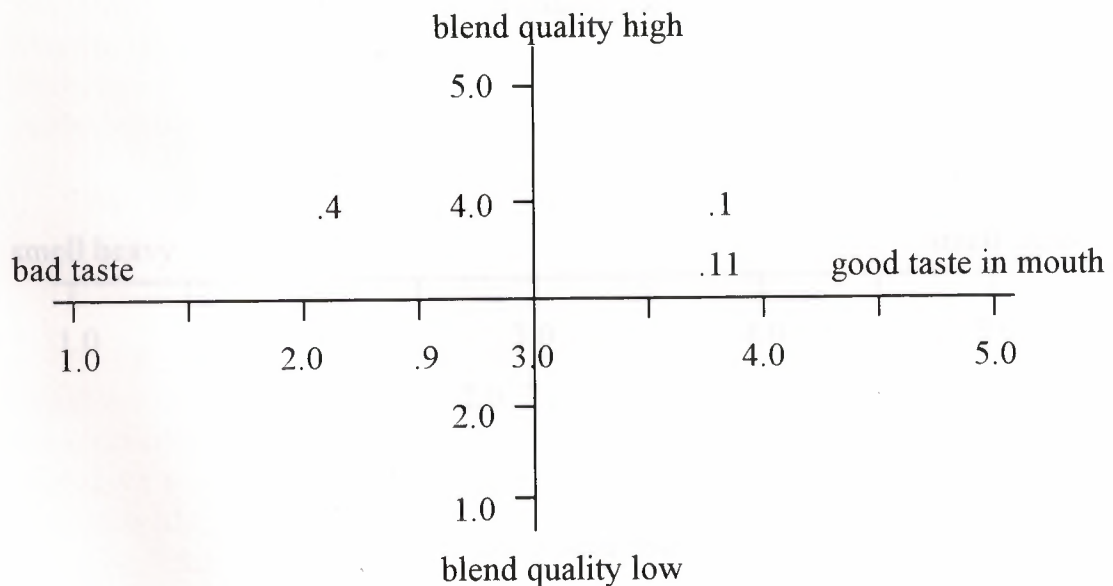
Here Tekel 2000 and Marlboro are capturing the high blend quality and good taste market the is no space to fill in.

price low

```
                        5.0  ─┤

                        4.0  ─┤
smell heavy                              smell light
                   .9
      ┬──────┬──────┬──────┬───────┬──────┬──────┬──────┬
     1.0          2.0          3|0        4.0          5.0
                        2.0  ─┤        .11
                                            .1
           .4          1.0  ─┤        .1
```

price high
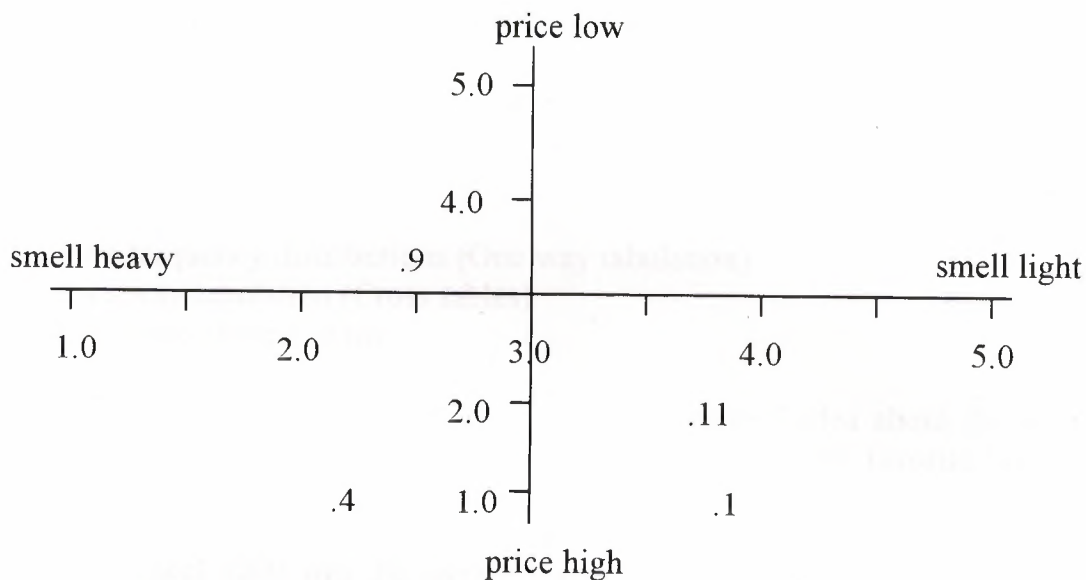
On the graph above we see a niche in the market for cheap and light smelling brands. Actually there may be such a brand but at least consumed in the student segment.

blend quality high

```
                        5.0  ─┤
            .4                         .1
                        4.0  ─┤        .11
smell heavy                              smell light
      ┬──────┬──────┬──────┬───────┬──────┬──────┬──────┬
     1.0          2.0          3|0        4.0          5.0
           .9          2.0  ─┤

                        1.0  ─┤
```

blend quality low
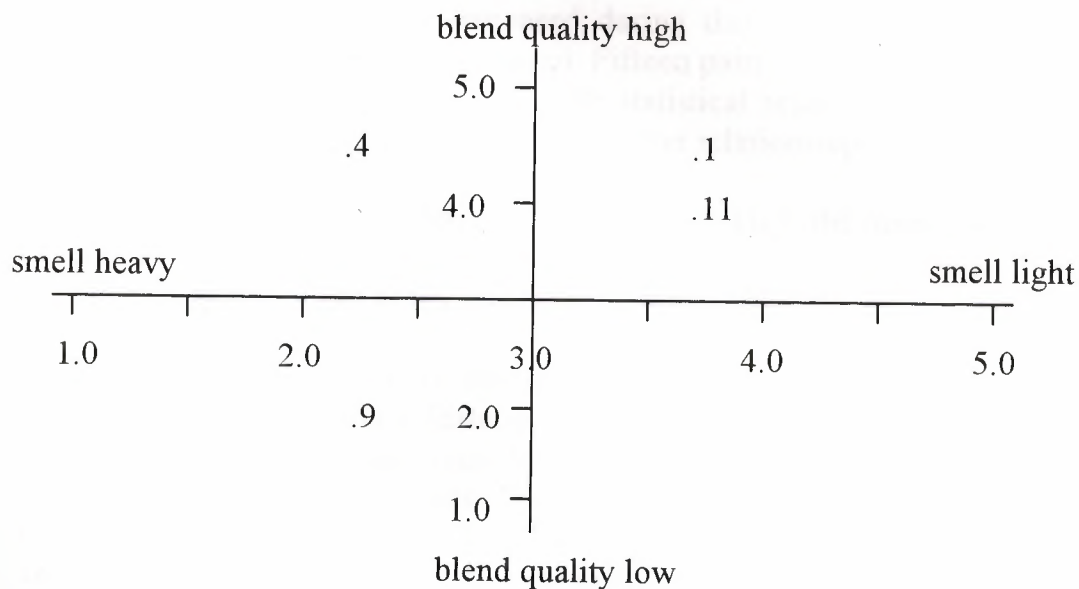
On the graph above we see again that Marlboro and tekel 2000 are again very close each other. As we stated earlier on the graph shows that Marlboro and tekel 2000 are close substitudes.

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# 7. CONCLUSION AND SUGGESTIONS

In that study the cigarette market in Turkey has been examined from the point of view of the student population. First a questionnaire was designed to collect desired data from the target population. Than 110 respondents were interviewed. The interviewes were selected from Bosphorus U. (20), from İstanbul University (50) and from I.T.U. (40). The results have been analysed in three aspects;

1) Pure frequency distributions (One way tabulation)
2) Two way tabulation (Cross tables)
3) Brand positioning maps

Pure frequency distributions gave us a general idea about the market and target population. Especially the 7 th question "Your favorite brand ?" enabled us to see the market shares of different brands.

Tekel 2000 was the market leader in the student segment with % 45 market share which was followed by Maltepe (short), Marlboro and Camel (short) respectively. General demographic characteristics of those respondents were also exhibited in the frequency distribution tables.

In the second part it was searched for possible relationships between two variables. Cross tables were used during that stage and with the chi-squarre statistics the relation was tested. Fifteen pairs of variables were tested. Only two of them could be proved with statistical results. All of the others looked to be ramdomly distributed. The clearcut relationships founded were

1) The more years respondents have been smoking the more amount of cigarette is being consumed by them.
2) Male respondents are heavy consumers than females are.

Positioning maps were used in order to search for market niches with respect to different product features such as taste in mouth, price, blend of tobacco and etc. The results have been exhibited in two dimentional graphs. But there was a major drawback. Only four brands could accumulate enough response (these brands were 1.Marlboro, 4.Camel (short), 9. Maltepe short and 11.Tekel 2000). It would be meaningless to plot other brands on the graphs with only one or two observations.

Considering those four brands the very first finding was that Tekel 2000 and marlboro were close substitudes for each other. Maltepe was always a few steps behind them. Camel was generally found as good except the taste in mouth.

Low nicotine containing and good tasting brands were lacking in the market. Also no product was found as good in taste and low in price. An other niche in the market was the lack of light smelling and low priced brands.

These niches in the market could be easily captured with appropriate products. These findings does not necessarily mean that such products are not existing. What we found out was that such products were at least not existing in the student segment.

# Appendix  A

S1.    Herhangi bir ortamda size sigara ikram edildiğinde;

[ ]    1. Kullandığım marka değilse kibarca red ederim
[ ]    2. Teşekkür eder ikram edilen sigarayı alırım
[ ]    3. Diğer (Lütfen belirtin) _____

S2.    Sigara tüketim sıklığınız;

[ ]    1. Günde bir paketten daha fazla
[ ]    2. Günde bir paket
[ ]    3. Günde yarım paket
[ ]    4. Üç dört günde bir paket
[ ]    5. Haftada toplam bir paket ya da daha az

S3.    Sigara seçiminizde sizin açınızdan önemli olan üç kriteri önem sırasına
       göre belirleyiniz. (Parantez içindeki boşluklara seçtiğiniz kriterin
       numarasını yazın.)

1. Yanması                          1. Kriter (_____)
2. Ağızda bıraktığı tad
3. Kokusu                           2. Kriter (_____)
4. Fiyatı
5. Fitresi                          3. Kriter (_____)
6. Tütünün harmanı
7. Sarımı
8. Diğer (Lütfen belirtin) _____

S4.    Sigara satın alırken;

[ ]    1. Kesinlikle kullandığım markayı alırım, yoksa almam
[ ]    2. Eğer kullandığım marka yoksa benzer türde bir sigara alırım
[ ]    3. Benim için marka pek önemli değil, o an içimden geçeni alırım
[ ]    4. Diğer (Lütfen belirtin) _____

S5.    En çok kullandığım sigara markası;

[ ]    1. Marlboro              [ ]    8. Kansas
[ ]    2. Marlboro (kısa)       [ ]    9. Maltepe (kısa)
[ ]    3. Marlboro Light        [ ]   10. Maltepe (uzun)
[ ]    4. Camel (kısa)          [ ]   11. Tekel 2000
[ ]    5. Camel (uzun)          [ ]   12. Samsun (kısa)
[ ]    6. Camel Light           [ ]   13. Samsun (uzun)
[ ]    7. Best                  [ ]   14. Diğer _____

S6.    Marka olarak ikinci tercihiniz;

[ ]    1. Marlboro                 [ ]    8. Kansas
[ ]    2. Marlboro (kısa)          [ ]    9. Maltepe (kısa)
[ ]    3. Marlboro Light           [ ]   10. Maltepe (uzun)
[ ]    4. Camel (kısa)             [ ]   11. Tekel 2000
[ ]    5. Camel (uzun)             [ ]   12. Samsun (kısa)
[ ]    6. Camel Light              [ ]   13. Samsun (uzun)
[ ]    7. Best                     [ ]   14. Diğer _____

S7.    Ne kadar süredir sigara kullanmaktasınız ?

[ ]    1. Bir yıldan az
[ ]    2. 1 - 3 yıl
[ ]    3. 3 - 5 yıl
[ ]    4. Beş yıldan fazla

5. soruda (S5.) seçtiğiniz EN ÇOK KULLANDIĞINIZ SİGARA MARKASINI
GÖZ ÖNÜNDE BULUNDURARAK;
aşağıdaki özellikler açısından bir değerlendirme yapınız.

Numaranın yanındaki boşluklara "X" işareti koyun.

1. Kesinlikle katılmıyorum
2. Katılmıyorum
3. Benim için farketmiyor
4. Katılıyorum
5. Kesinlikle katılıyorum

S8.    Kullandığım sigara ağızda hoş bir tad bırakıyor.

                1. _____   2. _____   3. _____   4. _____   5. _____

S9.    Kullandığım sigaranın kokusu hafif

                1. _____   2. _____   3. _____   4. _____   5. _____

S10.   Kullandığım sigarada katran ve nikotin miktarı düşük

                1. _____   2. _____   3. _____   4. _____   5. _____

S11. Kullandığım sigaranın fiyatı oldukça ucuz

1. _____  2. _____  3. _____  4. _____  5. _____

S12. Kullandığım sigaranın harmanı kaliteli

1. _____  2. _____  3. _____  4. _____  5. _____

S13. Kullandığım sigaranın yanması düzgün

1. _____  2. _____  3. _____  4. _____  5. _____

S14. Yaşınız

[ ]  1.   - 18
[ ]  2. 18 - 20
[ ]  3. 21 - 23
[ ]  4. 24 - 26
[ ]  5. 27 - 29
[ ]  6. 29 - 31

S15. Cinsiyetiniz

[ ]  1. Bay
[ ]  2. Bayan

S16. Aileniz siz dahil kaç kişiden oluşmakta ?

[ ]  1. 1 - 2
[ ]  2. 3 - 4
[ ]  3. 5 - 6
[ ]  4. 7 ve daha yukarısı

S17. Oturduğunuz konut;

[ ]  1. Kendi evim
[ ]  2. Kira
[ ]  3. Lojman
[ ]  4. Yurt
[ ]  5. Diğer (Belirtin) _____

S18. İkamet şekliniz;

[ ]  1. Ailemle beraber
[ ]  2. Yalnız yaşıyorum

[ ]    3. Arkadaşlarımla beraber kalıyorum
[ ]    4. Yurtta kalıyorum
[ ]    5. Diğer (Belirtin) _____

S19.   Ailenizin aylık geliri

[ ]    1.                    -  20.000.000
[ ]    2.   20.000.001 -  40.000.000
[ ]    3.   40.000.001 -  60.000.000
[ ]    4.   60.000.001 -  80.000.000
[ ]    5.   80.000.001 - 100.000.000
[ ]    6. 100.000.001 -       +
                Yardımlarınız için çok teşekkür ederim.


Q1.    When you are offered a cigarette somewhere;

[ ]    1. If it is not my favourite brand I politeliy reject it
[ ]    2. I thank and accept the cigarette
[ ]    3. Other (Please state) _____

Q2.    Your cigarette consumption frequency;

[ ]    1. More than one pack per day
[ ]    2. One pack per day
[ ]    3. A half pack per day
[ ]    4. One pack in three or four days
[ ]    5. One pack per week or less

Q3.    Please mark the first three criteria for you in the order of importance
       (Please write the number of your choice into the appropriate blank)

1. Its Burn                          1. Criteria (_____)
2. Taste in the mouth
3. Its  smell                        2. Criteria (_____)
4. Its price
5. Its filter                        3. Criteria (_____)
6. Blend of the tobacco
7. Bandage of paper
8. Other (Please state) _____

Q4.    When I buy a cigarette;

[ ]    1. I ask for my favourite brand, if not available I do not buy
[ ]    2. If my favourite brand is not available I buy a similar one
[ ]    3. Brand is not important for me I buy any of the availables
[ ]    4. Other (Please state) _____

Q5.    The brand that you consume most;

[ ]    1. Marlboro            [ ]    8. Kansas
[ ]    2. Marlboro (short)    [ ]    9. Maltepe (short)
[ ]    3. Marlboro Light      [ ]   10. Maltepe (long)
[ ]    4. Camel (short)       [ ]   11. Tekel 2000
[ ]    5. Camel (long)        [ ]   12. Samsun (short)
[ ]    6. Camel Light         [ ]   13. Samsun (long)
[ ]    7. Best                [ ]   14. Other _____

Q6.    Your second choice;

[ ]    1. Marlboro            [ ]    8. Kansas
[ ]    2. Marlboro (short)    [ ]    9. Maltepe (short)
[ ]    3. Marlboro Light      [ ]   10. Maltepe (long)
[ ]    4. Camel (short)       [ ]   11. Tekel 2000
[ ]    5. Camel (long)        [ ]   12. Samsun (short)
[ ]    6. Camel Light         [ ]   13. Samsun (long)
[ ]    7. Best                [ ]   14. Other _____

Q7.    How long have you been smoking ?

[ ]    1. Less than one year
[ ]    2. 1 - 3  years
[ ]    3. 3 - 5 years
[ ]    4. More than five years

Considering your answer in the 5th question
THE BRAND THAT YOU CONSUME MOST;
Please state your opinion for the following propositions
Mark a "X" into the blank near the number

1. I stongly disagree.
2. I disagree.
3. No difference for me.
4. I agree.
5. I stongly agree.

Q8.     The brand tastes pleasently in my mouth.

              1. _____   2. _____   3. _____   4. _____   5. _____

Q9.     The smell of the brand that I consume is light.

              1. _____   2. _____   3. _____   4. _____   5. _____

Q10.    The nicotine and tar content in my brand is low.

              1. _____   2. _____   3. _____   4. _____   5. _____

Q11.    The price of the cigarette thatthat I use is high

              1. _____   2. _____   3. _____   4. _____   5. _____

Q12.    The quality of the brand that I use is high

              1. _____   2. _____   3. _____   4. _____   5. _____

Q13.    The cigarette burns smoothly.

              1. _____   2. _____   3. _____   4. _____   5. _____

Q14.    Age

        [ ]   1.    - 18
        [ ]   2. 18 - 20
        [ ]   3. 21 - 23
        [ ]   4. 24 - 26
        [ ]   5. 27 - 29
        [ ]   6. 29 - 31

Q15.    Sex

        [ ]   1. Male
        [ ]   2. Female

Q16.    Your family consist of _____ persons. (including yourself)

        [ ]   1. 1 - 2
        [ ]   2. 3 - 4
        [ ]   3. 5 - 6
        [ ]   4. 7 and more

Q17. Your residential house/flat

[ ]   1. is owned by my family
[ ]   2. is rented
[ ]   3. is provided by the employer (Residence)
[ ]   4. Dormitory
[ ]   5. Other _____

Q18. Type of residence
[ ]   1. Together with my family
[ ]   2. Ilive alone
[ ]   3. Together with my friends
[ ]   4. At dormitory
[ ]   5. Other _____

Q19. Monthly income of your family

[ ]   1.                          -   20.000.000
[ ]   2.   20.000.001 -   40.000.000
[ ]   3.   40.000.001 -   60.000.000
[ ]   4.   60.000.001 -   80.000.000
[ ]   5.   80.000.001 - 100.000.000
[ ]   6. 100.000.001 -           +

Thank you for your contributions.

# Appendix B

# QUESTIONNAIRE TEXT FILE

Q1. WHEN YOU ARE OFFERED A CIGARETTE SOMEWHERE
   0. Null
   1. If not fav. reject
   2. Accept
   3. Other

Q2. YOUR CIGARETTE CONSUMPTION FREQUENCY
   0. Null
   1. More than 1 pack
   2. One pack per day
   3. Half pack per day
   4. 1 pack in 3/4 days
   5. One pack per week

Q3. FIRST CRITERIA OF CHOICE
   0. Null
   1. Its burn
   2. Taste in the mouth
   3. Its smell
   4. Its price
   5. Its filter
   6. Blend
   7. Bandage of paper
   8. Other

Q4. SECOND CRITERIA OF CHOICE
   0. Null
   1. Its burn
   2. Taste in the mouth
   3. Its smell
   4. Its price
   5. Its filter
   6. Blend
   7. Bandage of paper
   8. Other

Q5. THIRD CRITERIA OF CHOICE
   0. Null
   1. Its burn
   2. Taste in the mouth
   3. Its smell
   4. Its price
   5. Its filter

6. Blend
7. Bandage of paper
8. Other

Q6. WHEN I BUY A CIGARETTE
0. Null
1. Insist on favourite
2. Not insist on
3. Brand not important
4. Other

Q7. THE BRAND CONSUMED MOST
0. Null
1. Marlboro
2. Marlboro (short)
3. Marlboro Light
4. Camel (short)
5. Camel (long)
6. Camel Light
7. Best
8. Kansas
9. Maltepe (short)
10. Maltepe (long)
11. Tekel 2000
12. Samsun (short)
13. Samsun (long)
14. Other

Q8. SECOND BRAND CHOICE
0. Null
1. Marlboro
2. Marlboro (short)
3. Marlboro Light
4. Camel (short)
5. Camel (long)
6. Camel Light
7. Best
8. Kansas
9. Maltepe (short)
10. Maltepe (long)
11. Tekel 2000
12. Samsun (short)
13. Samsun (long)
14. Other

Q9. HOW LONG HAVE BEEN SMOKING ?
0. Null
1. Less than 1 year
2. 1 - 3 years
3. 3 - 5 years
4. More than 5 years

Q10. THE BRAND TASTES PLEASENTLY IN MY MOUTH
0. Null
1. Stongly disagree.
2. Disagree.
3. No difference.
4. Agree
5. Stongly agree.

Q11. THE SMELL OF THE FAVOURITE BRAND IS LIGHT
0. Null
1. Stongly disagree.
2. Disagree.
3. No difference.
4. Agree
5. Stongly agree.

Q12. THE NICOTINE AND TAR CONTENT IS LOW
0. Null
1. Stongly disagree.
2. Disagree.
3. No difference.
4. Agree
5. Stongly agree.

Q13. THE PRICE OF THE FAVOURITE BRAND IS LOW
0. Null
1. Stongly disagree.
2. Disagree.
3. No difference.
4. Agree
5. Stongly agree.

Q14. THE QUALITY OF THE BLEND IS HIGH
0. Null
1. Stongly disagree.
2. Disagree.
3. No difference.
4. Agree

5. Stongly agree.

Q15. THE CIGARETTE BURNS SMOOTHLY
0. Null
1. Stongly disagree.
2. Disagree.
3. No difference.
4. Agree
5. Stongly agree.

Q16. AGE
0. Null
1.     - 18
2. 18 - 20
3. 21 - 23
4. 24 - 26
5. 27 - 29
6. 29 - 31

Q17. SEX
0. Null
1. Male
2. Female

Q18. SIZE OF THE FAMILY
0. Null
1. 1 - 2
2. 3 - 4
3. 5 - 6
4. 7 and more

Q19. YOUR RESIDENTIAL HOUSE/FLAT
0. Null
1. Its self owned
2. Is rented
3. Residence
4. Dormitory
5. Other

Q20. TYPE OF RESIDENCE
0. Null
1. With family
2. Live alone
3. With friends
4. At dormitory

5. Other

Q21. MONTHLY INCOME OF FAMILY
    0. Null
    1.                   -  20.000.000
    2.  20.000.001 -  40.000.000
    3.  40.000.001 -  60.000.000
    4.  60.000.001 -  80.000.000
    5.  80.000.001 - 100.000.000
    6. 100.000.001 -        +

# QUESTIONNAIRE DATA FILE

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107. 15635107033442355422116
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109. 24600111012522254223442
110. 12425108034555155412115

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