CHAPTER 6

RESULTS AND INTERPRETATION

6.1   INTRODUCTION

Chapter 6 deals with the factor analysis results and the interpretation of the factors identified for the product category lipstick and the three advertisements to which the respondents were subjected.

Chapter 6 is structured according to the questionnaire completed by the respondents (Appendix A). Section A of the questionnaire dealt with the categorisation of the respondents according to their lipstick usage patterns. The usage patterns were recorded in Chapter 5. Section B of the questionnaire dealt with the importance ratings for the product category lipstick. All variables and factors for the product category lipstick were therefore labelled B.

Section C of the questionnaire focused on the performance ratings of each advertisement, rated on a scale ranging from excellent to poor, on each of the twenty-two variables identified through content analysis. The first advertisement, Clarins, was labelled C. All variables and factors for the second advertisement, Ellen Betrix, were labelled D with the Maybelline data set labelled E.

Important to note is that the description of factors requires some judgement on the part of the researcher. This obviously introduces a measure of subjectivity to any interpretation of a factor analysis. This stresses the importance of deciding which factor loadings are to be considered and which not. As was mentioned in Chapter 5, the Varimax-technique of orthogonal rotation was used to conduct the factor analysis study. Only eigenvalues greater than one were extracted and only factor loadings greater than 0,50 were considered to be significant.

Before discussing each of the four sets of data, it is important to note that the lipstick attributes identified through content analysis are referred to as input variables to factor analysis. It is therefore important to acknowledge, with regard to this study, that the terms "variable" and "attribute" are to be considered the same and not as two differing terminologies.

The mean values, rotated factor matrixes, factor identification and interpretation will now be discussed individually for each of the four sets of data.

6.2 FACTOR ANALYSIS RESULTS FOR THE PRODUCT CATEGORY LIPSTICK

Section 6.2 deals with the mean values ascribed to each of the twenty-two variables identified through the preceding content analysis study. Attention is also directed towards the rotated factor matrix for the product category lipstick and the labelling of identified factors. The section concludes with an interpretation of the labelled factors.

6.2.1 Mean value scores for the product category lipstick

The importance ratings (expressed as mean values on a scale of one, rated as extremely important, and five, rated as totally unimportant) for the product category lipstick for each of the twenty-two variables are presented in Table 6.1.

TABLE 6.1: MEAN VALUES FOR THE PRODUCT CATEGORY LIPSTICK

No	Variable	Mean
B1	Moisturises	1,86
B2	Light texture	2,60
B3	Creamy texture	2,72
B4	Long-lasting wear	1,63
B5	Hypoallergenic	2,47
B6	Not tested on animals	2,36
B7	Protects lips	1,89
B8	Nourishes	2,12

| No	Variable	Mean
B9	Phytospheres	2,44
B10	Smooth	1,85
B11	Innovative formula	2,80
B12	Prevents dryness	1,60
B13	Polished colour	2,36
B14	Perfume-free	2,98
B15	Brand name	2,80
B16	Price	2,02
B17	Colour	1,50
B18	Vitamin E-enriched	2,30
B19	Conditioning colour	2,48
B20	Doesn't run or bleed	1,51
B21	Matt finish	2,14
B22	Stays on lips (won't kiss or rub off)	1,55

Colour was considered to be the most important attribute when selecting a lipstick (mean value of 1,50) with the features that lipstick should not run or bleed, should stay on lips, prevent dryness and have a long-lasting wear being the next important. The least important attributes were the claim that lipstick should be perfume-free (mean value of 2,98), the brand name and the use of an innovative formula.

Although certain attributes were considered to be of greater importance it is important to note that none of the twenty-two attributes were considered unimportant (no mean value was greater than 3,0). The preceding content analysis can therefore be considered to be well-executed with the exhaustive list of product attributes functional to the study.

Figure 6.1 provides a graphical presentation of the mean values for the twenty-two attributes.

FIGURE 6.1: LIPSTICK MEAN VALUES
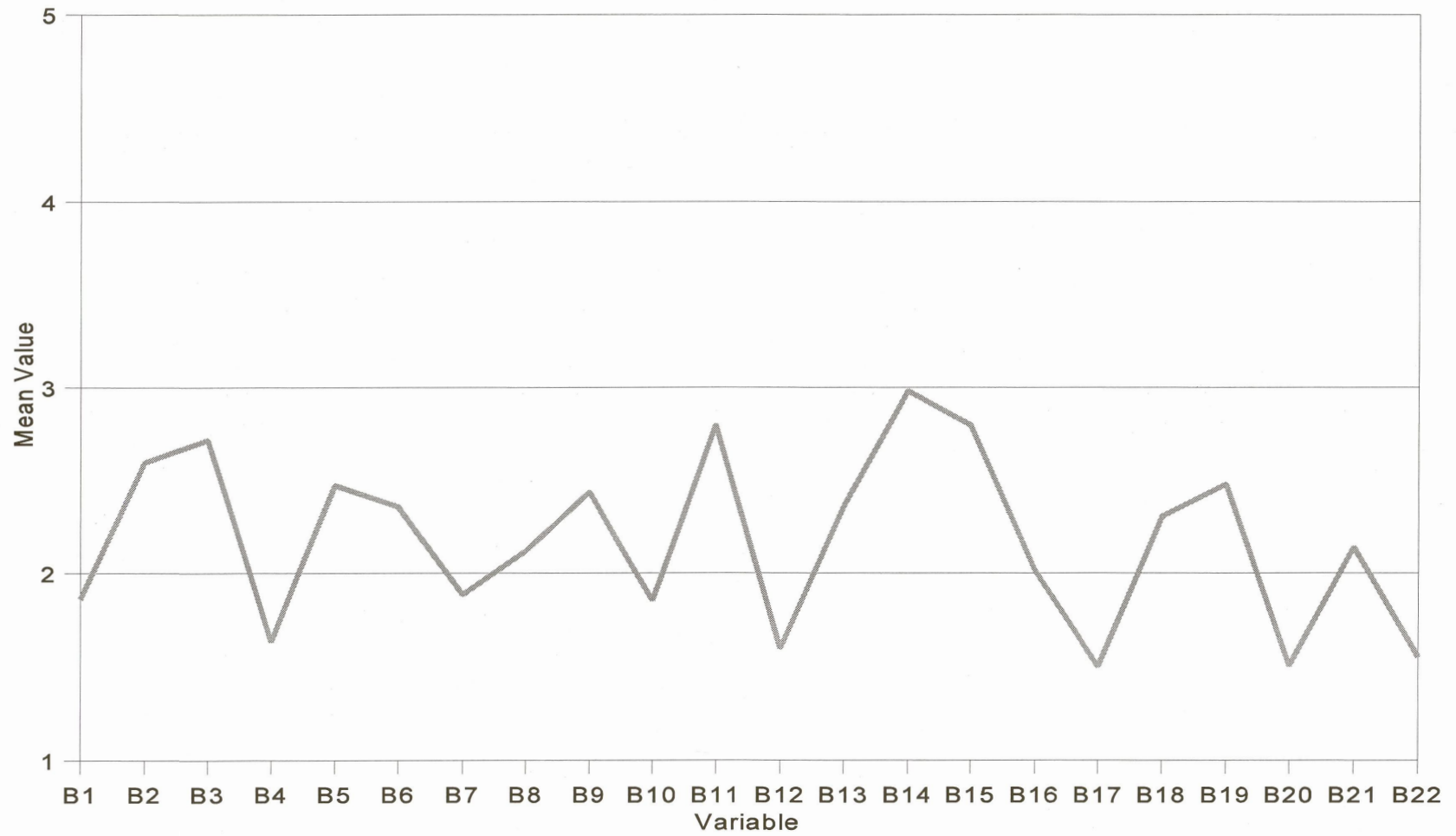
6.2.2 Rotated factor matrix for the product category lipstick

Table 6.2 depicts the rotated factor matrix with the factor loadings for each of the twenty-two attributes for the product category lipstick. As mentioned previously, only factors with eigenvalues greater than one were extracted and only factor loadings greater than 0,50 were considered in determining the factors.

TABLE 6.2: ROTATED FACTOR MATRIX FOR THE PRODUCT CATEGORY LIPSTICK

No	Variable	Factor					
		B1	B2	B3	B4	B5	B6
B1	Moisturises	0,52	0,03	0,11	-0,30	0,32	0,30
B2	Light texture	0,19	0,02	0,04	-0,01	0,68	0,05
B3	Creamy texture	0,12	0,03	0,13	0,04	0,76	-0,12
B4	Long-lasting wear	0,19	0,12	0,78	-0,06	0,09	0,13
B5	Hypoallergenic	0,28	-0,23	0,31	0,29	0,08	0,35
B6	Not tested on animals	0,28	-0,01	0,06	-0,03	-0,14	0,70
B7	Protects lips	0,76	0,17	0,08	0,17	0,08	0,08
B8	Nourishes	0,63	0,21	0,25	0,14	0,11	0,15
B9	Phytospheres	0,24	0,34	0,16	0,30	0,33	0,05
B10	Smooth	0,49	0,24	0,19	0,33	0,31	-0,23
B11	Innovative formula	0,09	-0,03	0,03	0,77	0,03	0,18
B12	Prevents dryness	0,73	0,07	-0,004	0,06	0,14	0,02
B13	Polished colour	0,15	0,13	0,44	0,50	-0,17	-0,14
B14	Perfume-free	0,16	0,43	-0,17	0,19	0,09	0,17
B15	Brand name	-0,15	0,19	-0,06	0,34	-0,04	0,66
B16	Price	0,27	0,56	0,10	0,04	-0,15	-0,26
B17	Colour	0,04	0,65	0,25	-0,05	-0,01	0,06
B18	Vitamin E-enriched	0,15	0,36	-0,05	0,57	0,15	0,23
B19	Conditioning colour	0,03	0,56	0,15	0,38	0,39	0,10
B20	Doesn't run or bleed	0,19	0,58	0,45	0,01	0,13	0,24
B21	Matt finish	0,09	0,30	0,16	0,16	0,21	0,39
B22	Stays on lips (won't kiss or rub off)	0,03	0,20	0,77	0,14	0,20	-0,04
Eigenvalues		5,30	1,74	1,55	1,31	1,13	1,09
Percentage of variance		24,1%	7,9%	7,1%	6,0%	5,1%	5,0%
Cumulative percentage		24,1%	32,0%	39,1%	45,1%	50,2%	55,2%

As identified in Table 6.2, six factors (labelled B1 to B6) were identified. Factor B1 comprised four, B2 four, B3 two, B4 three, B5 two and B6 two variables respectively. The eigenvalues (being the sum of the squared factor loadings for the particular factor) for factors B1 to B6 are 5,30; 1,74; 1,55; 1,31; 1,13; and 1,09 respectively.

The percentage of variance explained is a summary measure of how much of the total original variance of all twenty-two variables is represented by each factor. This is calculated by dividing the eigenvalue by the twenty-two variables. Factor B1 therefore accounted for 24,1%, factor B2 for an additional 7,9%, down to factor B6 that explained 5,0% of the total variance. It is important to calculate the cumulative percentage, because it provides a summary measure that shows how much of the total variance is explained in the relationships between the twenty-two variables by all six of the factors. In this study the six factors explained 55,2% of the total variance, an acceptable percentage for the purpose of factor analysis.

The following section deals with the labelling of the extracted six factors (B1 to B6) for the product category lipstick.

6.2.3 Factor identification

As mentioned in the previous section, six factors were identified for the product category lipstick. In this section these factors will be thoroughly examined and labelled accordingly.

Factor B1

Four of the twenty-two variables loaded heavily on the first factor, namely

No	Variable	Loading
B7	Protects lips	0,76
B12	Prevents dryness	0,73
B8	Nourishes	0,63
B1	Moisturises	0,52

113

According to the constituent variables of factor B1, it seems as if the most important feature of lipstick is that of lip care. Variable B7 (protects lips) is complimented by variables B12 (prevents dryness) and B1 (moisturises) since sensitive lip tissue is protected by moisturising lips, therefore ensuring that dryness does not occur. Variable B8 (nourishes) prevents dryness through preserving and feeding lips. Factor B1 can therefore be labelled **lip care.**

Factor B2

Factor B2 comprised the following four variables:

No	Variable	Loading
B17	Colour	0,65
B20	Doesn't run or bleed	0,58
B19	Conditioning colour	0,56
B16	Price	0,56

Variable B17 (colour) and B19 (conditioning colour) clearly lean towards the colour characteristic of lipstick. The other obvious explanatory variable is price (B16). The fact that the lipstick should not run or bleed (B20) influences both the colour and price variables. Lipstick that does not run or bleed produces an intense depth of colour. On the other hand, lipstick that tends to run may alter the desired colour and needs to be applied more often (more lipstick is therefore used with obvious financial implications). Factor B2 can therefore be labelled **colour as value for money.**

Factor B3

Factor B3 contained two variables, namely

No	Variable	Loading
B4	Long-lasting wear	0,78
B22	Stays on lips (won't kiss or rub off)	0,77

Lipstick is notorious for its disappearing act and adds to great frustration by frequently

rubbing off, especially when kissing! Factor B3 concentrates on long-lasting wear (variable B4) and staying power (B22) of lipstick. Factor B3 can therefore be labelled **durability.**

Factor B4

The following variables constitute factor B4:

No	Variable	Loading
B11	Innovative formula	0,77
B18	Vitamin E-enriched	0,57
B13	Polished colour	0,50

Variable B18 (vitamin E-enriched), a lipstick ingredient, supports variable B11 (innovative formula) since vitamin E is used as an innovation to smooth and soften lips. The result of smooth, soft lips is that it supports colour all day (and night) long, possibly explaining the inclusion of variable B13 (polished colour). Due to the questionability of the relevance of variable B13 (polished colour), it will be discarded and factor B4 can therefore be labelled as **composition.**

Factor 5

Factor B5 comprised only two variables,

No	Variable	Loading
B3	Creamy texture	0,76
B2	Light texture	0,68

As is eminent from the two variables (B3, creamy texture and B2, light texture), factor B5 is simply labelled **texture.**

Factor B6

The final factor, B6, consists of the following two variables:

No	Variable	Loading
B6	Not tested on animals	0,70
B15	Brand name	0,66

Since factor B6 comprises only brand name (variable B15) and the characteristic that lipstick should not be tested on animals (variable B6), it can be concluded that factor B6 deals with **brand association.**

Table 6.3 below indicates the labelled factors for the product category lipstick.

<u>**TABLE 6.3:**</u> **LABELLED FACTORS FOR THE PRODUCT CATEGORY LIPSTICK**

Factor	Description	Percentage of variance	Cumulative percentage
B1	Lip care	24,1%	24,1%
B2	Colour as value for money	7,9%	32,0%
B3	Durability	7,1%	39,1%
B4	Composition	6,0%	45,1%
B5	Texture	5,1%	50,2%
B6	Brand association	5,0%	55,2%

As indicated in Table 6.3, the six factors identified for the product category lipstick explained 55,1% of the total variance of the twenty-two variables. Factor B1, lip care accounted for 24,1% of the total variance with factor B2 (colour as value for money) explaining a further 7,9%. Durability (factor B3) accounted for 7,1%, composition (factor B4) for 6,0%, texture (factor B5) for 5,1% and factor B6 (brand association) for 5,0% of the total variance.

6.2.4 Interpretation

As mentioned in the previous section, lip care (factor B1) was perceived to be the most important feature when selecting a lipstick. The second most important characteristic of lipstick sought after was that of colour as value for money (factor B2) followed by durability (factor B3).

The three most important factors correlated with the most important mean values for the list of twenty-two lipstick attributes. The attributes rated as the most important were those of colour, that lipstick should not run or bleed (enclosed in factor B2), that it should stay on lips and be long-lasting (enclosed in factor B3) and that it should prevent dryness (enclosed in factor B1).

Important to note is that although colour received the best mean value score, the most important feature considered when selecting lipstick is lip care. Colour is only perceived to be the second most important feature with durability following in importance.

Although the attributes, brand name and an innovative formula received rather unimportant mean value scores, both the composition (factor B4) of the lipstick and the association of the brand (factor B6) were still considered to be important when selecting a lipstick.

6.3 FACTOR ANALYSIS RESULTS FOR THE CLARINS ADVERTISEMENT

Section 6.3 deals with the mean values ascribed to each of the twenty-two variables specifically applied to the Clarins advertisement. Attention is also drawn to the rotated factor matrix for Clarins and the labelling of factors identified from the Clarins data set. Section 6.3 concludes with a comparison between the explicitly mentioned attributes in the Clarins advertisement and the labelled factors.

6.3.1 Mean value scores for the Clarins advertisement

The Clarins advertisement, rated by the respondents on a scale ranging from excellent to poor on each of the twenty-two variables, comprised twelve explicitly mentioned attributes. The following attributes were explicitly mentioned in the advertisement:

- Protects lips
- Nourishes
- Phytospheres
- Moisturises
- Smooth
- Light texture
- Creamy texture
- Long-lasting wear
- Hypoallergenic
- Not tested on animals
- Colour
- Brand name

The mean values for each of the twenty-two variables, once the respondents were exposed to the Clarins advertisement, are presented in Table 6.4.

TABLE 6.4: CLARINS MEAN VALUE SCORES

No	Variable	Mean
C1	Moisturises	1,81
C2	Light texture	2,47
C3	Creamy texture	2,06
C4	Long-lasting wear	2,12
C5	Hypoallergenic	2,17
C6	Not tested on animals	1,97
C7	Protects lips	1,81
C8	Nourishes	1,81

| No	Variable	Mean
C9	Phytospheres	1,86
C10	Smooth	1,67
C11	Innovative formula	2,49
C12	Prevents dryness	2,02
C13	Polished colour	2,14
C14	Perfume-free	2,89
C15	Brand name	1,97
C16	Price	3,01
C17	Colour	2,06
C18	Vitamin E-enriched	2,54
C19	Conditioning colour	2,27
C20	Doesn't run or bleed	2,38
C21	Matt finish	2,63
C22	Stays on lips (won't kiss or rub off)	2,43

Opposed to colour being the most important attribute respondents considered when selecting a lipstick, Clarins was perceived to be excellent as far as the smoothness of the lipstick was concerned (mean value of 1,67). Other attributes rated as excellent were that Clarins was perceived to protect, moisturise and nourish lips.

Attributes on which Clarins was rated poorly were price (mean value of 3,01) and the claim that the lipstick was perfume-free.

Important to note is that the attributes that were explicitly mentioned in the Clarins advertisement were perceived more positively than those not mentioned, with the only exception being the light texture of the lipstick. Although light texture was not rated as positively as the other mentioned attributes, it is eminent that this attribute was perceived more positively than those attributes not mentioned.

Figure 6.2 clearly display the better ratings of the mentioned attributes (indicated with an X) to those not explicitly mentioned.

119

FIGURE 6.2: CLARINS MEAN VALUES
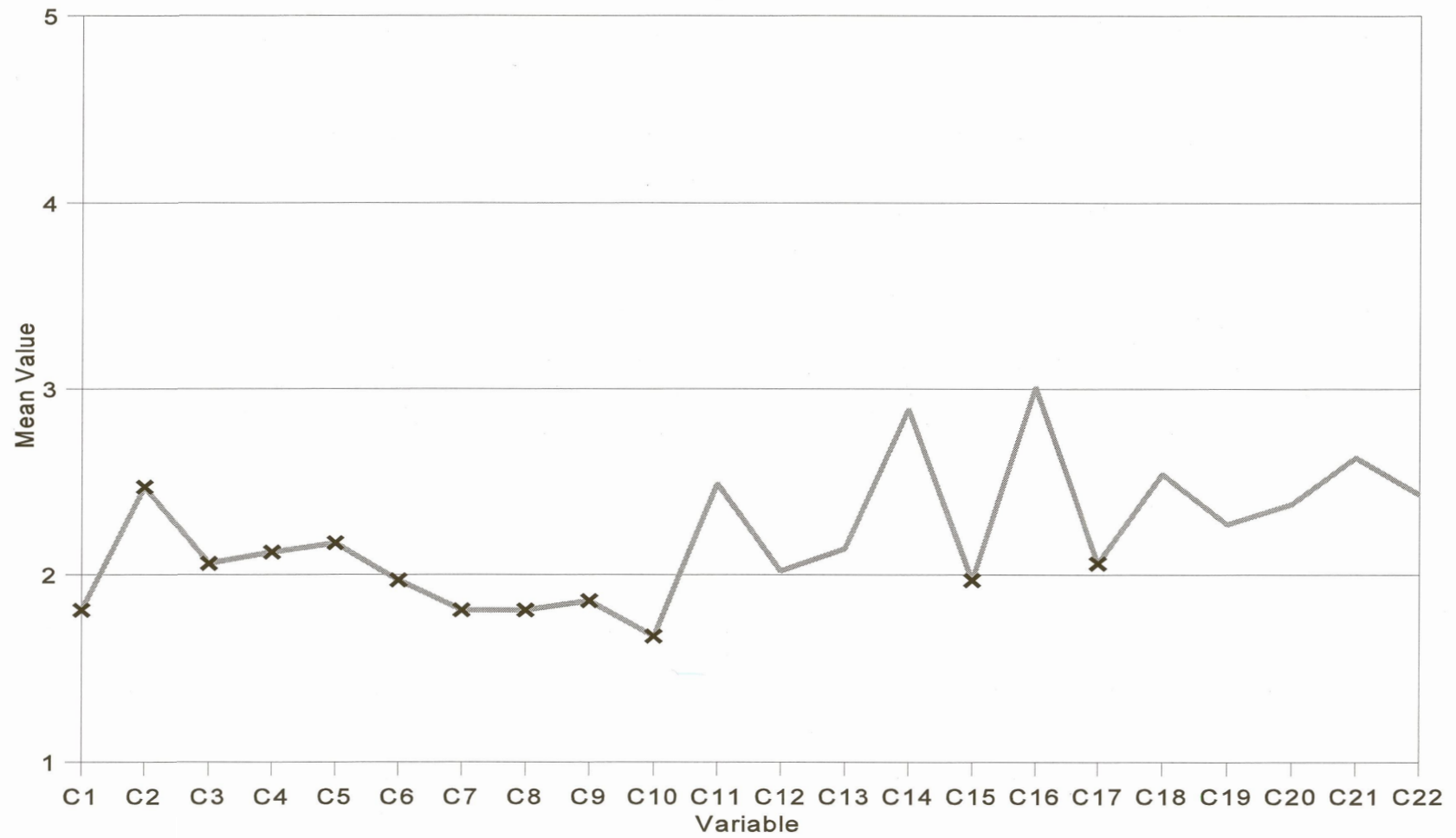
6.3.2 Rotated factor matrix for the Clarins advertisement

Table 6.5 depicts the rotated factor matrix for the twenty-two variables once the respondents were subjected to the Clarins advertisement.

TABLE 6.5: **ROTATED FACTOR MATRIX FOR THE CLARINS ADVERTISEMENT**

No	Variable	Factor					
		C1	C2	C3	C4	C5	C6
C1	Moisturises	0,33	0,09	**0,57**	-0,001	0,12	0,01
C2	Light texture	0,01	0,12	**0,79**	0,09	0,07	-0,09
C3	Creamy texture	0,15	0,15	**0,72**	0,20	0,14	0,19
C4	Long-lasting wear	0,36	0,27	0,22	0,20	0,01	**0,56**
C5	Hypoallergenic	0,19	-0,01	0,12	0,46	0,49	0,21
C6	Not tested on animals	0,14	-0,04	0,10	0,17	**0,75**	-0,12
C7	Protects lips	**0,74**	0,23	0,12	0,11	0,05	0,01
C8	Nourishes	**0,78**	-0,001	0,07	0,14	0,18	0,04
C9	Phytospheres	0,48	0,04	0,35	0,41	-0,07	-0,16
C10	Smooth	**0,55**	0,01	0,34	0,16	0,34	0,04
C11	Innovative formula	0,13	0,01	0,13	**0,78**	0,13	-0,11
C12	Prevents dryness	**0,52**	0,23	0,19	-0,11	0,22	0,07
C13	Polished colour	0,14	0,22	0,10	-0,01	**0,63**	0,08
C14	Perfume-free	-0,05	**0,60**	0,10	0,05	**0,50**	-0,29
C15	Brand name	0,42	0,01	0,12	0,25	0,02	**0,63**
C16	Price	0,09	**0,78**	0,11	-0,06	-0,01	-0,19
C17	Colour	**0,52**	0,34	-0,07	0,09	-0,05	-0,21
C18	Vitamin E-enriched	0,08	0,43	0,05	**0,63**	0,08	0,06
C19	Conditioning colour	**0,51**	0,17	0,12	0,41	0,13	0,07
C20	Doesn't run or bleed	0,29	**0,72**	0,14	0,02	0,11	0,21
C21	Matt finish	0,16	**0,63**	0,10	0,26	0,19	0,17
C22	Stays on lips (won't kiss or rub off)	0,19	**0,69**	0,11	0,25	-0,06	0,33
Eigenvalues		**6,26**	**1,98**	**1,38**	**1,24**	**1,14**	**1,04**
Percentage of variance		**28,4%**	**9,0%**	**6,3%**	**5,6%**	**5,2%**	**4,7%**
Cumulative percentage		**28,4%**	**37,4%**	**43,7%**	**49,3%**	**54,5%**	**59,2%**

As indicated in Table 6.5, six factors (labelled C1 to C6) were identified. Factor C1 comprised six, C2 five, C3 three, C4 two, C5 three and C6 two variables respectively. The eigenvalues for factors C1 to C6 were 6,26; 1,98; 1,38; 1,24; 1,14 and 1,04 respectively.

As indicated in Table 6.5, factor C1 accounted for 28,4%, C2 for an additional 9,0%, C3 for 6,3%, C4 for 5,6%, C5 for 5,2% and C6 for 4,7% of the total variance of the twenty-two variables. The six identified factors for the Clarins study explained cumulatively 59,2% of the total variance, an acceptable percentage for the purpose of factor analysis.

The following section deals with the labelling of the extracted six factors (C1 to C6) for the Clarins advertisement.

6.3.3 Factor identification

As mentioned in the previous section, six factors were identified for the Clarins advertisement. In this section these factors will be thoroughly examined and labelled accordingly.

Factor C1

Six variables load heavily on the first factor, namely

No	Variable	Loading
C8	Nourishes	0,78
C7	Protects lips	0,74
C10	Smooth	0,55
C12	Prevents dryness	0,52
C17	Colour	0,52
C19	Conditioning colour	0,51

Variables C8 (nourishes), C7 (protects lips) and C12 (prevents dryness) relates to the caring of lips. Variable C10 (smooth) can also be interpreted as caring for lips since the

smooth formula smoothens lips by filling lines and lip cracks and protecting delicate lip tissue. Variables C17 (colour) and C19 (conditioning colour) deal with the colour aspect of lipstick. Factor C1 is therefore labelled **lip care and colour.**

Factor C2

Factor C2 comprised the following five variables:

No	Variable	Loading
C16	Price	0,78
C20	Doesn't run or bleed	0,72
C22	Stays on lips (wont' kiss or rub off)	0,69
C21	Matt finish	0,63
C14	Perfume-free	0,60

The variable with the greatest loading, C16 (price), focuses on value for money. Variables C20 (doesn't run or bleed) and C22 (stay on lips) lean towards durability. Variable C21 (matt finish) supports durability in the sense that matt pigments applied to lips don't feather or fade easily.

The perfume-free characteristic (C14) rather leans to naturalness than to durability or value for money and will therefore be discarded as a meaningful explanation to factor C2. Factor C2 is labelled **durability as value for money.**

Factor C3

Factor C3 comprises three variables:

No	Variable	Loading
C2	Light texture	0,79
C3	Creamy texture	0,72
C1	Moisturises	0,57

Variable C2 (light texture) and C3 (creamy texture) clearly identify texture as a label for factor C3. A creamy texture is usually characterised by moisturising lips (C1) and ensures a light texture in stead of a dry finish. Factor C3 is therefore labelled **texture.**

Factor C4

Factor C4 comprised two variables, namely

No	Variable	Loading
C11	Innovative formula	0,78
C18	Vitamin E-enriched	0,63

As mentioned earlier, vitamin E (variable C18) is used as an innovation (C11) to smooth and soften lips. Lips that are smooth and soft supports lasting colour. Factor C4 is therefore labelled **composition.**

Factor C5

Factor C5 comprises three variables:

No	Variable	Loading
C6	Not tested on animals	0,75
C13	Polished colour	0,63
C14	Perfume-free	0,50

The fact that the lipstick is not tested on animals (variable C6) and is perfume-free (C14) characterises the lipstick as being natural. The relevance of variable C13 (polished colour) is not clear and will therefore be discarded. Factor C5 is therefore labelled **naturalness.**

Factor C6

Factor C6 focused on two variables only, namely

No	Variable	Loading
C15	Brand name	0,63
C4	Long-lasting wear	0,56

Factor C6 deals with brand name (variable C15) and long-lasting wear (C4). Factor C6 is therefore labelled **brand association** with regard to long-lasting wear.

Table 6.6 below indicates the labelled factors for the Clarins advertisement.

TABLE 6.6: LABELLED FACTORS FOR CLARINS

Factor	Description	Percentage of variance	Cumulative percentage
C1	Lip care and colour	28,4%	28,4%
C2	Durability as value for money	9,0%	37,4%
C3	Texture	6,3%	43,7%
C4	Composition	5,6%	49,3%
C5	Naturalness	5,2%	54,5%
C6	Brand association	4,7%	59,2%

As indicated in Table 6.6, Factor C1 (lip care and colour) explained 28,4% of the total variance for the twenty-two variables. Factor C2 (durability as value for money) accounted for an additional 9,0% and C3 (texture) for 6,3%. Composition (factor C4) revealed 5,6% and naturalness (C5) an additional 5,2%. The final factor, C6 (brand association) interpreted 4,7% of the variance.

Together, the six identified factors for the Clarins advertisement explained 59,2% of the total variance for the twenty-two variables.

6.3.4 Interpretation

As mentioned, the Clarins advertisement explicitly mentioned twelve attributes. All of the mentioned attributes received better mean value scores and were therefore perceived to be of greater importance than those attributes not mentioned in the advertisement.

The Clarins advertisement conveyed four lipstick features, namely lip care (the attributes supporting the lip care characteristic are that it protects lips, nourishes, phytospheres, moisturises and smooth), texture (light and creamy texture), naturalness (hypoallergenic and not tested on animals) and long-lasting wear. Colour also featured as a prominant characteristic.

Important to note is that all the factors identified for the Clarins advertisement correspond with the features of lipstick portrayed through attributes in the Clarins advertisement.

The most important factor (lip care and colour, C1) was clearly identified in the mentioned advertisement as stated above. Factor C2 (durability and value for money) can be interpreted by the featured attribute long-lasting wear. Although the factor itself comprises different attributes, the labelling of the factor corresponds with the claim that Clarins lipstick tends to be long-lasting.

Factor C3 (texture) corresponds with the mentioned texture attributes and when labelled also includes moisturises, an attribute explicitly mentioned in the advertisement.

Important to note is that formula was referred to in the advertisement to express the claim that colour was formulated for long-lasting wear. Formula was not expressed as an explicit characteristic of Clarins and was therefore not recognised as a mentioned attribute in the Clarins advertisement. Factor C4, composition, can be explained by the array of attributes mentioned in the advertisement with recognition to the fact that the colour was formulated for long-lasting wear. As mentioned, long-lasting lipstick tends to be drying and uncomfortable, yet Clarins also promotes lip care (through protection, moisturising and nourishing) and could therefore acknowledge its composition.

Factor C5 (naturalness) corresponds with the advertisement claim that Clarins is perfume-free and not tested on animals.

Factor C6 (brand association) associates the Clarins brand with one specific product feature, long-lasting wear, a feature conveyed by the advertisement.

6.4 FACTOR ANALYSIS RESULTS FOR THE ELLEN BETRIX ADVERTISEMENT

Section 6.4 deals with the mean values ascribed to each of the twenty-two variables, specifically applied to the Ellen Betrix advertisement. Attention is also drawn to the rotated factor matrix for Ellen Betrix and the labelling of factors identified from the Ellen Betrix data set. Section 6.4 concludes with a comparison between the explicitly mentioned attributes in the Ellen Betrix advertisement and the labelled factors.

6.4.1 Mean value scores for the Ellen Betrix advertisement

The Ellen Betrix advertisement presented to the respondents depicted four explicitly mentioned attributes, namely

- Hypoallergenic
- Perfume-free
- Colour
- Brand name

The mean values for each of the twenty-two variables (rated by the respondents on a scale ranging from excellent to poor) for the Ellen Betrix advertisement, are depicted in Table 6.7.

TABLE 6.7: ELLEN BETRIX MEAN VALUE SCORES

No	Variable	Mean
D1	Moisturises	2,06
D2	Light texture	2,07
D3	Creamy texture	2,37
D4	Long-lasting wear	2,61
D5	Hypoallergenic	1,83
D6	Not tested on animals	2,63
D7	Protects lips	2,22
D8	Nourishes	2,13
D9	Phytospheres	2,57
D10	Smooth	2,07
D11	Innovative formula	2,51
D12	Prevents dryness	2,26
D13	Polished colour	2,23
D14	Perfume-free	1,93
D15	Brand name	1,92
D16	Price	2,95

No	Variable	Mean
D17	Colour	1,77
D18	Vitamin E-enriched	2,62
D19	Conditioning colour	2,37
D20	Doesn't run or bleed	2,58
D21	Matt finish	2,49
D22	Stays on lips (won't kiss or rub off)	2,60

After reading through the Ellen Betrix advertisement, colour received the highest rating (mean value of 1,77) followed by the hypoallergenic, brand name and perfume-free attributes. Attributes with poor ratings were price (mean value of 2,95), not tested on animals, vitamin E-enriched and long-lasting wear.

Important to note, as with the Clarins advertisement, is that attributes that were explicitly mentioned in the Ellen Betrix advertisement were perceived more positively and received better mean scores than attributes not mentioned.

The better mean values for the four mentioned attributes (indicated by an X) are clearly visible from Figure 6.3.

6.4.2 Rotated factor matrix for the Ellen Betrix advertisement

Table 6.8 represents the rotated factor matrix for the twenty-two variables once the respondents were subjected to the Ellen Betrix advertisement.

FIGURE 6.3: ELLEN BETRIX MEAN VALUES
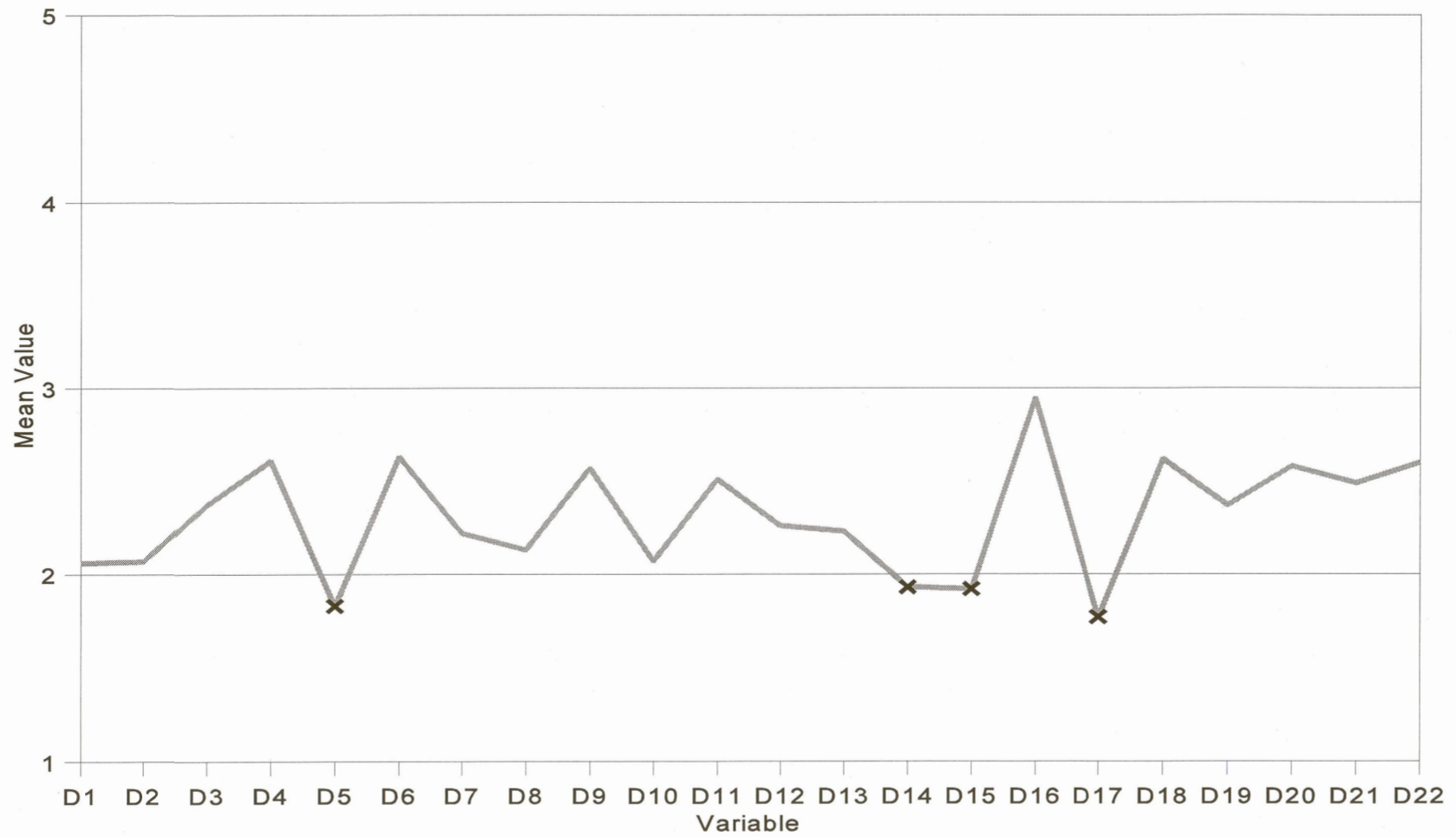
TABLE 6.8: ROTATED FACTOR MATRIX FOR ELLEN BETRIX

No	Variable	Factor			
		D1	D2	D3	D4
D1	Moisturises	0,36	**0,66**	0,18	0,08
D2	Light texture	0,08	**0,61**	0,31	0,36
D3	Creamy texture	0,11	**0,71**	0,09	0,28
D4	Long-lasting wear	**0,72**	0,38	0,14	0,16
D5	Hypoallergenic	-0,04	0,25	**0,75**	0,03
D6	Not tested on animals	0,40	**0,61**	0,06	-0,25
D7	Protects lips	**0,54**	**0,58**	0,11	0,14
D8	Nourishes	0,34	**0,61**	0,14	0,32
D9	Phytospheres	**0,58**	0,47	0,22	0,01
D10	Smooth	0,22	0,42	0,35	**0,52**
D11	Innovative formula	0,40	**0,58**	0,22	-0,09
D12	Prevents dryness	**0,60**	0,49	-0,02	0,22
D13	Polished colour	0,18	0,10	0,04	**0,82**
D14	Perfume-free	0,02	0,13	**0,84**	0,04
D15	Brand name	0,14	0,05	**0,72**	-0,002
D16	Price	**0,79**	0,03	0,15	-0,07
D17	Colour	0,33	-0,02	**0,67**	0,28
D18	Vitamin E-enriched	**0,50**	**0,56**	0,08	0,18
D19	Conditioning colour	**0,54**	0,39	0,16	0,36
D20	Doesn't run or bleed	**0,79**	0,32	0,04	0,33
D21	Matt finish	**0,57**	0,32	0,15	0,37
D22	Stays on lips (won't kiss or rub off)	**0,80**	0,29	0,01	0,18
Eigenvalues		9,46	2,17	1,24	1,15
Percentage of variance		43,0%	9,9%	5,7%	5,2%
Cumulative percentage		43,0%	52,9%	58,6%	63,8%

As displayed in Table 6.8, only four factors (labelled D1 to D4) were identified. Although only four factors were identified, most of the factors tended to comprise of more variables. Factor D1 comprised ten, D2 eight, D3 four and D4 two variables respectively. The eigenvalue for factor D1 was therefore the greatest of all four data sets with a value of 9,46. The eigenvalues for factors D2 to D4 were 2,17; 1,24 and 1,15 respectively.

As indicated in Table 6.8, Factor D1 accounted for 43%, D2 for an additional 9,9%, D3 for 5,7% and D4 for 5,2% of the total variance for the twenty-two variables. The identified four factors for the Ellen Betrix data set accounted for 63,8% of the total variance, an acceptable percentage for the purpose of factor analysis.

The following section deals with the labelling of the extracted four factors (D1 to D4) for the Ellen Betrix advertisement.

6.4.3 Factor identification

As mentioned in the previous section, only four factors were identified for the Ellen Betrix advertisement. In this section these factors will be thoroughly examined and labelled accordingly.

Factor D1

Factor D1 comprised the following ten variables

No	Variable	Loading
D22	Stays on lips (won't kiss or rub off)	0,80
D20	Doesn't run or bleed	0,79
D16	Price	0,79
D4	Long-lasting wear	0,72
D12	Prevents dryness	0,60
D9	Phytospheres	0,58
D21	Matt finish	0,57

No	Variable	Loading
D19	Conditioning colour	0,54
D7	Protects lips	0,54
D18	Vitamin E-enriched	0,50

Variables D22 (stay on lips), D20 (doesn't run or bleed) and D4 (long-lasting wear) direct factor D1 to durability.

Another prominent feature visible from factor D1 is lip care. Lip care in this factor comprises variables D12 (prevents dryness), D9 (phytospheres, which releases moisture to keep lips soft) and D7 (protects lips). Vitamin E-enriched (variable D18) can also be included in lip care since, as mentioned earlier, vitamin E is used as an ingredient to smooth and soften lips.

Conditioning colour (variable D19) is to a certain extent supported by variable D21 (matt finish) for matt pigments applied to lips don't feather or fade easily and therefore preserve the colour applied to lips. Variables D19 and D21 shall, however, be excluded from the labelling of factor D1 due to the questionability of its relevance.

The last remaining unexplained variable, D16 (price) once again concentrates on value for money. Factor D1 is labelled **lip care and durability as value for money.**

Factor D2

Factor D2 included eight variables, namely

No	Variable	Loading
D3	Creamy texture	0,71
D1	Moisturises	0,66
D2	Light texture	0,61
D8	Nourishes	0,61
D6	Not tested on animals	0,61
D7	Protects lips	0,58
D11	Innovative formula	0,58
D18	Vitamin E-enriched	0,56

Variables D3 (creamy texture) and D2 (light texture) clearly identify texture to be a possible label for factor D2. A creamy texture, however, is usually characterised as a lip moisturiser (D1) and ensures a light texture in stead of a dry finish. The aforementioned together with variables D8 (nourishes) and D7 (protects lips) tends to focus on lip care. This statement is supported by the inclusion of vitamin E (variable D18) since vitamin E (used as part of an innovative formula, D11) is used to soften lips.

Only variable D6 (not tested on animals) raises the question of relevance and will therefore be excluded from the labelling of factor D2. Factor D2 is therefore labelled **lip care.**

Factor D3

Factor D3 comprised four variables, namely

No	Variable	Loading
D14	Perfume-free	0,84
D5	Hypoallergenic	0,75
D15	Brand name	0,72
D17	Colour	0,67

Due to the high factor loading of variable D15 (brand name), it is strongly suggested that factor D3 be labelled brand association. The brand is associated with variables D14 (perfume-free) and D5 (hypo-allergenic). These two variables lean towards the naturalness of lipstick. D17 (colour) is also associated with the brand name.

Factor D3 will therefore be labelled **brand association** with specific recognition to naturalness and colour.

Factor D4

Factor D4 comprised the following two variables:

No	Variable	Loading
D13	Polished colour	0,82
D10	Smooth	0,52

Smoothness (variable D10) allows lipstick to fill lip cracks and protect delicate lip tissue and at the same time prevent colour from feathering. This enables a colour to be displayed more prominently (appears polished, D13) and enhance appearance, keeping in mind that lipstick is the one cosmetic that can truly change the looks of a lady. Factor D4 is therefore labelled **appearance.**

Table 6.9 below indicates the labelled factors for the Ellen Betrix advertisement.

TABLE 6.9: LABELLED FACTORS FOR ELLEN BETRIX

Factor	Description	Percentage of variance	Cumulative percentage
D1	Lip care and durability as value for money	43,0%	43,0%
D2	Lip care	9,9%	52,9%
D3	Brand association	5,7%	58,6%
D4	Appearance	5,2%	63,8%

Factor D1 (lip care and durability as value for money) explained 43,0% of the total variance for the twenty-two variables. Factor D2 (lip care) added an additional 9,9% with factor D3 (brand association) contributing a further 5,7%. The final factor, D4 (appearance) accounted for 5,2% of the variance. The four factors extracted from the Ellen Betrix advertisement cumulatively explained 63,8% of the total variance.

6.4.4 Interpretation

As with the Clarins advertisement, all the attributes mentioned in the Ellen Betrix advertisement received better mean scores (and were therefore perceived more positively) than those attributes not explicitly mentioned.

Important to note is that although the Ellen Betrix advertisement mentioned only four lipstick attributes, the advertisement's aim was also to position the Pure & Natural Look range of Ellen Betrix products as being natural. The copy of the advertisement was written in such a way to promote the naturalness combined with colour of the Pure & Natural range of Ellen Betrix. This most probably attributed to the better mean values for the naturalness and colour claims as opposed to the other variables. This phenomenon can clearly be seen from Figure 6.3.

If it can be assumed that the objective of the advertisement was not only to promote Ellen Betrix lipstick but also to promote and position the Pure & Natural Look range of products, the advertisement can be acknowledged as being very successful. This assumption can be supported by factor D3, brand association, since the Ellen Betrix lipstick (and therefore the brand itself) was associated with both colour and naturalness. All four mentioned lipstick attributes featured in the advertisement were enclosed in the association of the brand (factor D3).

Although the brand association corresponded with the featured attributes, only 5,7% of the total variance was explained by factor D3.

Factors D1, lip care and durability as value for money, D2, lip care and D4, appearance, contribute to the way in which Ellen Betrix lipstick is perceived. Due to the perceived naturalness of the lipstick, the only possible explanation for factors D1, D2 and D4 is that they were perceived to care for lips while at the same time enhancing appearance. This explanation is merely a suggestion since the mentioned three factors did not correspond to the attributes featured in the advertisement.

135

6.5 FACTOR ANALYSIS RESULTS FOR THE MAYBELLINE ADVERTISEMENT

Section 6.5 deals with the mean values ascribed to each of the twenty-two variables specifically applied to the Maybelline advertisement. Attention is also drawn to the rotated factor matrix for Maybelline and the labelling of factors identified from the Maybelline data set. Section 6.5 concludes with a comparison between the explicitly mentioned attributes in the Maybelline advertisement and the labelled factors.

6.5.1 Mean value scores for the Maybelline advertisement

Besides featuring a model displaying lipstick, the Maybelline advertisement also explicitly mentioned the following attributes:

- Polished colour
- Innovative formula
- Prevents dryness
- Brand name.

The mean values for each of the twenty-two variables, once exposed to the Maybelline advertisement (rated by the respondents on a scale ranging from excellent to poor), are shown in Table 6.10.

TABLE 6.10: MAYBELLINE MEAN VALUE SCORES

No	Variable	Mean
E1	Moisturises	1,85
E2	Light texture	2,36
E3	Creamy texture	2,47
E4	Long-lasting wear	2,56
E5	Hypoallergenic	2,94
E6	Not tested on animals	3,24
E7	Protects lips	2,45
E8	Nourishes	2,33
E9	Phytospheres	2,81
E10	Smooth	2,22

No	Variable	Mean
E11	Innovative formula	2,24
E12	Prevents dryness	1,94
E13	Polished colour	2,10
E14	Perfume-free	2,96
E15	Brand name	2,48
E16	Price	3,08
E17	Colour	2,32
E18	Vitamin E-enriched	2,75
E19	Conditioning colour	2,65
E20	Doesn't run or bleed	2,66
E21	Matt finish	2,74
E22	Stays on lips (won't kiss or rub off)	2,56

Maybelline was, as indicated in Table 6.10, rated to be excellent on the attributes moisturises (mean value of 1,85), prevents dryness and polished colour. Maybelline performed poorly on the attributes not tested on animals (mean value of 3,24), price, perfume-free and hypoallergenic.

As with the Clarins and Ellen Betrix advertisements, the Maybelline advertisement received better mean scores for attributes explicitly mentioned. The only exeptions were that moisturises, which was not explicitly mentioned, received an excellent score and brand name, which was explicitly mentioned, received a relatively poor score. Although the mean value for brand name (2,48) was not rated as favourable as the other mentioned attributes, the value still performed better than attributes not mentioned in the advertisement.

The more favourable mean value scores of the mentioned attributes (indicated with an X) in the Maybeline advertisement compared to those not mentioned are illustrated in Figure 6.4.

FIGURE 6.4: MAYBELLINE MEAN VALUES
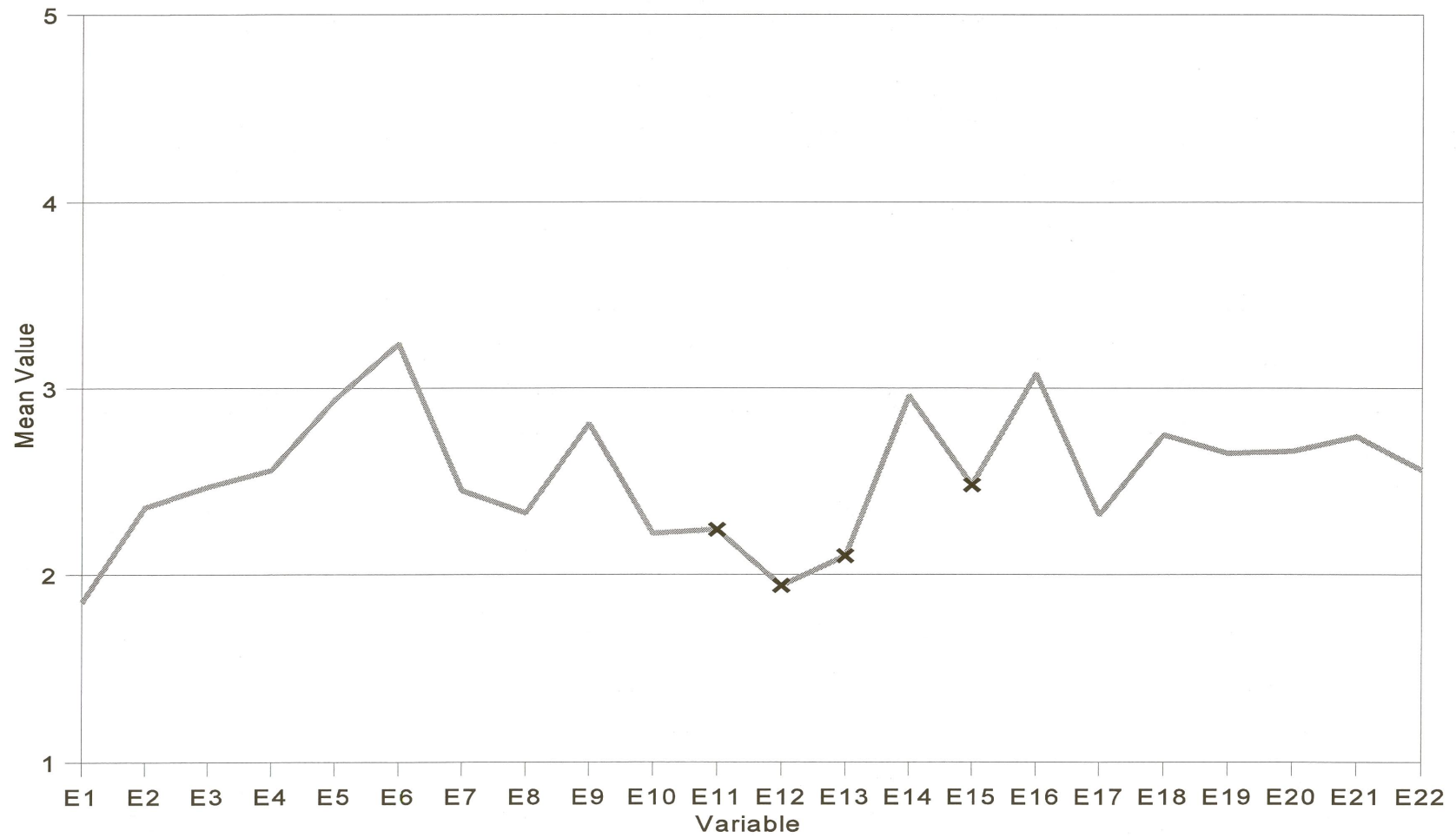
6.5.2 Rotated factor matrix for the Maybelline advertisement

Table 6.11 displays the rotated factor matrix for the twenty-two variables once the respondents were subjected to the Maybelline advertisement.

TABLE 6.11: ROTATED FACTOR MATRIX FOR MAYBELLINE

No	Variable	Factor				
		1	2	3	4	5
E1	Moisturises	0,17	0,01	0,36	0,73	0,04
E2	Light texture	0,12	0,15	0,14	0,76	0,22
E3	Creamy texture	0,40	0,24	0,06	0,65	0,13
E4	Long-lasting wear	0,74	0,30	0,34	0,04	0,03
E5	Hypoallergenic	0,34	0,60	0,44	-0,03	-0,04
E6	Not tested on animals	0,11	0,83	0,19	-0,01	0,04
E7	Protects lips	0,54	0,36	0,46	0,15	0,08
E8	Nourishes	0,34	0,17	0,64	0,25	0,05
E9	Phytospheres	0,29	0,46	0,49	0,11	0,06
E10	Smooth	0,57	0,08	0,31	0,29	0,17
E11	Innovative formula	0,08	0,01	0,71	0,10	0,44
E12	Prevents dryness	0,14	-0,02	0,69	0,38	0,31
E13	Polished colour	-0,003	0,24	0,27	0,25	0,55
E14	Perfume-free	0,22	0,71	-0,04	0,25	0,16
E15	Brand name	0,14	-0,02	0,13	0,10	0,70
E16	Price	0,22	0,77	-0,02	0,10	0,16
E17	Colour	0,37	0,24	0,17	0,03	0,65
E18	Vitamin E-enriched	0,30	0,47	0,07	0,22	0,26
E19	Conditioning colour	0,56	0,31	0,01	0,18	0,52
E20	Doesn't run or bleed	0,74	0,24	0,15	0,25	0,17
E21	Matt finish	0,64	0,28	-0,02	0,18	0,38
E22	Stays on lips (won't kiss or rub off)	0,82	0,16	0,16	0,13	0,12
Eigenvalues		8,79	1,94	1,26	1,18	1,07
Percentage of variance		39,9%	8,8%	5,7%	5,4%	4,9%
Cumulative percentage		39,9%	48,7%	54,4%	59,8%	64,7%

As indicated in Table 6.11, five factors (labelled E1 to E5) were identified. Factor E1 comprised seven, E2 four, and factors E3 to E5 three variables respectively. The eigenvalues for factors E1 to E5 are 8,79; 1,94; 1,26; 1,18 and 1,07 respectively.

Factor E1 accounted for 39,9%, E2 for an additional 8,8%, E3 for 5,7%, E4 for 5,4% and E5 for 4,9% of the total variance for the twenty-two variables. The five identified factors for the Maybelline study explained an acceptable 64,7% of the total variance, the greatest cumulative percentage of all four sets of data.

The following section deals with the labelling of the extracted five factors (E1 to E5) for the Maybelline advertisement.

6.5.3   Factor identification

As mentioned in the previous section, five factors were identified for the Maybelline advertisement. In this section these factors will be thoroughly examined and labelled accordingly.

Factor E1

Factor E1 comprised the following seven variables

No	Variable	Loading
E22	Stays on lips (won't kiss or rub off)	0,82
E4	Long-lasting wear	0,74
E20	Doesn't run or bleed	0,74
E21	Matt finish	0,64
E10	Smooth	0,57
E19	Conditioning colour	0,56
E7	Protects lips	0,54

Variables E22 (stays on lips), E4 (long-lasting wear) and E20 (doesn't run or bleed) display the durability characteristic of lipstick. The matt finish (E21) quality of lipstick

supports the durability claim by preserving colour (E19) and ensuring that the colour won't feather or fade.

Protection of lips (variable E7) is supported by variable E10 (smooth) since the lines and cracks in lips are filled resulting in the protection of delicate lip tissue.

Factor E1 is therefore labelled **durability and protection.**

Factor E2

Factor E2 comprised four variables,

No	Variable	Loading
E6	Not tested on animals	0,83
E16	Price	0,77
E14	Perfume-free	0,71
E5	Hypoallergenic	0,60

Factor E2 clearly exhibits naturalness through the fact that the lipstick has not been tested on animals (variable E6), that it is perfume-free (E14) and that it is hypo-allergenic (E5).

Price (variable E16) once again played an important role in indicating the importance of value for money. Factor E2 is therefore labelled **naturalness and value for money.**

Factor E3

Factor E3 comprised the following three variables:

No	Variable	Loading
E11	Innovative formula	0,71
E12	Prevents dryness	0,69
E8	Nourishes	0,64

Although variables E12 (prevents dryness) and E8 (nourishes) suggest protection as label for factor E3, it is important to note that variable E11 (innovative formula) has the

greatest factor loading and can therefore not be discarded. Factor E3 should therefore rather be labelled **formula** since the formula ensures the prevention of dryness by nourishing lips.

Factor E4

The following three variables loaded heavily on factor E4:

No	Variable	Loading
E2	Light texture	0,76
E1	Moisturises	0,73
E3	Creamy texture	0,65

Variable E2 (light texture) and E3 (creamy texture) clearly identify texture as label for factor E4. As mentioned earlier, a creamy texture usually characterises moisturised lips (E1) and ensures a light texture in stead of a dry finish. Factor E4 is therefore labelled **texture.**

Factor E5

The final factor comprised three variables, namely

No	Variable	Loading
E15	Brand name	0,70
E17	Colour	0,65
E13	Polished colour	0,55

Factor E5 clearly focuses on both brand name (variable E15) and colour (variables E17 and E13). Factor E5 is therefore labelled **brand association** with specific reference to colour.

Table 6.12 indicates the labelled factors for the Maybelline advertisement.

TABLE 6.12: LABELLED FACTORS FOR MAYBELLINE

Factor	Description	Percentage of variance	Cumulative percentage
E1	Durability and protection	39,9%	39,9%
E2	Naturalness and value for money	8,8%	48,7%
E3	Formula	5,7%	54,4%
E4	Texture	5,4%	59,8%
E5	Brand association	4,9%	64,7%

Durability and protection (factor E1) explained 39,9% of the total variance for the twenty-two variables. Factor E2 (naturalness and value for money) explained an additional 8,8% and factor E3 (formula) 5,7% of the variance. The final two factors, E4 (texture) and E5 (brand association) accounted for 5,4% and 4,9% respectively. Factors E1 to E5 cumulatively explained 64,7% of the total variance for the twenty-two variables.

6.5.4   Interpretation

As mentioned, the Maybelline advertisement explicitly mentioned four lipstick attributes, namely polished colour, innovative formula, prevents dryness and brand name.

As with the other advertisements, the attributes portrayed in the Maybelline advertisement were perceived to be of greater importance than those attributes not mentioned since the featured attributes received better mean value scores.

As can be seen from the mentioned attributes, the advertisement seemed to position Maybelline as a lipstick that focused on colour and protection (by preventing dryness) through the use of an innovative formula.

Factors identified for the Maybelline data set corresponding with the advertisement claims are factor E1, durability and protection, factor E3, formula and factor E5, brand association.

Factor E1, durability and protection, to a certain extent correspond with the claim that Maybelline prevents dryness since this product feature protects lips by either moisturising or nourishing the lips. Although the labelled factor comprised different variables, the resemblance in the fact that Maybelline protects is eminent. The durability claim, however, is unaccounted for.

The fact that the formula used in producing Maybelline lipstick prevents dryness (both mentioned attributes in the advertisement) corresponds to factor E3, formula. The labelled factor also included the variable, nourishes, which would naturally come to mind when lipstick is formulated to prevent dryness. Factor E3 can therefore be regarded as corresponding to the attributes portrayed in the advertisement.

Factor E5, brand association, corresponds with the advertisement since the labelled factor acknowledged that Maybelline is associated with colour. Polished colour was explicitly mentioned as an attribute in the Maybelline advertisement and as mentioned, the advertisement also portrayed a female model displaying the product. Much emphasis was placed on the beautiful colour of the model's lips by portraying a beautiful, striking colour. The lipstick would most likely be associated with the beautiful colour portrayed by the model.

Factors E2, naturalness and value for money, and E4, texture, does however not correspond in any way with either the explicitly mentioned attributes in the advertisement or the features implied by the model. Any meaning ascribed to the unexplained factors as a result of the appearance of the model would only be a suggestion and furthermore highly subjective. The relevance of factors E2 and E4 would therefore be acknowledged as unexplained with specific reference to the Maybelline advertisement.

6.6 SUMMARY

Chapter 6 presented the results and interpretation of the research conducted to determine consumer perceptions of displayed product attributes in advertising.

The mean value scores for each of the twenty-two lipstick attributes for the product category lipstick as well as the three identified advertisements, Clarins, Ellen Betrix and Maybelline were presented. Factors were identified and labelled and the discussion on each data set was concluded with an interpretation for each of the labelled factors.

Chapter 7 concludes the research study by drawing a final conclusion and providing recommendations for the use of product attributes in advertising with specific recognition to the preceding factor analysis study.