THE EVALUATIVE ANALYSIS OF THE AESTHETIC CHARACTERISTICS OF THE PREVAILING BRANDS' MOBILE PHONES IN IRAN MARKET

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ABSTRACT:

Mobile Phones can be divided in many and various groups by their aesthetic properties. The shape, color, texture, material and all the micro and macro elements of the form which make the aesthetic appearance of a mobile phone are considerable qualities that attract the customer and take his/her attention. Thinking of meeting the users expectations and fulfilling their wishes motivated us to conduct an empirical research on Mobile Phone (MP) and do an aesthetic analysis on four well selling MP brands in Iran, in order to study their aesthetic specifics, similarities and differences and exploring the relationship between various form categories and different price ranges. Combining the results of the data analysis with a survey of MP users' opinion and wishes, the study is going to find out the appropriate areas in terms of MP deign for the Iran market by focusing on aesthetic aspects of the product.

1. INTRODUCTION

In the past twenty years, Mobile Phone (MP), as one of the most successful innovation of our century, has become an inseparable part of our everyday life to be a significant communication device. The utilization of MP as a significant communication device is drastically increasing not only in Europe and America but also in many developing countries like Iran. The MP producers have to compete and constantly launch the new models with a variety of form and function to keep and/or extend their domain in such a competitive market. Statistics show that almost 23% of Iranian population uses MP (GSMarena, 2007). Although Nokia is the bestseller in Iran Market, four other MP brands, *Motorola, Samsung, Sony-Ericsson* and *LG* (*MSSeL*), are also foremost in Iran (GSM, 2006). As the statistics of Q3 (2005) presented in Table 1 show, *MSSeL* have the same position in the worldwide (IDC, 2005).

Rank	Vendor	Q3 2005		Q3 2004		Growth
		Shipments, mln.	Share	Shipments, mln.	Share	%
1	Nokia	66.6	32.0%	51.4	29.4%	29.6%
2	Motorola	38.7	18.6%	23.3	13.3%	66.1%
3	Samsung	26.8	12.9%	22.7	13.0%	18.1%
4	LG Electronics	15.5	7.4%	11.8	6.7%	31.4%
5	Sony Ericsson	13.8	6.6%	10.7	6.1%	29.0%
	Others	46.9	22.5%	55.0	31.4%	-14.7%
	Total	**208.3**	**100.0%**	**174.9**	**100.0%**	**19.1%**
Source: IDC (2005)						

Table 1: Worldwide mobile phone shipments in Q3 2005.

Generally, consumers may perceive the brand identification of a corporation from form and style of its product (Chen, et all, 2003). Considering the highly effects of the aesthetic particulars on acceptability and brand characteristics of a product and hence its status and position in market, the focus of this research is on those four foremost brands, *MSSeL*, to find out the particular aesthetic characteristics of each of them in relation to the different price ranges of their presented MP models in Iran market. For this purpose, the existing models of MP of *MSSeL* in Iran market have been considered as the object samples for analysis. Those models are quantified and clustered based on their aesthetic particulars to eventually show the dominant aesthetic characteristics of each brand in any of the defined price ranges. By doing an investigation on the MP users in Iran, the research is going to finally find out the new areas and directions for designing the appropriated MP models for Iran market.

2. OUTLINE AND METHOD

This research is trying to approach the following objectives:

I) To find the dominant variety of aesthetic characteristic of the MP models presented by the four well-known brands, *MSSeL*, in Iran market.

II) To distinguish the relationship between the various aesthetic characteristics and the price level.

III) To extract the Iranian MP users' favorite aesthetic properties.

The comparison between the aesthetic characteristics of introduced MP models in Iran market and the Iranian users' favorite aesthetics properties for MP leads to draw the new directions in terms of MP design focused on Iran market. In order to reach the above objectives, a fieldwork consisting of three phases is done in this research. An overview of the research process, phases and steps is shown in Figure 1.
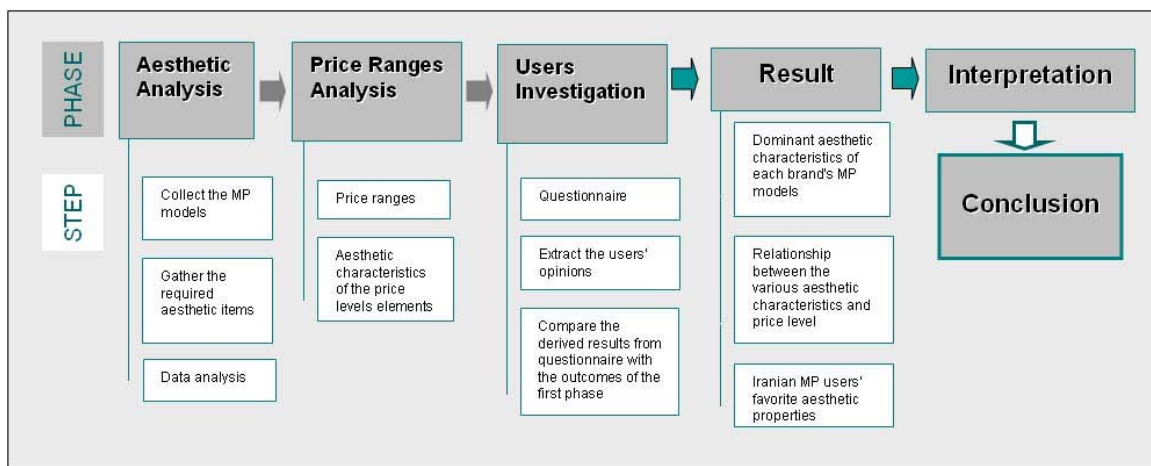

Figure 1: Overview of the research phases and steps.

2.1. PHASE 1: AESTHETIC ANALYSIS

This phase involves the analysis of the aesthetic particulars of each of the above-mentioned four brands' MP models, *MSSeL*. First, to define the MP samples for analysis, 83 various MP models presented by *MSSeL* in Iran market have been collected after doing a quick market research visiting the main MP shop centers in Tehran, the capital of Iran, and some credible e-shops. The model numbers of the collected samples respecting each brand are introduced in Table 2. The front views of the samples, as the visual material for the analysis, have been obtained from the brands' official websites and the other web sources. Figure 2 shows the samples sorted by their production dates in respect to each brand.

Sony Ericson	Samsung	Motorola	Lg
T100	N620	E365	W3000
T610	A800	C115	G5300
T230	c100	C116	G5500
Z200	x100	C155	G7030
T630	x450	E398	G7050
P900	x600		F710
K300I	N700	V3	G1500
K500	E330	C139	C3100
P910	c110	C118	KG800
J200	c200	C261	
T290	x460	L6	
S700	E630	L7	
J300	D500	E1	
K750	E800	V3I	
W550	i300	U6	
P990	x480	V3X	
W900	D720	A1200	
W810	P850		
J100	D600		
K310	c210		
Z530	D510		
K510	x700		
Z550	x660		
W700	E770		
K610	x150		
M600	P300		
K800	D820		
W850	D520		
W950			

Table 2: Model numbers of the collected MP samples of each brand.
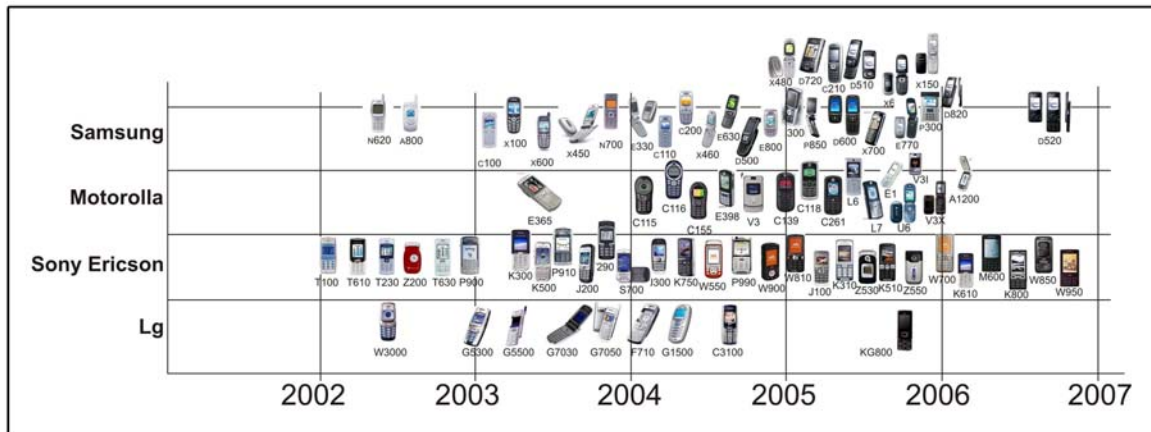

Figure 2: The MP samples' figures sorted by their production dates in respect to each brand.

In the next step, the required items for describing the samples' aesthetic varieties within the analysis have been designated based on: the careful observation of the samples' aesthetic elements and formal differences; brainstorming for generating the descriptive keywords or attributes; and discussion to decide the appropriate items. The items consist of the elements and variables, which could depict the formal particulars and aesthetic characteristics of samples. Considering the main component parts of MP, the decided items are put in six categories shown in Table 3.

Body	Keypad	Guide key	Door	Speaker	Color
Foot	Leaf	Same with Body	slide	ShinyRod	Shiny
Rectangle	Rectangle	Same with Keypad	fold	groovy	Matt
SmoothRectangle	Flexicube	Circle	half	Bottun	Gray
Candy	Oval	Oval	lcd	Circle	Black
Toungue	Arc	Rectangle	Light	Spotty	White
Finger	Line	Cube	Guidekey	Pointy	Colorful
Pooh	Worm	Flexicube	Camera		
OvalRect.	Frow	Frameknit			
TwoP	Fcolumn	Framed			
ExterFrame	Framed	Different Color			
Sideline	Same with Body	Sliced Frame			
InterFrame	Transp	Same Color			
TangentF	Diff.Ma				
Anthene					
Mono Color					
MultiTex					

Table 3: The designated items for aesthetic analysis of the MP samples.

Next, the samples have been analyzed and clustered into the main groupings of the aesthetic characteristics. The used methods for the analysis are Quantification Theory Type III (see Note 1) and Cluster Analysis. Last, the distribution of each brand's samples in the resulted groupings illustrates the possible dominant aesthetic character of each brand.

2.2. PHASE 2: PRICE RANGES ANALYSIS

Observing the variation of price level of the presented MP models in Iran market, they can be categorized into five ranges shown in Table 4. The price ranges are named as: Cheap (under 1,000,000 Rials); Medium Cheap (from 1,000,000 to 2,000,000 Rials); Medium (from 2,000,000 to 3,000,000 Rials); Expensive (from 3,000,000 to 4,000,000 Rials); and Highly Expensive (more than 4,500,000 Rials).

Price levels	
Cheap	-1,000,000 Rials ~ -102 $
Medium cheap	1,000,000-2,000,000 Rials ~ 102-204 $
Medium	2,000,000-3,000,000 Rials ~ 104-306 $
Expensive	3,000,000-4,500,000 Rials ~ 306-460 $
High expensive	+4,500,000 Rials ~ +460 $

Table 4: The MP models' price ranges.

In order to discover the possible relation between the samples' price ranges and their aesthetic characteristics, their price ranges have been specified within the output of the aesthetic analysis. The distribution and frequency of the price ranges in terms of the various resulted aesthetic characteristics help us distinguish the aesthetic particulars of each price range. Furthermore, the comparison between the brands' presented MP models in each price range would indicate each brand's price range domain in the market.

2.3. PHASE 3: USERS INVESTIGATION

Within phase 3, an investigation is done on the Iranian MP users in order to gain a better understanding of Iranian users' tastes and favorites. In this investigation, the required information and data are obtained through the regular and definite questionnaire. The questionnaires have been distributed among to 120 Iranian subjects. The subjects are randomly selected among the students in the fields of Art and Design, ranging from 18 to 25 years old that 65% of them are female, and 60% being undergraduate students.

The original questionnaire sheet in Persian language is shown in Figure 3. The questionnaire consisted of: the face sheet; a table for writing a brief history of using MP and the used MPs' total specifications; a question about the reasons of the subject's MP replacement; two questions about the subject's level of satisfaction of the aesthetic and functional properties of his/her MP models; a question about the subject's favorite form and aesthetic character of a MP to be ticked among the 21 choices listed under the question; a question about the further required MP functions; and as the last question, the subject has been asked to mention his/her favorite MP model from aesthetic perspective. The used methods for processing the derived data from the questionnaires same are Quantification Theory Type III and cluster analysis.

 In the current research the focus is mainly on the relevant questions to the aesthetic character. The used items as the choices about the subject's favorite form and aesthetic character have been purposely arranged to make the good senses in terms of describing the MPs' aesthetic characteristics and differentiations for the subjects. They have been mostly chosen among the designated items for aesthetic analysis, the ones that are concerned with the macro aesthetic elements, and partly derived from the combination of those items. Furthermore, some randomly selected students have been quickly interviewed to firstly check whether the items, as the choices of aesthetic properties, are familiar and meaningful for them and secondly find out the further appropriate items. In order to obtain the new directions for MP design appropriated for Iran market, the results of this investigation and aesthetic analysis, phase 1, would be compared to clarify their similarities and the differences.

Figure 3: The original questionnaire sheet in Persian language used for investigating Iranian MP users.

3. RESULTS

3.1. AESTHETIC ANALYSIS

3.1.1. AESTHETIC CHARACTERS GROUPINGS

As the output of analyzing the collected samples of MP based on the designated aesthetic items, the chosen cut-off line for the clustering algorithm has yielded 8 major clusters. This choice of the cut-off line is carefully made in order to arrive at the most meaningful groupings of the aesthetic items. The output graph of distribution of the samples and their groupings is shown in Figure 4. As the laid samples in the top and bottom of the graph tend to '*High Tech.*' and '*Old Fashion*', axis 'Y' is concerned with 'content aesthetics' (Jung-Pyo, 2003). But the distribution of the '*Organic*' and '*Minimal*' form samples in the left and right sides of the graph leads to allocate axis 'X' for the stylistic or 'form aesthetics' (Jung-Pyo, 2003). The stylistic nature of this axis refers it to the time through the course of form evolution.

The resulted clusters are named as: Smooth & Neutral; Shiny Black; Special Material; Contrast in Keypad; Rectangle; Common & Clear; Smooth Rectangle; and Wavy Body. The given name to each cluster is decided based on the most frequent aesthetic items in the context of the samples belonging to the cluster. The clusters could be expanded as follows.
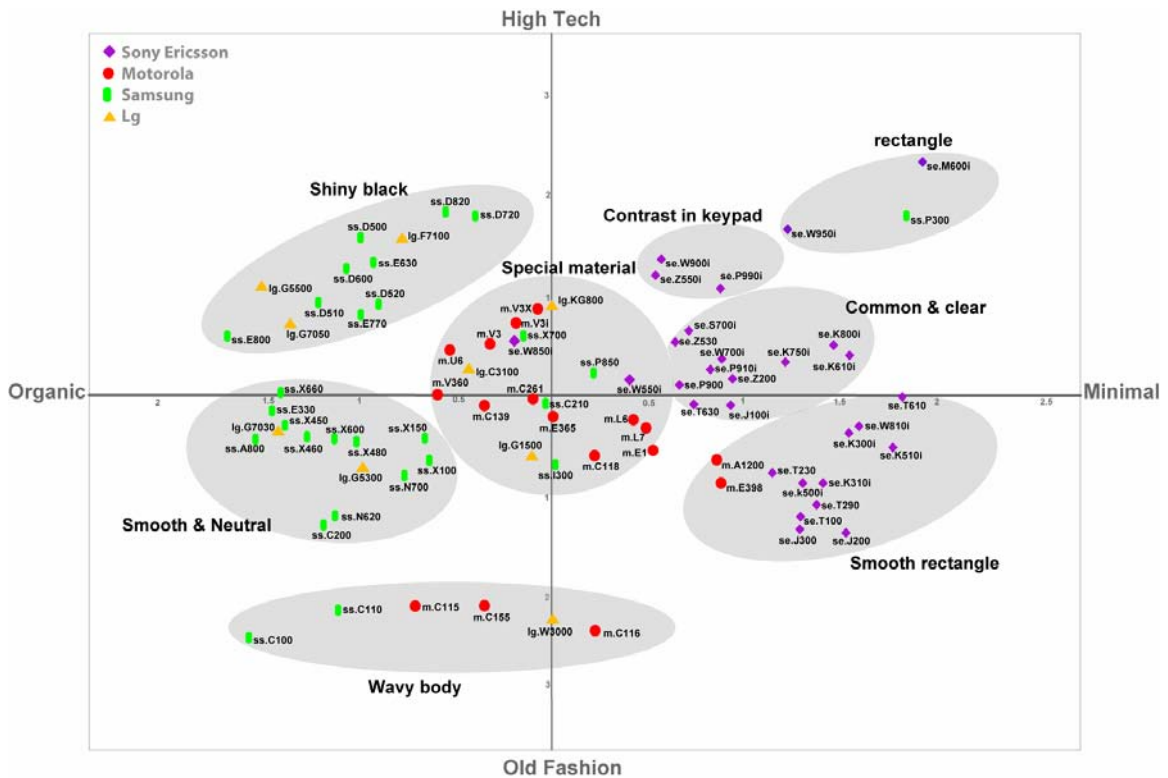

Figure 4: Distribution of the collected samples and their groupings based on their aesthetic characteristics.

Cluster 'Smooth & Neutral' is placed in '*Organic*' – '*Old Fashion*' area of the graph and can be described through the smooth and organic shape and the use of cold and low contrast grays in the body and the keyboard which contains a large group of folding MPs.

Cluster 'Shiny Black' is in the '*Organic*' – '*High Tech.*' area of the graph. The most effective element characterizing this group of sliding MPs is their shiny black appearance with the high contrast details like a silver speaker and a well-knit keypad.

Cluster 'Smooth Rectangle' is in the '*Minimal*' – '*Old Fashion*' area of the graph. It can be characterized in the round corner rectangular shape of the body and a frame around the display, separate keys in a linear arrangement and a highlighted navigation key.

Cluster 'Special Material' is laid in the central area of the graph. The MPs belonging to this cluster mostly have a simple form in gray or black and the flat planes with no decoration but basically characterized in their specific material and variety in texture**.**

Cluster 'Common & Clear' is near the '*Minimal*' direction of the graph. It presents the regular image of an MP. The simple and clear rectilinear form of the body and the keypad makes these MPs look functional and easy to use. The color of the MPs in this cluster is mostly a combination of light and dark grays.

Cluster 'Contrast in Keypad' is settled in the '*Minimal*' – '*High Tech.*' area of the graph. Its major particulars are: the small body; the contrast between the simple rectangular keypad in a straight line arrangement; and the round guide keys.

Cluster 'Wavy Body' is in the '*Old Fashion*' – '*Organic*' area of the graph. The most specific item that differentiates this cluster from the other ones is the wavy form of the side lines of the body, which makes its MPs look like a shoe. The keys have also the smooth and no-geometric forms with a round shape that are arranged in curved lines.

Cluster 'Rectangular' is in the '*Minimal*' – '*High Tech.*' area of the graph. The laid MPs in this cluster can be described through their minimal and rectilinear design which makes them look like a calculator. There is no complexity in the forms of their body, the keypad, and most of the other components.

3.1.2. BRANDS AESTHETIC DOMAIN

The distribution of each brand's samples in the resulted groupings graph illustrates the possible dominant aesthetic character of each brand, shown through the colored points in the graph (Fig. 4). In each brand, the models' numbers could show the models' priority in time and indicate the date of launching the product and introducing it in market. Thereupon, the brands' domains could be aesthetically characterized as follows:

Motorola; most of the presenting models of Motorola MP in Iran market are laid in cluster 'Special Material' placed in the '*high tech*' area. Motorola's MPs' exceptional appearance is made through their special texture and shiny metallic look. The old Motorola MPs have the character of 'Wavy Body' and smooth rectangle cluster and are placed in '*organic*' – '*old fashion*' area.

Samsung; the older models of Samsung are mostly placed in the old '*organic*' – '*old fashion*' area and clusters 'Wavy Body' and 'Smooth & Neutral', but the new sliding models mainly in '*organic*' – '*high tech*' area and the 'Shiny Black' cluster. The newer models are also varied in material and texture. Samsung have different models with different aesthetic characters and it

is not confined to a special physical style, notwithstanding it generally looks smooth and organic.

Sony Ericsson; most of Sony-Ericsson MP models belong to clusters 'Smooth Rectangle' being in '*minimal*' – '*old Fashion*' area and 'Common & Clear' in '*minimal*' – '*high tech*' area. They all are in the right side of the graph, '*minimal*' direction. They are almost similar in their simple round corner and rectangular shape of the body. Accordingly, Sony-Ericsson has preferred to do not change the whole shape of her MP models' body, but to concentrate on the details and micro elements specially the keypad.

LG; it is not easy to simply describe the aesthetic character of the LG MP models, because it has different models in several clusters and areas while the number of models in each cluster is relatively equal. It seems that LG is currently presenting rather the simple and sliding MP models with a rectilinear and minimal design, which are in '*minimal*' – '*high tech*' area, than the previous curved and smooth models being in '*organic*' area.

3.2. PRICE RANGES ANALYSIS

3.2.1. PRICE RANGES AND AESTHETICS

For drawing the existent relationship between the MP models' price ranges and their aesthetic characteristics, their price ranges are specified within the resulted graph from the aesthetic analysis (Fig. 5). The used colors for the samples' model numbers including cyan, green, magenta, red and black, respectively represent the price ranges cheap, medium cheap, medium, expensive and high expensive.

The distribution of the price ranges in the graph's areas and the derived clusters lead to define the relatively allocable aesthetic domain for a price range. As the cheap and medium cheap samples are mostly distributed in the underneath half of the graph, namely in '*old fashion*' area, and the higher price level ones vise versa being in '*high tech*' area, the new names are added to the 'Y' axis of the graph, '*Low Price*' and '*Costly*'.
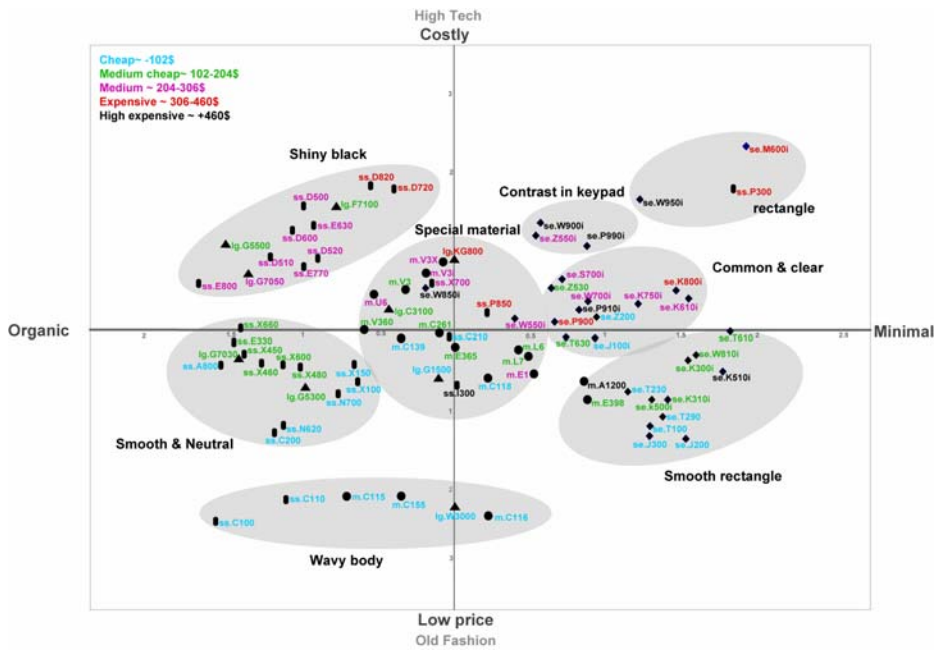
Figure 5: Distribution of the collected samples and their groupings based on their aesthetic characteristics.

3.2.2. PRICE RANGES AND BRANDS

First, as an overview of the number of each brand's samples, a histogram of the frequency of the samples belonging to each brand is presented in Figure 6. As most of the samples belong to Sony-Ericsson and Samsung, these two brands have appeared as the most active MP brands, of course just among *MSSeL*, in Iran market.
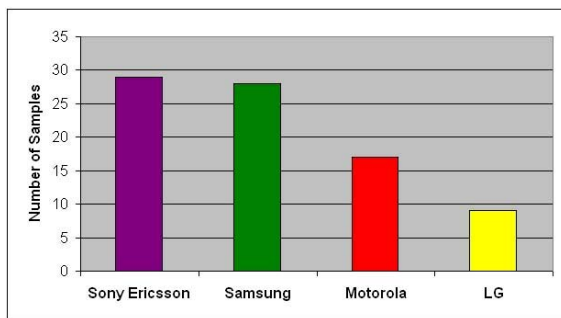

Figure 6: Comparison of the number of each brand's samples.

To have an overall comparison of the numbers of samples in each price range, the histogram of frequency of the samples in five defined price ranges with their percentage into a pie are

presented in Figure 7. As it is visualized in the figure, most of the samples are in the Medium Cheap range and then two other ranges besides that range.
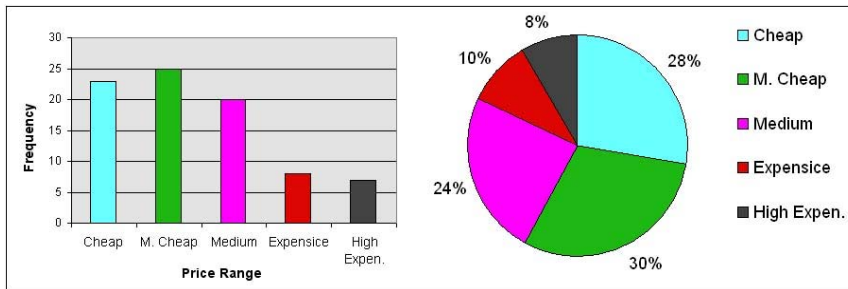

Figure 7: Percentage and frequency of the samples in the price ranges.

Considering the number of MP models presented by *MSSeL* in each price range, each of those brands seems to be more active in a price range than the other ones. The frequency of the brands' presented models in the price ranges is shown in Figure 8. This frequency beside the percentages of the brands' presented models in each price range would lead to the better understanding of the brands domain in terms of price ranges. Figure 9 shows the percentages of the samples belonging to each brand in the various price ranges. It can somehow illustrate the dominant price range of each brand. In 'cheap' and 'medium' ranges, all brands seem equal, when considering the numbers of the samples belonging to each brand in total (Fig. 6). Nevertheless, Samsung's most samples are presented in those two ranges. But, 'medium cheap' range is seemingly the main domain preferred by Motorola and LG, while Samsung is more active in 'expensive' range than the others. Sony-Ericsson has allocated the 'high expensive' range as its special domain in comparison with the other brands.
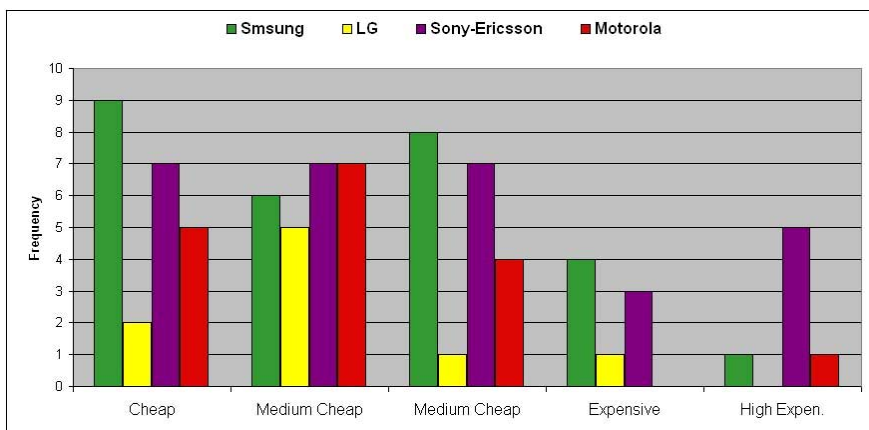

Figure 8: Comparative frequency of the brands' presented MP samples in each price ranges.
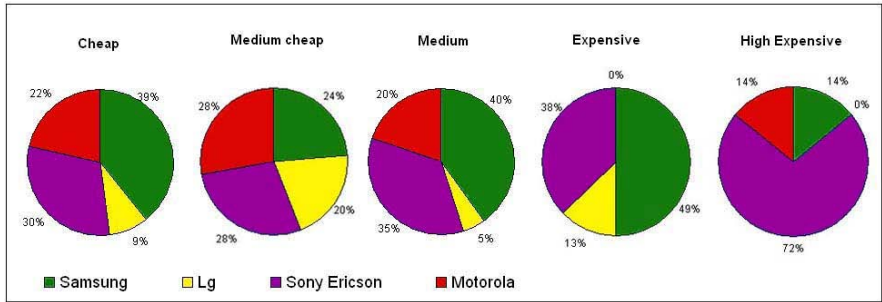
Figure 9: Comparison of the percentage the brands' presented samples in the price ranges.

3.2. IRANIAN USERS INVESTIGATION

The investigation on Iranian users of MP is fulfilled through the predefined questionnaire. The questionnaires have been filled by 120 subjects randomly selected among the university students in the field of art and design. Such subjects could be considered as the mirror of the trends of the young generations in Iran. As the output of investigation, the frequency of the subjects' marked items of favorite aesthetic characteristics of MP among 21 choices in the questionnaire is presented in Figure 10.
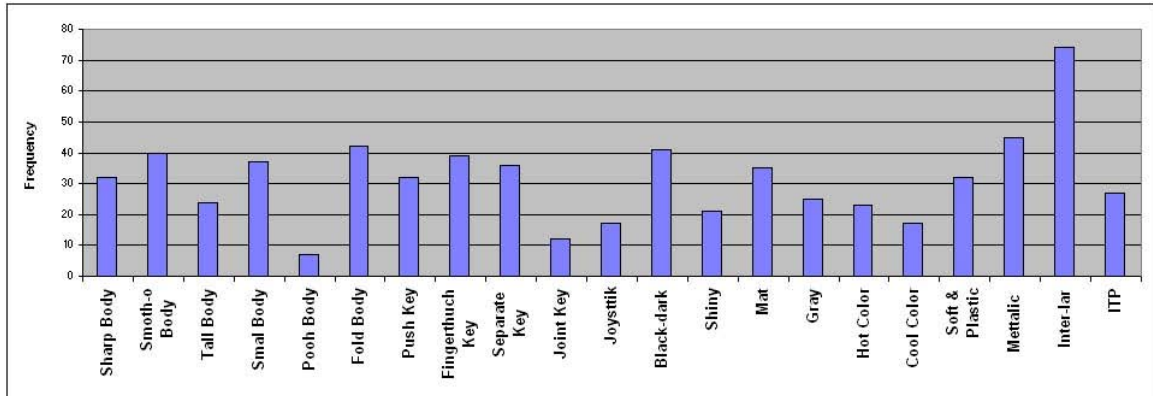

Figure 10: Frequency of the aesthetic items in the context of the investigated Iranian students.

The relevant data to the subjects' favorite MP aesthetics derived from the questionnaires have been processed through the methods of Quantification type III and Cluster Analysis. As the result, the chosen cut-off line for the clustering algorithm has yielded 12 clusters of aesthetic characteristics marked from A to L. The graph of distribution of the subjects based on their answered aesthetic items as their favorites is shown in Figure 11. Considering the most frequent aesthetic items within each cluster, a descriptive keyword would be registered as the 'Kansei' type or emotional character of the cluster. Thus the clusters, as the representatives of

the subjects' trends and favorite 'Kansei' type, are respectively named as: Sever; Serious; Sober; Cool Neat; Technical; Soft Neat; Soft Plain; Active Organic; Clear Organic; Minimal High-tech; Hot Tech; and Organic High-tech. To show the most meaningful trends in the context of the subjects, the directions of the axis are named Simple Tech – Complex Tech and Rectangular – Organic.

Clusters A and C, Sever and Sober are laid in the Rectangular – Simple Tech area of the graph, while cluster B, Serious, is positioned just on the Y axis near its Rectangular direction. Clusters D and E, Cool Neat and Technical, are placed in Rectangular – Complex Tech area. Clusters F and G, Soft Neat and Soft Plain, are almost in the central area of the graph. Clusters H and I, Active Organic and Clear Organic, are almost laid in Simple Tech – Organic area. The rest clusters including Minimal High-tech, Hot Tech, and Organic High-tech (J, K and L) are positioned in Organic – Complex Tech area.
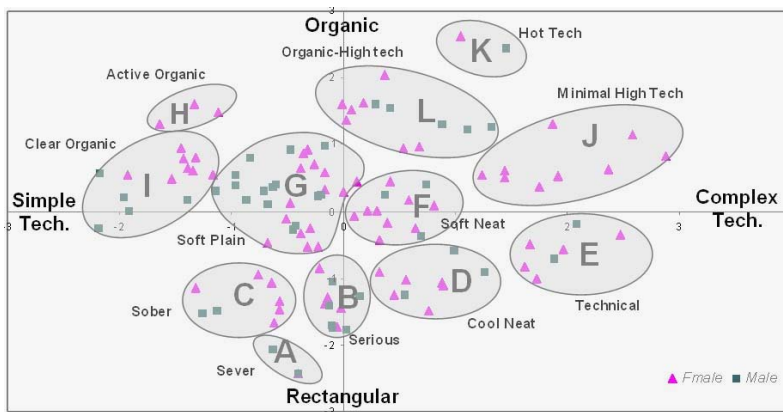

Figure 11: Distribution of the investigated Iranian MP users based on their answered aesthetic items.

According to the designated MP models in each brand as the subjects favorite MP models within the questionnaire, the common & clear and the smooth rectangle clusters of Sony Ericsson, the special material cluster of Motorola, the smooth & neutral cluster of Samsung and the shiny black cluster of LG are the most popular aesthetic characteristics in each brand.

4. INTERPRETATION

4.1. AESTHETIC DOMAIS

The distribution of the brands' samples in the resulted graph from aesthetic analysis shows that there is a relation between the aesthetic characters groupings and the brands. To precisely visualize such a relationship, a benchmark of aesthetic characters is made for each

brand. The given names to the derived clusters from aesthetic analysis are considered as the parameters of the benchmark. As each brand's aesthetic domain can be shown through its benchmark, the benchmarks can somehow reflect the brands' identities. For better comparison of the brands' aesthetic domains, the brands' benchmarks all together are shown in Figure 12.
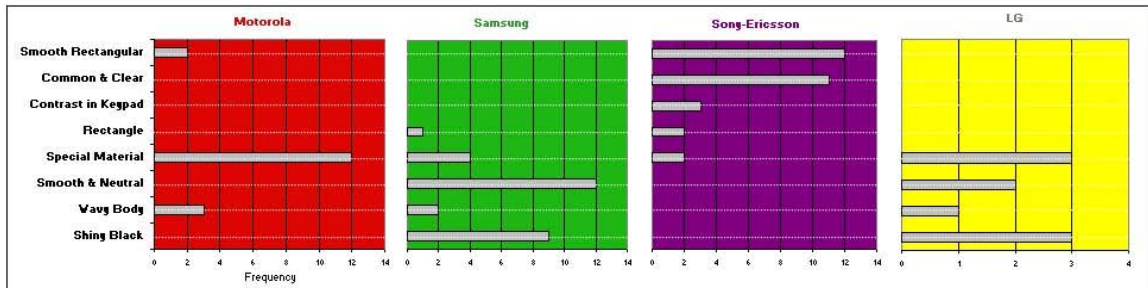

Figure 12: Benchmarks of the brands *MSSeL* based on the resulted clusters from aesthetic analysis.

Motorola has always presented unique MP models by using high quality or 'special material'. Comparing to the other brands Motorola has had a drastic shift in the design of its recent models. The most effective characteristics of Motorola's new models are their slim design and the flat scratched metallic looking surface of the keypad, while its past models have almost the curve body. Motorola has often presented her MPs in cheap and medium cheap price ranges.

Samsung offers a wide variety of sliding and folding MP models that mostly belong to clusters 'Smooth & Neutral' and 'Shiny Black'. The whole shape of their curved and smooth bodies is approximately in all models similar. Because of the entrance of the shiny black color, the new sliding models are more stylish and look more fashionable. However the price doesn't have a major change and is mainly frequented in the medium level.

Sony-Ericsson, in case of the whole shape of body, has a constant aesthetic character in its MP models with the simple round-corner rectangular body. But the innovations happen mostly in the design of the keypad and the micro elements, in addition to the functional properties that improves increasingly. Sony-Ericsson has generally a large variation of in models and also a large spread in all price ranges from cheap to high expensive.

LG has several different models with various aesthetic characteristics. Most of its previous models have some similarities with the remarkable models of the other brands. Its newer models have a more rectilinear and fashionable design. LG MPs are spread mostly in the cheap and medium cheap price ranges and few ones are expensive.

To compare the dominant aesthetic characters between the price ranges, another benchmark in the same way is arranged for five price ranges altogether (Fig. 13). The aesthetic clusters' names are similarly considered as the parameters of the benchmark.
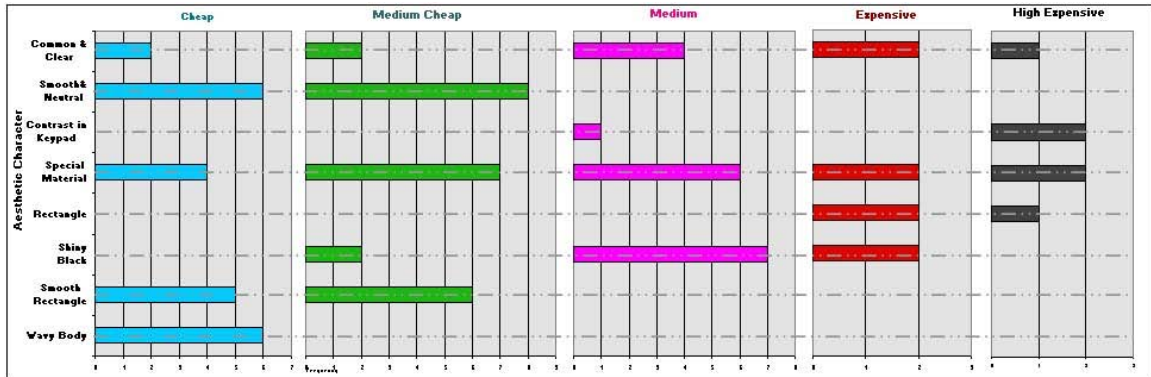

Figure 13: Benchmarks of the price ranges based on the resulted clusters from aesthetic analysis.

The benchmark shows that in the cheap range the variety of presented aesthetic characters is more than the other ranges. The dominant aesthetic characters in this range are wavy body, smooth & neutral and smooth rectangular. In the medium cheap range the most dominant characters are smooth & neutral and special material. But the mainstreams in medium range are shiny black and special material. In the expensive range, four clusters, including common & clear, rectangular, shiny black and special material are in the same degree of domination. But the dominant aesthetic characters in the high expensive range are special material and contrast in keypad.

4.2. AESTHETIC TRENDS

There are two parameters of the samples that can be concerned with the factor of time, as well as their model numbers. First, usually a MP model price in market would be decreased a while after being launched and introduced in the market. Hence the newest models have often the higher price than the older ones. Second, the stylistic characteristics of a MP model imply the period in which the product has been introduced in market. As the graph of distribution of the samples resulted from aesthetic analysis shows, the newer samples tend to 'minimal' side of X axis and 'high tech' side of 'Y' axis. After specifying the models price ranges within the resulted graph from aesthetic analysis, it has become clear that the levels of technology and price obviously have a meaningful and direct ratio. Therefore, as the diagonal axis of the graph is concerned with evolution, it can be considered as the vector of time (Fig. 14).
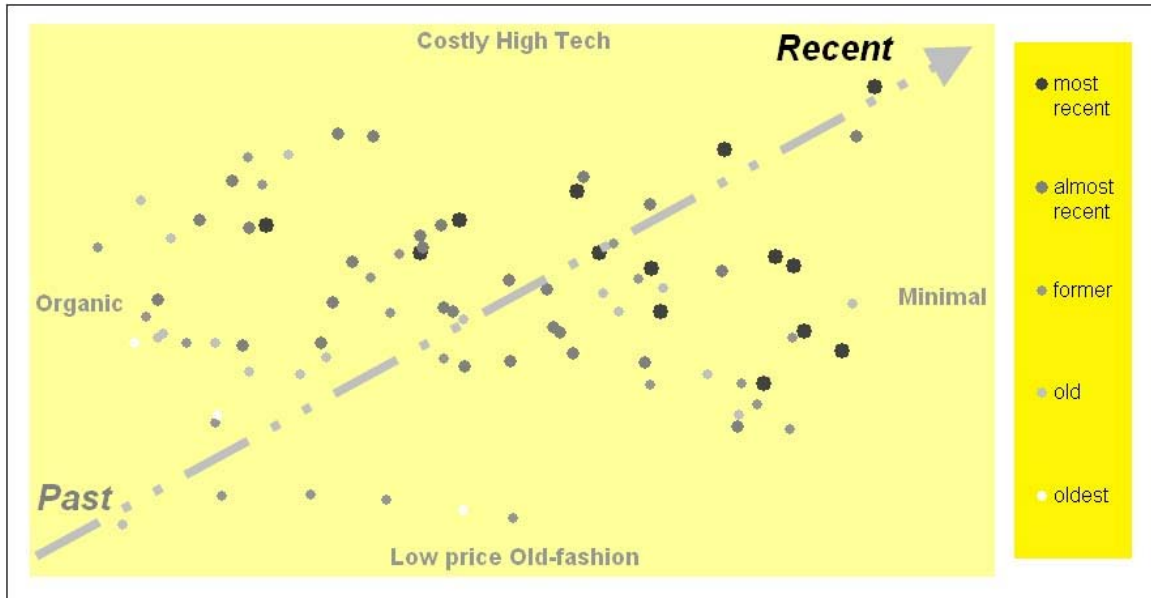
Figure 14: Distribution of the samples specified in the resulted graph from aesthetic analysis based on their model dates.

4.3. COMPARISION

Comparing the resulted graphs from aesthetic analysis of the samples and users investigation, as the given names to the axis directions in both graphs show, overall, they are similar. By quadrant rotating left the relevant graph to the investigation, those graphs will be roughly coincident. The similarity of their axis directions also heightens such a coincident. Nevertheless, despite of such evident similarity, there are some differences between those graphs. Though the aggregation of the samples and subjects in the central areas of the graphs are denser than the other areas, the number of the derived clusters and the distribution of the samples and subjects in the graphs areas are not the same. Considering the number of various clusters in the Rectangular – Simple Tech area, central area and Organic – Complex Tech area of the relevant graph to the Iranian subject, it seem there is a need for more variety of form and character in MP designs to be practiced in the 'Old-Fashion – Minimal' and 'Organic – High Tech' areas within the relevant graphs to the existent MP models in Iran market.

The comparison between the acquired groupings from aesthetic analysis of the MP models and Iranian users investigation clarifies some differences between the users' preferences and the dominant aesthetic characteristics of the mentioned Brands.

The following aesthetic characteristics derived from the users' opinion show some of their expectations which can not be met through the contemporary MP models of the brands *MSSeL*: long thin body, small folding body with a large display and rubber surface. This may reflect the possible segmentations of this group of users, university students, from aesthetic point of view.

5. CONCLUSION

Aesthetic appearance of a MP, like many other products, plays an important role in creating its identity. Samsung, Motorola, Sony-Ericsson and LG are four well selling brands in Iran market. The aesthetic characteristics of the presented MP models by those brands in Iran market can be classified into eight clusters named as Smooth & neutral, Shiny black, Smooth rectangle, Special material, Common and clear, contrast in keypad, Wavy body. Each of those brands has its particular aesthetic characteristics that show its aesthetic domain and somehow identity in the market. There is also a close relationship between the derived aesthetic clusters and the price level of the MP models, as each price range has its own dominant aesthetic characteristics. The minimal and rectilinear designed MPs are relatively more expensive and/or newer than the organic and curved designed MP models.

When comparing the existent MP models' aesthetic varieties and groupings with the investigated Iranian users' groupings upon their favorites, there is a need for more variety of form and character in MP designs to be practiced in simple tech – minimal or rectangular and, organic – high tech directions of form and content aesthetics. Such results can lead to draw the new directions in terms of MP design being appropriate for Iran market. In addition to the aesthetic characteristics of the existing MP in Iran market, there are also some aesthetic particulars that Iranian MP users have preferred. Those particulars, which have not been met in the existing models, for instance are long thin bodies and small folding bodies with large displays and rubber surface. Respecting the favorite aesthetic characteristics in each brand, the common & clear and the smooth rectangle characters of Sony Ericsson, the special material character of Motorola, the smooth & neutral character of Samsung and the shiny black character of LG are the most preferred aesthetic characteristics in each brand.

NOTE:

1. "Quantification 3 is one of a set of four statistical methods developed in Japan in the 50s (Hayashi, C. 1950) for the quantification of qualitative evaluations, and represents a method of pattern classification mathematically similar to Multidimensional Scaling (Kruskal and Wish,

1977)" . Further, the derived result or output of the analysis method of Quantification Theory III is actually very similar to the method of Non-linear Principal Component Analysis (Shackleton, et all,1996).

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