

BEYOND FORM AND FEATURES

**Does brand play a significant role
in consumer selection of handsets?**

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INTRODUCTION

The mobile handset market has rapidly moved toward devices that serve needs other than simple voice communication. These needs include other communications functions such as text/multimedia messaging, email and internet access. They also include imaging (still camera, video), music, and games, serving as a potential substitute for other separate digital devices.

These new features are unquestionably important drivers of consumer purchases and a major focus of handset manufacturers, but are they the only key drivers of consumer preference? A significant issue in these feature-frenzied times is the extent to which brand and current product ownership patterns affect purchases in this rapidly changing market. What role does handset brand play in the purchase decision relative to new features? Are new features enough to stimulate consumers to upgrade their handsets more frequently?

The reasons why brands generally affect consumer behavior have been heavily researched; they range from the psychosocial and sometimes personal relationship that some consumers form with brands to the more direct association of brands with expectations of quality and reliability. A range of these brand effects are undoubtedly associated with mobile devices, and an important question is how strongly those effects influence purchase in this market with feature-differentiated products.

A related issue is the extent to which new features drive the consumer's decision to purchase a new mobile device or to retain their existing devices. Consumers clearly exhibit some tendency to retain their existing mobile devices as a result of the monetary cost and learning curve associated with acquiring a new device. This inclination is offset to some degree by the broadened feature sets offered on new mobile devices. Again, a key question is how strongly consumer inertia – the tendency to retain an existing phone – manifests itself in the current market.

The effects of brand preference and consumer inertia are most appropriately evaluated in the context of a purchase decision in which features and price are also considered, as they are in most actual purchase situations. The research described in this paper is based upon detailed survey data on past and prospective mobile device purchases of more than 1,800 consumers in nine countries. Those data were collected to support the design and positioning of new feature-rich sets of handsets. The survey instrument was also designed to support an analysis of the role of brand and current device ownership on consumers' mobile device purchases. This paper describes the objectives of the research, the approach used to conduct the work and the key findings from the research effort related to brand preference and consumer inertia.

QUESTIONS ADDRESSED IN THIS PAPER

This paper addresses key questions about the roles of brand and inertia in today's market:

1. How important is handset brand in consumer decisions?
 - * What distinguishes consumers who are more brand sensitive from those who are less sensitive? Does importance vary across countries? What accounts for variation?
 - * Have some manufacturers succeeded in differentiating their brand value from competition? What accounts for their success?
2. How important is inertia in consumer decisions?

- * What distinguishes consumers with high inertia from those with low inertia? Does importance vary across countries? What accounts for variation?
- * Have some manufacturers succeeded in creating higher inertia for their products? What characterizes their success? Is inertia a characteristic of the brand or the model of handset?

OBJECTIVES AND SCOPE

The original research was designed to assess the fit of new models of feature-rich handsets with mid-tier consumers interested in new features. More specifically, the research sought to:

- *Determine consumer value for specific features including brand and price.* Do consumers place more value on a handset's brand or its price during the purchase decision? How do these value systems vary across target segments?
- *Understand feature prioritization among consumers.* What is the relative importance of various handset features to consumers? Understanding consumer priorities for key features would enable the manufacturer to more efficiently and effectively target these consumers. Also, another outcome of prioritizing handset features was to identify the potential for loss or gain of consumer preference share by the addition and removal of specific features to handset products.

The research study included consumers from a variety of countries and represented a range of demographic characteristics determined to be important to the manufacturer. Research participants were required to meet several criteria in order to be qualified to participate in the study. Recruited from select major metropolitan areas in North America, Asia, and EMEA, they were required to:

- currently own a mobile handset and be responsible for its purchase;
- use the handset at least 40% of the time for social or personal use;
- intend to purchase a handset in the next 12 months;
- have previously spent or be willing to spend a minimum amount of money on their next mobile handset purchase, equivalent to approximately US\$100;
- express interest in a minimum level of features, activities, and types of devices that were pre-selected by the manufacturer (e.g., text messaging, music, games, and activities such as searching the Internet or listening to music on a portable device).

The final sample consisted of over 1,800 consumers in nine countries who met all of the above qualifications. They ranged in age from 16 to 55 years of age, were a mixture of those employed full or part-time and students, and owned a range of form factors (i.e., clam, bar and other forms). The projectability of the research results is affected by these sample conditions. In particular, these results are directly applicable to this mid-tier market of consumers who are using and seeking mobile device features beyond basic voice communication.

RESEARCH OVERVIEW AND METHODOLOGY

The research was conducted in the summer of 2003. The quantitative interview was a computer-based instrument which took approximately 45 to 50 minutes to complete.

Data collected that are relevant to the current analysis include the following:

- *Demographic and behavioral profiling*: Detailed demographic and psychographic data were collected for segmentation and profiling.
- *Characteristics of current phone*: Complete information was collected describing the respondent's current mobile phone including presence, use and importance of features.
- *Mini-competitive assessment*: This section involved a two-part shelf test of 17 mobile devices that were considered to be direct competitors for the mid-tier, feature-rich device market. The debranded devices included both recently-introduced models and accurate physical models of yet-to-be-introduced devices.
- *Imagery/Perceptual mapping*: Participants provided ratings on key performance factors of mobile handsets from the mini-competitive assessment.
- *Discrete choice exercise*: A set of discrete choice experiments was structured for each respondent. Each experiment presented two alternatives from the 17 models completely described on a set of attributes, including brand, features and price. Participants were also given the option to stay with their current handset rather than buy one of the alternatives. They were asked to indicate whether they would purchase one of these new devices if they were available now and, if so, which they would most likely choose.

The discrete choice exercises are the centerpiece of the analysis. These exercises were structured to support statistical estimation of the quantitative effects of each of the phone features, price, and brand on the choice between competitive products. They were also structured to evaluate the degree to

which consumers were drawn to purchase a new device rather than retain their current handset.

The following attributes were measured and analyzed in the discrete choice modeling (DCM):

- Form factor (the style and design of the handset)
- Price (ranging from free to US\$250)
- Brand
- Display size and quality
- Battery talk time
- Camera
- Bluetooth capabilities
- Messaging
- Video clips
- 3D sound
- Downloadable games
- Situational response

Each feature covered a range of offerings included “not available”, an option today, and a level that would be available in the near future. The form attribute includes the 17 models from the mini-competitive assessment and represents the handset’s aesthetics, handling and feel, exterior and interior design, and size and weight. Forms that differ on these dimensions may have the similar preference; for example, a consumer may be indifferent between an ugly, light handset and an attractive, heavy one. Later, when we refer to “similar forms”, we mean forms that are similar in preference rather than forms that look alike.

The brand attribute measured a range of preferences across a select set of seven global brands. These brands account for between 69% and 92% of the total share for this segment in each market. A “generic” brand was also included. For this paper, we will focus on the brands that represent the range from each respondent’s most preferred brand to their fifth most preferred brand, rather than the full range of eight brands. This focus on the top five brands for each individual represents the choices that would be most relevant in the decision process, and better represents the true impact of the attribute in the market versus using the full set of eight. It is important to note that brands below the top five, although excluded from this analysis, have, in some cases, significantly lower value than the top five. Those brands are thus far less competitive than the top brands.

Several different, but related, statistical methods were used to estimate values for the features, price, brand and inertia in the mobile device market. Aggregate-level analyses were conducted to determine overall values at the country and regional levels. Latent class modeling was used to identify general ranges in these values across segments of the population, and individual-level discrete choice modeling was conducted using both hierarchical Bayes and mixed logit statistical estimation approaches.

After consumers expressed their choices in the survey exercises, these statistical methods were used to derive a relative value for each component of the alternatives tested. The methods reconstruct the value system of each participant across the set of product attributes and their levels. As a result, each participant's data set has comparable values for each specific brand, each of the 17 forms, each level of price, and so on for each level of each attribute. When one level is compared to another, the level with the higher value is the one the participant prefers. The difference between the values for the two levels represents the strength of preference for one over the other.

The numbers we will discuss in our analysis focus on consumer preferences as derived from the DCM. Once we have the values for each level of each attribute, to simplify the analysis they are converted to preference indexes that range from zero to 100. The least preferred level of each attribute is assigned a value of zero. The highest value in the data set is assigned a value of 100, and every other level is scaled between the zero level of its attribute and the level with the 100 value.

Each level now has a value between zero and 100, and we compute preference indexes for the attributes by taking the difference between their highest levels and their lowest levels. As the lowest level is always zero, the attribute index is equal to the index for its most preferred level.

It is important to understand this scaling because these numbers must be interpreted within the context of certain key properties. For this paper, it is important to know that an attribute with an extreme preference will depress the preference indexes for all other attribute and levels. We shall see that, in some countries, the index for form is so extreme that the indexes for all the other attributes are depressed to a value that is lower than in other countries. Therefore, it is possible that an attribute's index can be lower in one country than another, but its rank out of the twelve attributes can be higher.

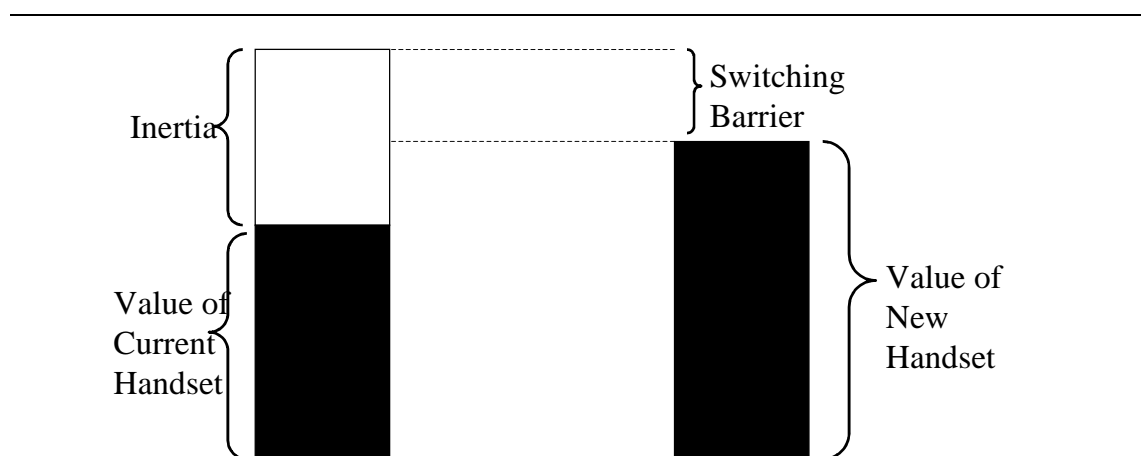
For example, Germany may have a higher preference index for brand than Brazil, but Brazil ranks brand sixth in importance while Germany ranks it eighth. This occurs because the value for form in Brazil is so extreme that the index for brand is depressed. In Brazil, a brand advantage is less likely to overcome a deficiency in form than in Germany, but if the forms are

competitive, brand is likely to play a stronger role in consumer decisions in Brazil than in Germany.

INERTIA AND BRAND VALUE IN CONSUMER DECISIONS

Discrete choice experiments are widely used to evaluate price, brand and features, and they can also be used to measure the degree of “inertia” in the market represented by individuals who choose, for various reasons, to forgo a new product purchase – even when the new product is objectively “better” than what they have currently. Figure 1 illustrates the role of this inertia in an individual’s comparison between a currently-owned product and a possible new replacement product.

Figure 1
ROLE OF INERTIA IN PRODUCT CHOICES



If a consumer’s perceived “value” for a new mobile handset, after adding in the value for all of its new features and subtracting the value assigned to the purchase price, exceeds the value of the currently-owned handset by a margin that is greater than the inertia value, that consumer is likely to purchase that new handset. This means that, in theory, a new purchase will occur only if the value of the new features offsets the purchase price as well as the value assigned to inertia. If inertia is high in the handset market, it means that a handset manufacturer must not only strive to deliver a more valuable offering than its competitors, it must deliver enough additional value to overcome the consumer’s inertia, too.

The inertia value that consumers implicitly assign varies substantially among product classes and among consumers themselves. For example, the paper’s authors have measured very high inertia values among software developers in

their decision of whether to adopt a new programming language/system. In that case, the time and effort required to switch platforms results in the high level of inertia. In a European study of likely prospects for room air conditioner purchases, inertia was very high, and simulation modeling revealed that over 30% of consumers in the target market would not purchase any of the room air conditioners that were likely to be available; they would rather keep their money and have no air conditioning. A study of checking account customers in Mexico revealed that the hassle of changing accounts drove inertia to such an extent that the bank could substantially raise fees without fear of losing customers.

On the other hand, very low and even negative levels of inertia were measured in the U.S. consumer telecommunications carrier market where the costs and effort of switching are low and levels of satisfaction with current carriers are also low. Negative inertia indicates that the consumers are looking for change, even if it means settling for a product or service that may be less valued in objective terms.

In the discrete choice experiments for this study, inertia was measured by asking the consumers to choose among three alternatives: their current handset and two hypothetical alternatives defined on each attribute. Each consumer evaluated sixteen of these scenarios. Inertia values were derived through analysis of the choices consumers made between the current handset and the alternatives.

FINDINGS: BRAND

To summarize in general across the markets, consumers find brand to be a salient consideration in their handset purchases, although it is usually a secondary consideration to form, price, and some top features. Consumers tend to consider brand as one of several important decision criteria once their needs for form and price are met. However, fragmented preferences for brands across consumers indicate that handset manufacturers have not fully harnessed the power of this attribute.

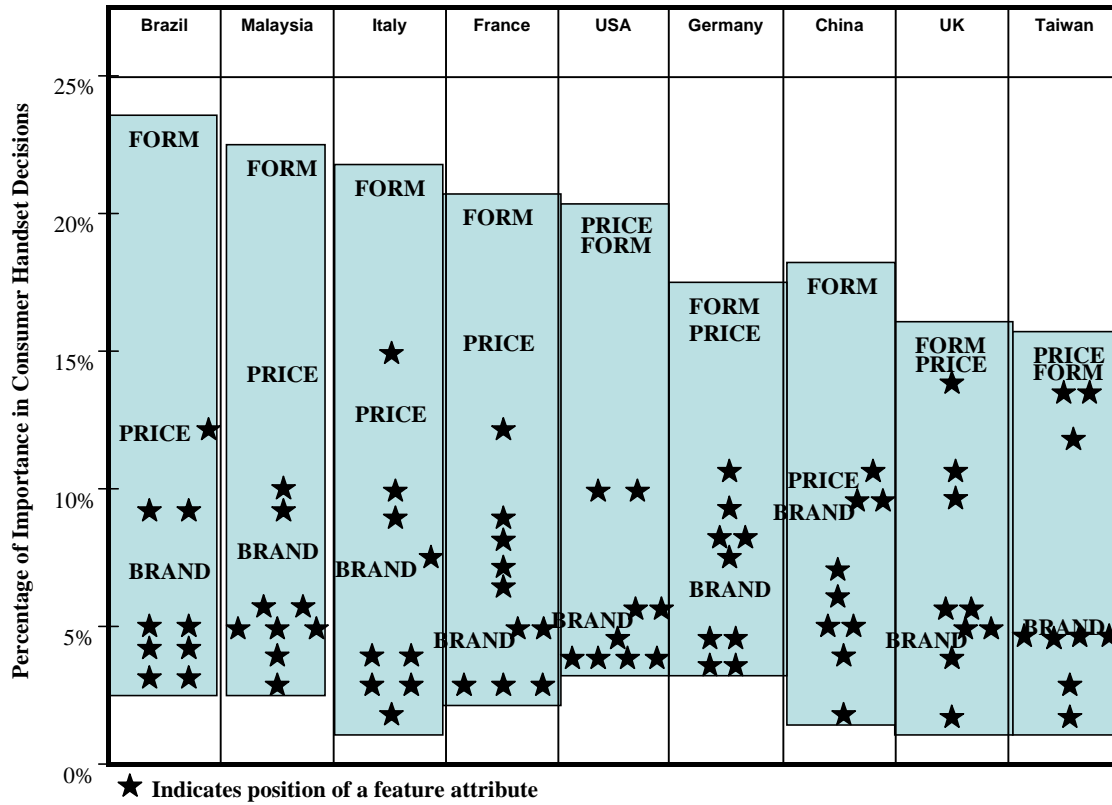
Table 1 illustrates the relative impact that brand has in the context of the full twelve attributes for four different markets. The total column represents the average for the sample across the nine markets. For this analysis, values for the attributes derived from the discrete choice analysis are converted to percentages to simplify comparisons.

Table 1
RELATIVE IMPORTANCE OF BRAND IN CONSUMER DECISIONS

	<i>Total</i>	<i>UK</i>	<i>France</i>	<i>China</i>	<i>Malaysia</i>
<i>Form (flip/clam)</i>	18.7%	15.8%	20.2%	17.9%	22.3%
<i>Price</i>	14.1%	13.4%	15.8%	10.4%	13.7%
<i>Feature B</i>	12.2%	14.8%	12.9%	9.6%	10.2%
<i>Feature A</i>	10.0%	9.1%	9.2%	10.6%	9.9%
<i>Feature C</i>	7.9%	10.5%	8.0%	5.8%	6.3%
<i>Feature E</i>	7.2%	6.1%	5.7%	9.6%	6.6%
<i>Brand</i>	6.6%	5.0%	5.0%	9.4%	8.1%
<i>Feature H</i>	5.4%	6.9%	7.1%	2.5%	5.3%
<i>Feature F</i>	5.0%	4.8%	5.9%	6.8%	5.0%
<i>Feature I</i>	4.7%	5.5%	3.4%	4.7%	5.1%
<i>Feature G</i>	4.6%	5.2%	3.5%	7.3%	4.0%
<i>Feature D</i>	3.7%	2.8%	3.4%	5.2%	3.5%
<i>Total</i>	100.0%	100.0%	100.0%	100.0%	100.0%

On average across the nine markets, brand ranks seventh of twelve attributes, ranging from a high of fifth in Malaysia to a low of tenth in the United Kingdom. Typically, it ranks behind form, price, and several features. As a percentage of the decision criteria, brand ranges from a high of 9.4% in China to a low of 5% in the UK and France. Clearly, the impact of brand differs across markets, although it is not the leading factor in any market. Figure 2 shows the range of importance across attributes, the relative importance of brand, price, and form, and the relative importance of other features (indicated by stars).

Figure 2
COMPARISON OF ATTRIBUTE IMPORTANCE ACROSS COUNTRIES



There are some important differences across the markets. Some have large gaps between form, often the most important attribute, and the second most important attribute. In such markets, it can be difficult for a single attribute to compensate for a deficiency in form, even if it is high in rank. Another difference is the position of brand in the overall ranking. If brand is more highly ranked, it is more likely to play a role in the consumer purchase decision if the highest ranked attributes are competitive.

Looking more closely at the brand preference index (the values for brand derived from the DCM analysis before they were converted into percentages), we find significant differences across markets for the mean values (table 2).

Table 2
BRAND PREFERENCE INDEX DIFFERENCES ACROSS COUNTRIES

<i>Brand preference index is ...</i>	
<i>Higher than average</i>	China (31.2) Germany (24.2) Malaysia (24.1)
<i>Average</i>	Italy (23.4)
<i>Lower than average</i>	Taiwan (20.3) Brazil (19.6) United Kingdom (19.4) United States (18.0) France (17.0)

Comparing these results with the attribute rankings discussed earlier produces some interesting observations. China and Malaysia were among the markets to rank brand in the upper half of attribute importance, so it is not surprising that their brand preference index is higher than average. However, Germany had ranked brand eighth, and yet has a higher than average preference index. Brazil ranked brand sixth in importance, and yet their index is lower than average. Why is this the case?

Recall one of the properties of the preference index: all attributes are scaled relative to the one with the highest index, so if a market is more strongly dominated by a single attribute than other markets are, all the attribute preference indexes will be depressed. In the case of Brazil, the value for the form attribute is quite extreme relative to the second most valued attribute, price. The rank order of the attributes stays the same, but their power in the decision is weak relative to the dominant attribute.

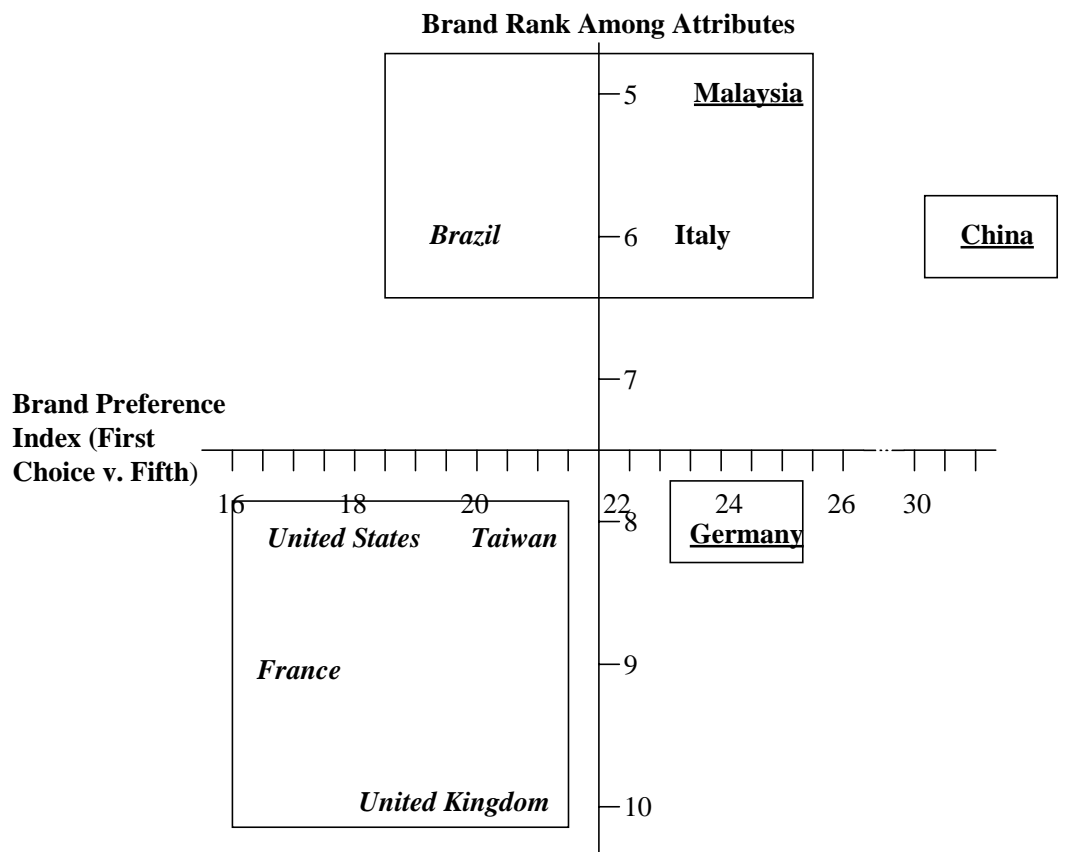
Suppose a consumer in Brazil is deciding between two handsets. If the handsets are far apart regarding the desirability of the form, the other attributes will not matter much. On the other hand, if the handsets have similar forms, the rest of the attributes will come into play as they do in other markets. In this market, there is a greater risk of introducing a design that alienates consumers to the extent that they may not consider other attributes such as price, brand, display size, or talk time as a trade off for a less preferred design.

Germany represents the flip side of this case. As in other markets, form and price are primary issues, but, unlike other markets, other attributes have high importance, too – the gap between the top drivers and the secondary drivers is much smaller. In this market, there are more opportunities to compensate for

handset dislikes by offering preferred levels of other attributes, provided that no competitor delivers a better offering across each feature already.

The brand preference index is important because it tells us how well brand can compensate for deficiencies on other attributes regardless of whether they are the result of one or many other attributes. The brand rank is important because it tells us what role brand will play if a product is competitive on the higher ranked attributes. Putting these two pieces of information together suggests a way to visualize the differences across the markets (figure 3):

Figure 3
COMPARISON OF BRAND RANK AND PREFERENCE INDEX



In this chart, markets that rank brand higher in the decision process are placed farther north while markets that rank brand lower are placed farther south. Markets that have a high preference index for brand are placed farther west, and brands with a lower preference index are placed farther east. Markets that are underlined have a higher than average brand preference index, while those in italics have a lower preference index for brand.

The chart suggests four groupings of the nine markets. For Group A (China), brands resonate strongly. Despite having form as a dominant attribute, its preference index for brand is higher than average, and brand ranks relatively high in the attribute list. Group A would be more willing to use brand to compensate for a deficiency in form, for example, than would other markets.

Similar to Group A, markets in Group B (Italy/Malaysia/Brazil) rank brand relatively high in the list of attributes, but the preference index for brand is more strongly dominated by form. Brand resonates in these markets, but does not compensate well for deficiencies in form.

Group C (Germany) ranks brand lower in the list of attributes, but it has a higher preference index than average across the markets. Form is much less dominant in this market than in Groups A and B, so the value of brand is not depressed very much. There are also other attributes that are more highly ranked than brand, but brand resonates in this market and is one of many attributes that can have an impact.

Finally, Group D (UK/USA/France/Taiwan) does not value brand very highly. With the exception of France, these markets are similar to Groups A and C where form does not dominate so much, creating an opportunity for other attributes to have greater impact. However, even under these more favorable conditions, brand does not resonate strongly in these markets.

Even in markets where brand overall is less important relative to other decision criteria, some brands appear to be more successful at establishing differentiated preference. However, it is not often clear how handset brand preferences are related to purchase and use in these markets. The average preference index was plotted against the share of current users in the sample for each brand in each of the nine markets. The share of current users is based upon our sample of mid-tier mobile handset purchasers, and it does not necessarily reflect full brand market shares. It does represent how well penetrated the brand is in our sample, and experience in other markets suggests that there should be a strong relationship between penetration and brand preference.

These results do not show a pronounced relationship between share of current users and brand preference. In the one market, for example, the brand with the second highest share ranks seventh in brand preference value. Another brand has the leading brand preference index in that market, but no penetration. In most of these markets, there is at least one low-share brand that places among the top three in brand preference. We would expect that average preferences for a particular brand would be higher where there are more consumers using them, but here this is often not the case.

One could hypothesize that many of the mobile handset consumers are locked into long term contracts and perhaps their brand preferences have changed since they selected their current phone. If we look only at those people who purchased their phones recently, however, we find a similar phenomenon. Four brands have a brand preference index between 20 and 22, but their shares range from 4% to 19%. Even among recent purchasers, there is a questionable link between brand preference and purchases. This suggests that brand preferences do not strongly drive purchases across today's market. Other factors, such as unique forms, differentiated features, price, or availability and packaging with carriers' services drive consumer purchases.

Taking a closer look at each brand's customer base, we find that consumers are not very likely to prefer the brand they own to other brands. We would expect to find that customers of a brand are more likely to make that brand their top choice than other brands. However, in the handset market, we find that very few brands have customers that choose them as their most preferred brand more often than they choose a competitor.

So what characterizes consumers who think that brand is more important? Pre-paid plans versus post-paid contracts are the single biggest indicator of whether a consumer has a high value for brand or not. Consumers with prepaid plans have a higher preference index for brand than do those with post-paid contracts, and it is the widest difference of any characteristic tested.

Recalling the discussion of how the countries differ on brand value, it's not surprising that all the markets in the low brand Group D are less than 40% pre-paid in our sample. By contrast, the markets with higher sensitivity to brand in Groups A and B each are over 65% pre-paid in our sample. Group C, not surprisingly, falls in between the two groups.

Aside from country and type of service plan, other characteristics that most identify a consumer as someone sensitive to brand include:

- Higher annual household income (e.g., over \$100K in the US)
- Paid more for current phone (e.g., over \$150 in the US)
- Own more than one mobile phone
- Use current phone more than 40% for business

Attitudinally, the brand sensitive segment scores higher on attitude factors that concern work and willingness to spend more to get products that suit their style and that offer technology solutions. This profile suggests that higher spending segments pay more attention to brand, and so building a strong brand image may be more worthwhile than the analysis to this point had suggested.

Brand building may also help to harness the power of brand that exists today. When comparing an individual's most preferred brand to their second most preferred brand, the preference index difference between the two brands is fairly substantial: on average, there is about an eight point difference. However, consumers do not agree on which brands are most preferred, so the strength of preference for their first choice versus second choice does not emerge when we compare the average indexes for the seven brand studied.

For example, in France, the average preference index for an individual's first choice versus second choice brand is seven, but averaged across the market, no single brand emerges as a clear top choice. Two brands are tied for the preference index lead in France, so the difference between first and second choice at the market level is zero. If there were consensus in the market regarding a most preferred brand, the difference would be seven, creating a noticeable market advantage.

There are similar gaps between the individual preference indexes for the top choice versus the second choice across most countries in our sample. The smallest gap is in the UK, where one brand has a statistically higher preference index than every other brand, as well as 68% penetration. Clearly, there are other reasons besides brand that explain why it has high penetration. However, these observations suggest that brand can create valuable advantages if a handset manufacturer can build consensus within these currently fragmented consumer markets.

FINDINGS: INERTIA

Inertia, the tendency for someone to want to keep their current handset despite the presence of objectively "better" alternatives, is strong across these markets. Our sample includes only consumers who plan to purchase a new handset in the next twelve months, with half of them intending to purchase in the next six months. Therefore, it may be a little surprising to find that inertia is so high.

Treated as an attribute in the same way as brand, price, form, and features, inertia is the second most influential element in consumer purchase decisions. Handset manufacturers must offer a combination of benefits that not only beats competition, but also overcomes consumer inertia. This underscores the need to perform well on the top customer decision criteria: form, price, and key features. Figures 4 and 5 shows how inertia ranks when it is included with the other attributes.

Figure 4
IMPORTANCE OF INERTIA IN CONSUMER DECISIONS (GROUP D)

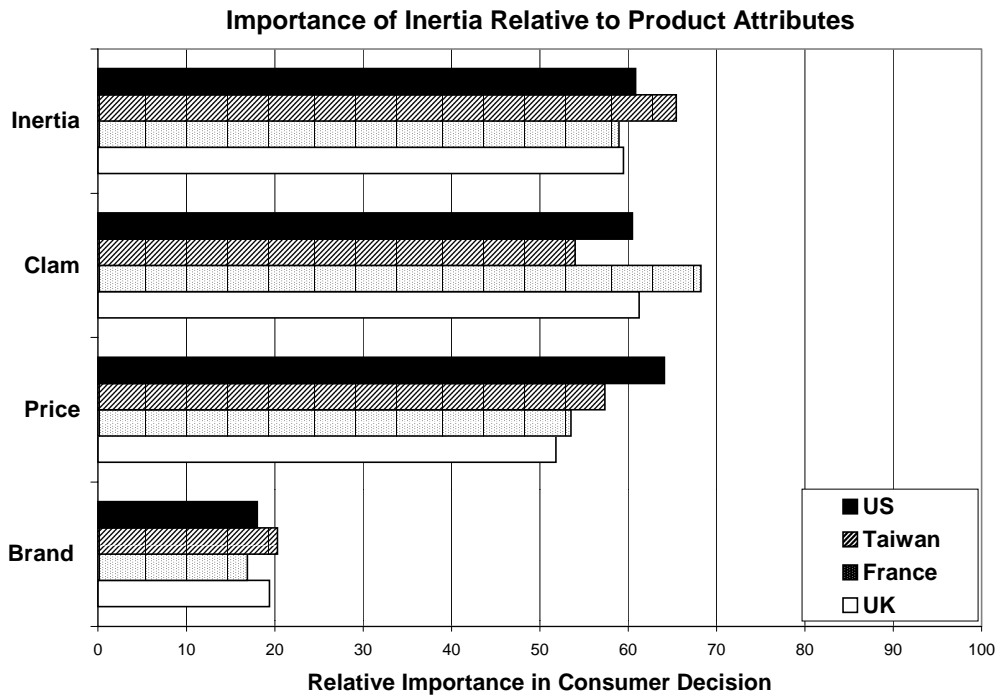
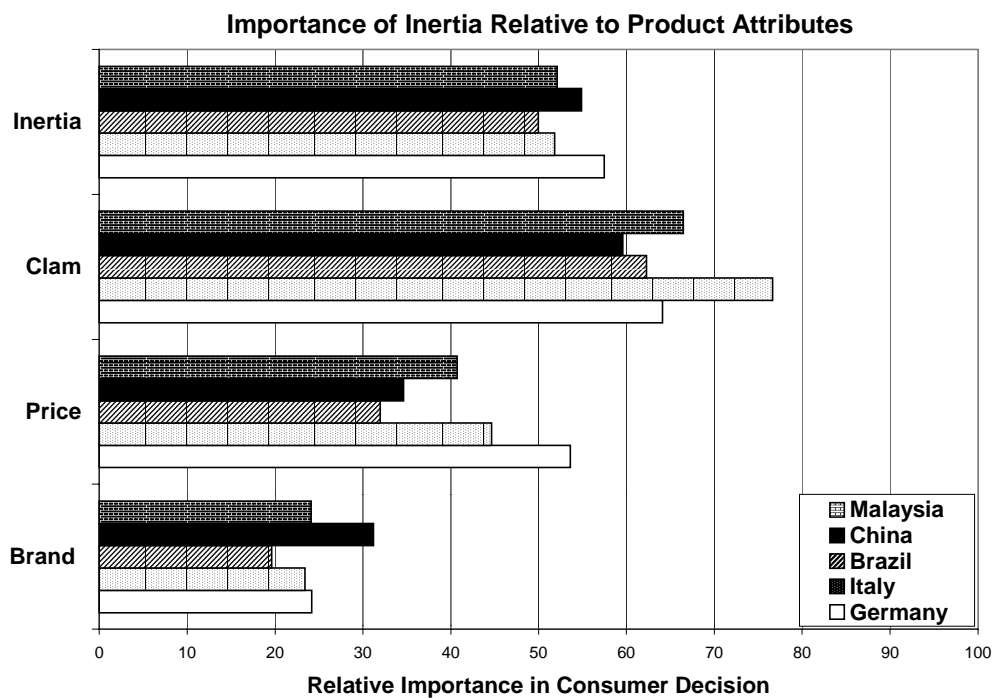


Figure 5
IMPORTANCE OF INERTIA IN CONSUMER DECISIONS (GROUPS A, B, AND C)



Unlike brand, inertia is important across all countries – it is the second most important attribute behind form in each country except Italy, where it is third behind form and Feature B; the US, where it is second behind price; and Taiwan, where it is number one. Inertia is higher than average in the Group D and C markets, and lower than average in Group B.

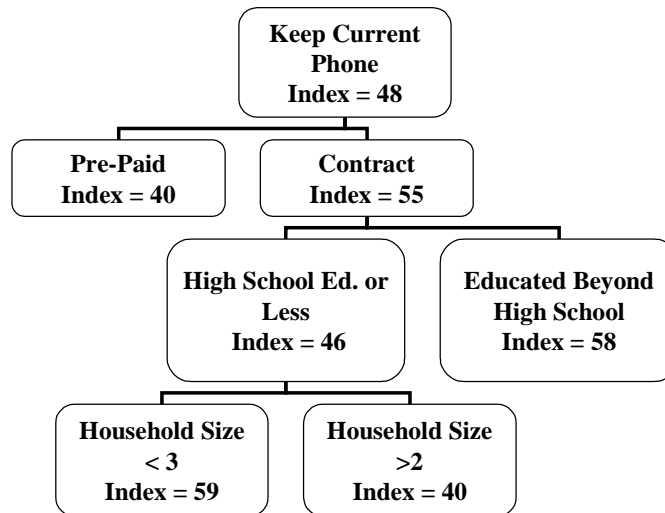
Not surprisingly, pre-paid plans are associated with lower inertia, or higher willingness to switch. Recall that all the markets in Group C and D have a much lower incidence of pre-paid plans in our sample than the Group B countries. In addition to having pre-paid plans, consumers who are more willing to switch are more likely to have owned their current handset for more than a year. So, market conditions (service flexibility and time since last purchase) have strong influence on customer behavior.

Attitudinally, low inertia consumers describe themselves as trendy, stylish, outgoing, futuristic, and schedule conscious. They also are more likely to say they like to be among the first to try new things, that they are usually one of the first to buy new products, and tend to rate the purchase likelihood questions higher. These attitudes suggest that consumers with lower inertia may also be early adopters.

As was the case with brand, pre-paid versus contract once again is the most differentiating variable with respect to inertia. Drilling down further, pre-paid customers in Germany, UK, France, and Italy have higher inertia than pre-paid customers in other markets, and those with contracts in the US, Taiwan, and Germany are more likely to want to retain their current handset than are their contract counterparts in other countries.

If we remove country from the analysis and focus on demographics, we find the following results (see figure 6):

Figure 6
INERTIA AND DEMOGRAPHICS



Within the pre-paid segment, no demographic segments emerge that further differentiate consumers with high and low inertia. On the contract side, however, demographic analysis identifies another segment that is more willing than average to switch from their current phone. These lower inertia consumers have no education beyond high school and live in households with three or more people. This group tends to be married, female, and to use the phone exclusively for personal use. We see that even within the contract segment there are some people who are more willing to switch.

The results of the mixed logit and latent class modeling yield complementary insights into this issue. A latent class segment that comprised about one quarter of the sample had negative inertia; that is, they would accept a new phone of lower value than their current phone just to be able to change. In practice, this might not happen because newer models tend to have more features than their predecessors at comparable prices, but the finding demonstrates that a significant segment of consumers like change.

The latent class analysis found that low levels of inertia are partially explained by the demographics described in figure 6, but that consumers with negative inertia values do not share common characteristics. If they did, the demographic analysis shown in figure 6 would show even smaller values for the inertia index.

The latent class analysis also revealed that consumers who are more predisposed to change are also more brand sensitive. Although they are not targetable by demographics, improving the overall brand impression may be an effective way to capture this part of the market if a distinct brand

positioning can be communicated that addresses common needs of the segment.

Turning our attention back to brand, it would be instructive to know if any of the handset providers have succeeded in building inertia in their customer bases. Analyzing the inertia of the customers for each brand, however, reveals that the level of inertia is approximately the same across brands.

However, if we revisit the analysis of how often a handset brand's current customers prefer it to other brands, there is an interesting finding regarding inertia. In cases where a consumer prefers its current brand to others, inertia has an index of 60. For those who prefer another brand to their current one, the inertia index is only 42. Interestingly, there is no difference in satisfaction levels across the two groups, indicating that there is more to building brand preference and inertia than satisfaction. These findings apply across all brands rather than to a particular brand, and suggest that a handset manufacturer can build consumer inertia if it can build brand preference, not just satisfaction. The higher inertia consumer may be less likely to buy a new handset more frequently, but when he or she is ready to buy, the current brand will have an advantage.

MARKETING IMPLICATIONS

Overall, we have seen that brand has a significant, but by no means dominant, role to play in this feature-rich, mid-tier handset market. It is, at best, secondary to form, price, and some key features among the consumer purchase criteria. The analysis suggests that handset manufacturers must be competitive with attractive designs, expected prices, and a few key features before they can leverage any preference advantage that brand might have.

In practice, handset marketers seem to be having difficulty creating strong preference for their brands. The markets tend to be fragmented with regard to brand preference: while individual consumers may have strong brand preferences, there seems to be a lack of consensus across consumers as to which brands are preferred. The fact that significant brand preferences exist but no brand dominates preference overall suggests that there is benefit to be gained for a handset manufacturer that builds its brand across a wider audience.

Building brand across a wider audience is a daunting challenge. The analysis demonstrates that preferences for a particular brand are not strongly associated with penetration and use. Brand preference will not necessarily grow with market share, and handset marketers who wish to build a stronger brand will need to find ways to connect the consumer's positive experience with handset use to the specific brand of handset. Handset satisfaction and use is a complex

experience that depends on factors outside the handset provider's control, such as the carrier's sales activity and service provided. The carrier may be a barrier in building the relationship with the consumer, and the use of post-paid contracts in many markets also seems to create barriers to brand building.

Brand has higher importance among consumers with pre-paid plans, and also among consumers who are more affluent, willing to pay more, and business use-oriented. These consumers represent a good opportunity for brand building as they are already sensitive to brand and may represent a stronger revenue opportunity.

Inertia is a powerful force in the market, and underscores the need for handset manufacturers to perform well across multiple important consumer decision criteria.

Low inertia, or high willingness to switch, is stronger among consumers with pre-paid plans, but also among consumers who have had their current handsets longer. These findings demonstrate that, in addition to consumer preferences, the circumstances around a consumer's decision significantly influence behaviors. However, consumers are also more likely to be willing to switch if they consider themselves to be early adopters, so attitudes also play a role in inertia.

Is low inertia good for a manufacturer or is high inertia better? If you get recurring revenue from consumers, it is good to have high inertia in your customer base. However, in markets that depend on new sales, it's better to have consumers with low inertia but high brand preference so that they will buy more of your handsets more often. Ironically, the analysis suggests that higher preference for the current brand also builds higher consumer inertia, probably increasing the time between purchase and replacement.

Of course, it is great when inertia is low among your competitors' customers as this creates greater opportunity for you to gain new sales. Toward this end, the research indicates that greater and more frequent switching will occur in markets where pre-paid plans are more prevalent, so these might be addressed differently (e.g., by brand building) than a predominantly post-paid contract market.

Even where inertia is lower, it must be noted, it still should not be considered "low" across most of the market. While it is negative for a significant portion of the market, these consumers do not share common demographics and thus are difficult to identify for marketing efforts. The average inertia indexes we have seen among the "low inertia" demographic segments would still rank it in the upper half of the consumer decision criteria. Therefore, it is important to focus on winning on multiple attributes in order to beat competitors and to entice consumers into the market to make a purchase.

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