

## **The Black Market in China Lightens up**

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### **Abstract**

In the past few years China's trade in counterfeit goods has boomed. Counter-piracy efforts focussed on supply chain disruption or legal system interventions have not halted the proliferation of counterfeiters nor the growing and increasingly public consumer market. This black market growth begs questions about how consumers decide whether to buy illegitimate goods. This exploratory study shows that consumers place great importance on obtaining the latest models and technology at low prices and are not very concerned by social stigma or product risks. The implications for marketers facing quick and competent knock-offs are that any marketplace advantages based on technology or fashion must be captured in the short term and must consider the speedy introduction of virtually identical competitors.

Keywords: Best-Worst Scaling, Black Market, Consumer behavior

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### Introduction: Commercial Piracy in China

The main aim of this research was to describe consumer behavior with regard to black market cellphones in China. It explored new ground in examining the relative importance of factors that lead to a choice between legal and black market phones. More specifically, we shed new light on the attributes considered by buyers through a market utility-based approach using a form of discrete choice analysis known as a best-worst experiment. We develop ratio scales that capture the relative importance of different attributes to buyers and also overcome many of the limitations of studies that rely on simple attribute rankings. We then separate the self-acknowledged previous buyers of black market cellphones from non-buyers and compare these two groups' attribute rankings.

In 2005 the international trade in counterfeit or pirate goods was worth \$200 billion (OECD, 2007) or more than the GDP of over 150 national economies. Counterfeit goods are produced and consumed in virtually all countries and categories of consumer goods. Asia has long been the largest producing region and is now rapidly becoming the largest consuming region as well. While much effort goes into combating counterfeiting (Staake, Thiesse and Fleisch 2009) pirate goods continue to proliferate and gain new customers. Historically these customers were attracted by low prices, but were also constrained by the primarily social risks of buying black market goods, e.g. loss of face (Gentry et al 2006).

In practice, Chinese entrepreneurs manufacture and sell anything as long as there is a market for it. All they need is to find their *baohusang* or protective umbrella whose spokes are local Party bureaucrats who reduce business risks by signing licenses or stifling the curiosity of regulators. This tight relationship between state and illegal economic interests has been labeled the Political Criminal Nexus or PCN (Zhang & Chin 2008) and is a driving force for economic development, especially in China's southern provinces.

Counterfeiting is entrenched in many Chinese industrial sectors such as mobile phones (called cellphones in China)--the focus of this study. A current term for pirate goods is *Shanzhai*, derived from 'rural fortress' and roughly meaning bandit or pirate, with a hint of Robin Hood (pirates yes, but *our* pirates). Many Shanzhai firms have as few as ten employees, but by combining modern software and production technology with expertise in reverse engineering they speedily knock off the latest models and brands. And since they pay no taxes and have minimal R&D, counterfeiters' costs are very low. Some makers even have their own brands, or 'brends' that closely mimic market leaders—iPhone, Nokea, Rizr and so on selling for a quarter to half the price of the originals.

Other counterfeits are phones bought legally abroad and then brought into China and hacked or 'unlocked' so they function on local networks. These phones sell for up to several times the foreign market price because they are usually the latest, most fashionable models. Altogether, counterfeit phones account for a rapidly growing 20% of mobile phone sales and are now eating into the market share of both big multinational and local brands (Barboza, 2009).

Yet while it has long been known that counterfeiting is rife—indeed there are upwards of 2000 academic studies of it each year (Staake, Thiesse and Fleisch 2009)—in China at least, the market has lately become increasingly public and open for manufacturers, retailers and consumers. In Chinese cities fakes sit side by side with original models and many, perhaps

most of the goods offered on China's leading on-line retailer Taobao give every appearance of being knock-offs. It is as if the black market has come out into the open.

### **Methodology: Best-Worst Scaling**

An effective method for evaluating the relative importance that consumers place on various decision factors is to model their preferences as a response to experimentally designed choice scenarios. This approach, commonly known as discrete choice analysis (DCA), has been used to model choice preferences of decision makers in many areas; marketing, operations management, transportation and economics (Morwitz 1997, Auger et al., 2007; Verma et al., 2006). Amongst these techniques, one relatively simple method that is useful in creating an accurate picture of preferences is best-worst scaling.

The first stage in this study was to choose attribute items for evaluation and these came from previous work on black markets (OECD 2007, Albers-Miller, 1999, etc.) that listed positive motives for buying (lower prices, access to new technology, latest models, etc.) and reasons not to buy (low quality, illegality, social stigmatization). Pre-study interviews with phone buyers led to the inclusion of items such as "the seller is known to me" and "black market is patriotic" because these attributes may affect a black market purchase decision.

This preliminary study used a convenience sample of 87 adult cellphone buyers (25-45 year old) drawn from large cities in southern China--the primary cellphone buying demographic. The small sample is a major limitation of this study and results based on it are only indicative of what may be found with a broader more representative study, which is now underway.

Finn and Louviere (1992) laid out the formal statistical and measurement properties for best-worst scaling, also known as Maximum Difference Scaling. This was later elaborated (Marley and Louviere 2005). Fundamentally the technique assumes there is an underlying subjective dimension such as "degree of importance" and that it is possible to measure the location of some set of objects along this dimension by requiring respondents to make selections from groups of items, choosing the 'best' or most important and the 'worst' or least important item. Items may be product attributes, options in a decision, ethical constructs, etc. The approach is particularly effective in ordering preferences when the number of items is large because unless there is a clearly dominant attribute, individuals are better at deciding which of several items is best or worst than they are at putting items into a specific order. Best-worst scaling is quick and relatively simple and gives results that are empirically consistent with more complex ordering tasks and theoretically in line with the principles of random utility theory.

The major advantage of best-worst scaling study is the simplicity of the analysis that yields a coefficient for each choice, or item, which can be directly compared. The key design issue is to construct a series of choice sets that include all the items and all possible comparisons an equal number of times for each respondent. For example, for  $x$  attributes to be scaled in  $C$  subsets, there are  $x(x-1)/2$  "BW" pairs and  $x(x-1)/2$  "WB" pairs associated with each subset, so each choice set contains  $x(x-1)$  possible choice options (or, all the BW and WB pairs). From any given subset a respondent implicitly chooses from  $x(x-1)$  pairs. Auger, Devinney and Louviere (2004) state that the total choices over all subsets of the implied pairs will be consistent with the multinomial logit model (MNL). A simple approximation of which is achieved by calculating the differences of the total best and total worst counts for each item. This is done by simply adding the number of times an item is chosen as best and subtracting

the total number of times it is chosen as worst. The resulting scale is about 95% as accurate as using multinomial logit to model the same data (Auger, Devinney and Louviere 2004).

In this exploratory study the intent is to determine the relative importance of factors considered in the purchase of mobile phones. This allows us to reduce a large number of attributes associated with the decision (N=16) to a manageable number of important issues.

### Findings

This study adopted a design from Finn and Louviere (1992), and used attributes associated both positively and negatively with purchasing black market goods, e.g. that *they are cheaper* and *people disapprove*. The simple rank order results are presented in Table 1.

**Table 1. Attribute Rankings for Chinese Consumers of Cellphones**

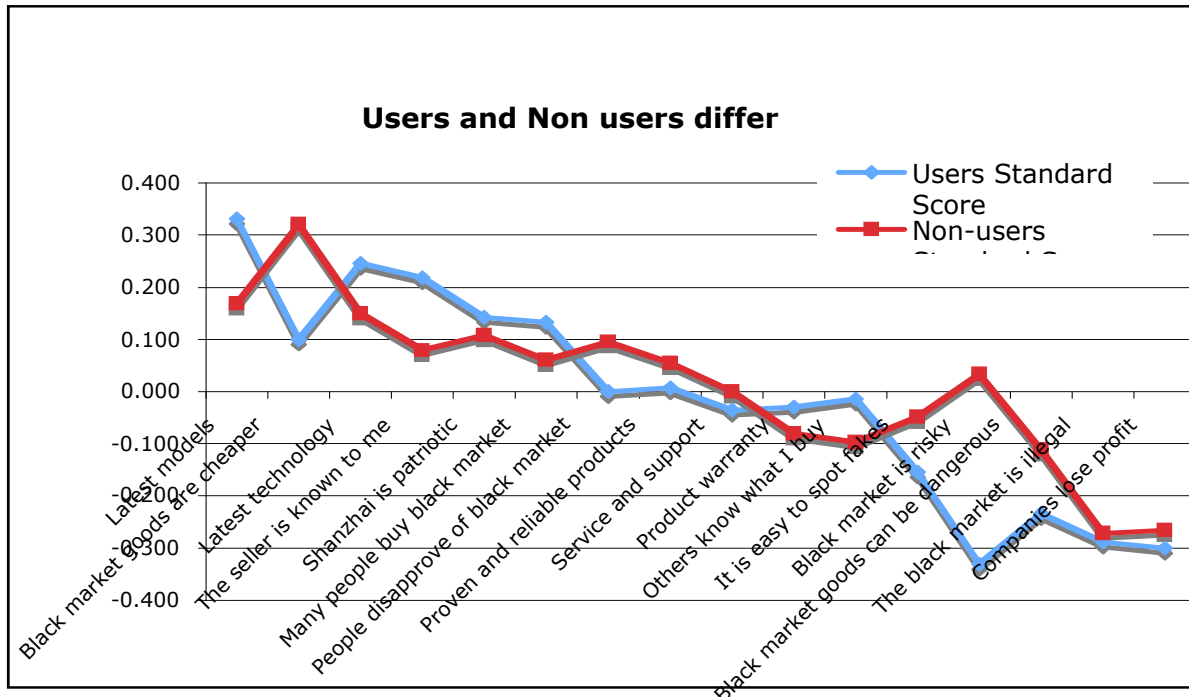
Attribute	Importance (Best-Worst)	Standard Score
Latest models	171	.246
Black market goods are cheaper	151	.217
Latest technology	136	.195
The seller is known to me	101	.145
Shanzhai is patriotic	87	.125
Many people buy black market	66	.095
People disapprove of black market	35	.050
Proven and reliable products	22	.032
Service and support	-12	-.017
Product warranty	-40	-.057
Others know what I buy	-41	-.059
It is easy to spot fakes	-69	-.099
Black market is risky	-97	-.139
Black market goods can be dangerous	-118	-.170
The black market is illegal	-195	-.280
Companies lose profit	-197	-.283

The importance column shows the frequency that a particular attribute was chosen as ‘matters most’ by respondents from the attribute group. For example, the top scoring attribute overall that matters ‘most’ was *latest models* (selected 171 times; the lowest scoring attributes (matters least) were *black market is illegal and companies lose profit* (selected 195 and 197 times respectively). The second column presents the standard score. This is the level of importance divided by  $8n$ , where 8 is the number of times each attribute appears in the design and  $n$  is the number of respondents.

Overall, Chinese consumers felt that certain attributes such as *latest models* were of great importance. On the other hand, they were least concerned that *the black market is illegal* and that legitimate *companies lose profit*. In between, attributes including *proven and reliable products*, *service and support* and *product warranty* generated less strong opinion. This may be because the Chinese change phones every 6 to 9 months (Gallup 2006) so they may not be so concerned about product-based attributes. Nor do they place much importance on social issues such as *people disapprove of the black market*, or *others know what I buy*.

Forty six percent of the sample had purchased black market cellphones. These respondents were then split from those who had not bought black market phones to see if they differed in the importance they placed on black market issues. Figure 1 compares the item coefficients of the two groups and shows that buyers and non-buyers do differ on some issues. For example, on the left buyers rate *latest models* as most important, but non-buyers rate *black market goods are cheaper* higher. Buyers may be simply more interested in satisfying their desires to have fashionable phones, regardless of price. On the other hand, non-buyers may perceive black market phones to be cheap down-market fakes--this also tallies with their perception that the black market is risky, in contrast to buyers who rate risk as unimportant.

**Figure 1, Users of black market cellphones vs. non-users**



These product-related attributes bracket *black market goods are cheaper*. But here buyers of black market goods rate cheapness as much less important than product features, while non-buyers rate it most important of all attributes—as if cheapness were the defining feature. At any rate, respondents felt that product reliability, warranties and service are of relatively much less importance than having the latest models and technology.

On the other hand Chinese consumers consider illegality and company loss of profits as least important. In addition, they show only middling concern about social factors such as *others know what I buy* and *people disapprove*, hinting that part of the explanation for the growing popularity of black market goods is that at least as far as cellphones are concerned, consumers do not worry much that other people know what they buy, or that they disapprove.

One of the limitations of this work is that the sample was too small to divide into e.g. age groups or social strata and therefore we cannot see whether there are big differences between the young and old, or classes of respondents in their views. This remains an important step for subsequent research.

## Conclusions

Research on Chinese consumers has shown that social concerns inhibit consumption of black market or illicit goods (Albers-Miller 1999, Staake et al 2009). Even so, over the last decade especially, the black market in China has grown in size and scope and become much more visible. The preliminary results presented here lay out the considerations that are most and least important to Chinese consumers in choosing cellphones and reveal that social concerns have become much less important and do not act strongly as inhibitors.

Instead, cellphone consumers feel that having the *latest models* and *technology* are most important. Cellphones are after all, public and obvious expressions of fashion and wealth. These new findings show that traditional views of black market participation by consumers need to be revised. Many consumers seem to view black market goods as just one amongst many alternatives. Not only is it difficult to spot the knock-offs, but also many consumers seem to feel that it is not worth the effort.

This research confirms that best-worst scaling gives simple and reliable estimates of customer decision criteria, and therefore can be useful for predicting future consumption. The procedure used in this study forced respondents to select items of relative importance through trade-offs and therefore provides data that is scale free and comparable across other studies and respondents.

In summary, this study has provided greater understanding of the attributes considered to be important by Chinese consumers of mobile phones. The findings provide valuable clues as to where suppliers should be focusing their attention; and importantly, areas in which resource allocations can be re-evaluated. For example, the fewer operating social restraints combined with growing black market product sophistication and competence means that black market products have become much more competitive, and marketers can no longer simply view them as a low-price down-market also ran—rather, they should be considered as direct competitors, in every sense. The challenge is to learn how to compete with fast-moving, technically competent, low cost and thoroughly unscrupulous bandit firms that consumers are increasingly willing to patronize. Marketers need to develop product and brand appeals that support residual consumer desires to buy legitimate goods

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