MEASURING CONSUMER SATISFACTION AND DISSATISFACTION INTENSITIES TO IDENTIFY SATISFIERS AND DISSATISFIERS

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ABSTRACT

Identifying satisfiers and dissatisfiers (i.e., satisfying and dissatisfying product attributes) has long been a major research focus among scholars in various disciplines, including management, marketing and engineering. It is observed that CIT (critical incident technique) is frequently used in such research but it has some limitations. So the objective of this study is to suggest a companion research method, termed as ICT (intensity comparison technique), to complement the use of CIT in identifying satisfiers and dissatisfiers. In the demonstration and empirical validation of ICT, we find that this method is convenient to use and yields results that complement those of CIT. It is expected that this study can trigger future research through which the ICT can be further developed.

INTRODUCTION

The concept that dissatisfaction is not the direct opposite of satisfaction was first proposed by Herzberg, Mausner and Snyderman (1959) in the mid-twentieth century. In their two-factor theory, Herzberg et al. (1959) classified job attributes as either hygiene factors, which are content-related, such as working conditions, pay and job security, or motivation factors, which are context-related, such as achievement, the work itself and responsibility. They argued that poor performance in hygiene factors causes job dissatisfaction; however, good performance in them does not cause satisfaction but rather no dissatisfaction. Likewise, good performance in motivation factors causes job satisfaction; however, poor performance in them does not cause dissatisfaction but rather no satisfaction. This theory was mostly applied in management and psychology research until the 1970s when Swan and Combs (1976) adapted it to marketing, classifying product performance into instrumental performance and expressive performance, which were counterparts of Herzberg's hygiene factor and motivation factor respectively. In a key study, Cadotte and Turgeon (1988) used consumer complaints and compliments to analyze what they coined "satisfiers" and "dissatisfiers" – the terms first appeared in major marketing literature equivalent to motivation factors and hygiene factors of job attributes. Since then, continuous effort has been put into the identification of satisfiers and dissatisfiers in satisfaction/dissatisfaction studies (e.g., Bitner, Boom and Tetreault 1990; Johnston 1995; Meuter, Ostrom, Roundtree and Bitner 2000; Yang and Fang 2004; Sweeney and Lapp 2004; Auh 2005; Goetzinger, Park and Widdows 2006).

As the above mentioned studies indicate, the identification of satisfiers and dissatisfiers has long been of interest to marketing researchers. Critical incident technique, CIT, developed by Flanagan (1954), was used by Herzberg et al. (1959) for his pioneering two-factor theory study. Since then, it has been frequently used by management and marketing researchers and practitioners in commercial sectors to identify satisfiers and dissatisfiers. CIT can be nicely applied in many service studies, but when is used for identifying satisfiers and dissatisfiers, it has some limitations. The two major limitations are its low statistical validity and the possibility of flawed conclusion, which will be explained later. Given the presence

of satisfiers and dissatisfiers and the need to identify them, the objective of this study is to introduce a new method that may serve as a companion research method to complement the use of CIT (in identifying satisfiers and dissatisfiers). The concept of this new method is very simple. It measures the intensity of consumer satisfaction when a product attribute has a positive valence (e.g., many color choices) and the intensity of customer dissatisfaction when the same attribute has a negative valence (e.g., few color choices). Then the two measurements of intensity are compared to determine whether an attribute is a satisfier (satisfaction intensity > dissatisfaction intensity), dissatisfier (satisfaction intensity < dissatisfaction intensity), or hybrid (satisfaction intensity = dissatisfaction intensity). The method is a comparison of intensities and thus, it is termed intensity comparison technique, ICT.

METHODOLOGY REVIEW

How Does CIT Work in Identifying Satisfiers and Dissatisfiers?

The way CIT works to identify satisfiers and dissatisfiers is straightforward. In their pioneering study, Herzberg et al. (1959, appendix I) asked the respondents "Think of a time when you felt exceptionally good or exceptionally bad about your job, either your present job or other job you have had". For such a question, the answers became "incidents" of satisfying or dissatisfying occasions in ones' job. Then, the incidents were grouped into different job factors. In each job factor, satisfying and dissatisfying incidents were tallied. If a factor was related to more satisfying incidents than dissatisfying incidents, then the factor was a motivation factor, whereas if it was related to more dissatisfying incidents than satisfying incidents, then it was a hygiene factor. Adapting this concept to consumer satisfaction context, Swan and Comb (1976, p.28) asked respondents "Think about a specific item of clothing that has been especially satisfactory and an item that has been especially dissatisfactory," while Bitner et al. (1990, p.74) asked respondents "Think of a time when, as a customer, you had a particularly satisfying (dissatisfying) interaction with an employee of an airline, hotel, or restaurant." The data in both studies were analyzed following the method of Herzberg et al. (1959). In sum, CIT can be used to identify satisfiers and dissatisfiers among job factors, product attributes or service attributes. This method compares the number of occurrences of satisfying incidents with that of dissatisfying incidents of a particular product attribute, whereas ICT, which is discussed later, compares the intensities of consumer satisfaction and dissatisfaction that are associated with a particular product attribute.

Studies Adopting CIT to Identify Satisfiers and Dissatisfiers

Since Herzberg et al. (1959) first used CIT to identify motivation and hygiene factors, satisfiers/dissatisfiers studies in a wide variety of disciplines have adopted this technique. CIT has been used to: identify instrumental/expressive product attributes in a consumer research (Swan and Combs 1976; Maddox 1981); distinguish satisfactory and dissatisfactory service encounters in airlines, hotels and restaurants from the customer's point of view (Bitner et al. 1990) and contact employee's point of view (Bitner et al. 1994); investigate satisfiers and dissatisfiers in the banking industry (Johnson 1995); explore job motivators in technical organizations (Utley, Westbrook and Turner 1997); identify satisfiers and dissatisfiers in service encounters across six service industries (Wels-Lips, van der Ven and Pieters 1998); identify job motivators and dissatisfiers in the telecommunications industry (Knight and Westbrook 1999); distinguish value-enhancing elements and minimum requirements within B2B customers (Backhaus and Bauer 2000); explore satisfying incidents

and dissatisfying incidents in consumer self-service technology (Meuter et al. 2000); explore sources that create satisfaction and dissatisfaction in the context of B2B self-service technology (Pujari 2004); explore critical factors in Web site service quality perceptions to determine whether the factors contributed to the perception of high- or low-quality service or both (Sweeney and Lapp 2004); classify service attributes as soft or hard (Auh 2005); and provide evidence of bivalent satisfiers, monovalent satisfiers and monovalent dissatisfiers in online business transactions (Goetzinger, Park and Widdows 2006).

Studies Adopting Derivatives of CIT to Identify Satisfiers and Dissatisfiers

Content analysis of customer complaints and compliments is another way to determine customer satisfaction/dis-satisfaction, where complaints are regarded as dissatisfying incidents and compliments as satisfying incidents (see, e.g., Cadotte and Turgeon 1988; Friman and Edvardsson 2003; Yang, Peterson and Cai 2003). Yang and Fang (2004) conducted content analysis of complaints and compliments obtained from consumer reviews of online brokerage experiences (netnography). Oshagbemi (1997) asked respondents to list five job factors that contributed most to their satisfaction and dissatisfaction, respectively. Johns and Howard (1998) asked respondents in foodservice industry about the "things", rather than "incidents", they found most and least satisfactory in their meal experience. We conclude from these studies that CIT can be applied even if incidents are replaced by elements such as complaints and compliments, and other factors related to satisfac-tion/dissatisfaction.

Studies Adopting other Methods to Identify Satisfiers and Dissatisfiers

Studies that use a method other than CIT or one of its derivatives to identify satisfiers and dissatisfiers are few. Brandt (1988) suggested an innovative technique to identify value-enhancing service elements but did not conduct an empirical test to assess its feasibility. Mersha and Adlakha (1992) first ranked the positive service attributes, and then ranked the reversed service attributes according to the attribute importance to the respondents. Then they compiled two ranking lists and compared the rankings of these two lists to judge whether an attribute is more related to good service quality or poor service quality. Zhang and Dran (2000, p.1259) provided respondents with "a short lecture on the basic concepts of hygiene and motivator [sic] factors in the work place" and then relied on their judgments to classify hygiene and motivation factors. Matzler and Sauerwein (2002) used multiple regression analysis to explore which attributes have a significant impact on customer satisfaction, while Cui, Lewis and Dong (2004) conduct content analysis of the data from depth interviews and relied on the coder's personal judgment to determine positive, negative, or dual per-ceptions of service quality according to the answers of respondents.

It appears that the above methods have rarely been used in other studies which makes CIT, although introduced more than half a century ago (Flanagan 1954), the most widely used method for identifying satisfiers and dissatisfiers until now.

Limitations of CIT in Identifying Satisfiers and Dissatisfiers

There are more advantages than disadvantages when CIT is used in general applications (Gremler 2004). However, when CIT is used in identifying satisfiers and dissatisfiers, there are some limitations, which are summarized as follows:

1. *Accuracy of data collection:* Respondents are asked to recall something that may have happened long before, and their perceptions may have been modified or reinterpreted because of some later

events (Johnston, 1995). It can be controlled by asking respondents for recent incidents but the tradeoff is that a much bigger sample size is needed.

2. *Extremeness of the data collected:* Johnston (1995) asserted that only extreme views are collected in CIT, that is, incidents close to or within the zone of tolerance are not obtained. Therefore, less critical product attributes cannot be identified as satisfiers or dissatisfiers. It can be controlled by tuning down the criticality of the key question. For instance, the key sentence "Think of a time when you felt exceptionally good or exceptionally bad about ……." can be changed into "Think of a time when you felt good or bad about ……." However, by so doing, the incidents may not be critical enough as to draw solid conclusions.

3. *Objectivity of data analysis:* The data collected have to undergo content analysis, which has been questioned for its reliability and validity as there can be ambiguity of word meanings, category labels, and the coding rules in the analysis process (Weber, 1985). Maddox (1981, p.102) also expressed similar concern that the interpretation process is highly subjective. Objectivity can be enhanced when pre-existing theory is used for classification. However, this is not always possible when CIT is used in an exploratory fashion when little is known about a phenomenon, like the identification of satisfiers and dissatisfiers.

4. *Possibility of flawed conclusions in data analysis:* Matzler and Sauerwein (2002) noted that when a customer mentions negative incidents related to a particular attribute, it is unclear if it is because he/she does not remember positive incidents related to the same attribute (because a positive incident related to this attribute is perceived as normal and not critical – in this case, the attribute is accurately regarded as a dissatisfier) or because positive incidents related to this attribute have never occurred (in this case, there is no conclusion but the attribute will still be wrongly regarded as a dissatisfier); and vice versa if the customer mentions positive incidents.

5. *Lacking of statistical validity:* To determine whether an attribute is a satisfier or dissatisfier by using CIT, one has to compare the number of positive incidents with that of negative ones, so there is a problem in setting the cut-off point, that is, how many more satisfying (dissatisfying) incidents than dissatisfying (satisfying) incidents are related to an attribute before we can say an attribute is a satisfier (dissatisfier)? This suggests that when an attribute is classified as a satisfier or dissatisfier, the probability of the type one error is unknown. Therefore, the finding that an attribute is a satisfier or dissatisfier is not statistically conclusive.

These limitations suggest the need for a new method to complement the use of CIT such that more data on whether a product attribute is a satisfier or dissatisfier can be obtained.

THE COMPANION METHOD: INTENSITY COMPARISON TECHNIQUE (ICT)

How Does ICT Work in Identifying Satisfiers and Dissatisfiers?

People tend to overlook the most obvious solution to a problem. If we need to know whether a product attribute is a satisfier or dissatisfier, then the most obvious and straightforward way is to ask the respondents how satisfied they are if the attribute has a positive valence (e.g., attractive appearance) and how dissatisfied they are if the same

attribute has a negative valence (e.g., unattractive appearance). By so doing, the satisfaction intensity can be compared with the dissatisfaction intensity. If satisfaction intensity is greater than dissatisfaction intensity, then the attribute is a satisfiers, and vice versa. If there is no significant difference between the two intensity levels, then the attribute is a hybrid (i.e., both a satisfier and dissatisfier). How, then, can this concept be operationalized? We can simply ask a question in two opposite directions; that is, ask the respondent to rate his/her satisfaction level when an attribute takes a positive direction, and his/her dissatisfaction level when the same attribute takes a negative direction. For instance, if we want to know whether the product attribute "engine power" in a consumer vehicle is a satisfier or dissatisfier, then we can ask a sample of respondents the following pair of questions:

How satisfied would you be if you found the engine of your car is powerful?
(Circle one number.)

Indifferent					Extremely Satisfied
0	+1	+2	+3	+4	+5

How dissatisfied would you be if you found the engine of your car is not powerful?
(Circle one number)

Extremely Dissatisfied					Indifferent
-5	-4	-3	-2	-1	0

Should we wish to gain specific details of this product attribute, further questions can be asked, such as:

> *How (dis)satisfied would you be if you found the acceleration of your car is (not) good?*
>
> *How (dis)satisfied would you be if you found the speed of your car is (not) good?*

The responses to these satisfaction and dissatisfaction questions are then compared by paired-sample t-tests. If the mean difference between the consumer satisfaction and dissatisfaction levels is significant, then we can compare their intensities and judge whether a product attribute is a satisfier or dissatisfier. If the difference is insignificant, then we can say it is a hybrid.

One may argue that the responses will be biased when respondents can see the questions in pairs (positive and negative). This is a legitimate concern that is addressed by taking one of the following approaches:

Approach 1: If there are many attributes in a questionnaire, then the counterpart questions of one attribute can be listed far apart from each other.

Approach 2: We can develop two versions of a questionnaire, where the first version includes some questions in a positive direction for some attributes and other questions in a negative direction for other attributes, and the second version includes the counterparts of the questions of the first version (i.e., another side of the pairs). Then the respondents are asked to respond to both versions of the questionnaires at dif-

ferent times, with a sufficient time lag, such as three hours or a number of days.

Approach 3: First, we have to develop two versions of a questionnaire using the same method as that discussed in approach 2. Second, we randomly assign the sample into two groups to achieve homogeneity between groups (as a lab experiment usually does). Finally, one group answers one version of the questionnaires and the other group answers the other version.

The first approach is the basic and most cost-effective approach. The second and third approaches are more vigorous but the former takes more time to complete and the latter requires a doubled sample size.

Demonstration of the Identification of Satisfiers and Dissatisfiers by ICT

To demonstrate that ICT works even in a basic setup, we used it with a small sample of 40 university students comprising approximately two-thirds female with a mean age of 20 and mean family size of 4.2. This sample size is big enough for a t-test. We used the first approach to operationalize the questionnaire. This small sample was randomly selected from a larger convenience sample of 302 students who had been participating in another study with monetary remuneration. Attributes of accommodation, or living place, which had previously been explored by a focus group of student participants from the same university were used to test the method. We chose accommodation for testing simply because it is most familiar to students. The scale we used for satisfaction intensity went from 0 (indifferent) to +5 (extremely satisfied) and that for dissatisfaction intensity went from -5 (extremely dissatisfied) to 0 (indifferent). In data analysis, we compared the satisfaction and dissatisfaction intensities by their mean absolute values through t-test. The results are tabulated on the left side of Table 1.

TABLE 1

Cross Comparison of ICT and CIT Results

ICT Attributes	Satis. Mean	Dissatis. Mean	*t*-value	Sig.	**ICT* Results**	CIT Comparable Attributes	No. of positive incidents	No. of Neg. in-cidents	**CIT* Results**	They match each other?
1. The building is new/old	3.18	1.21	6.25	0.00	**S**	Complaint/Compliment of incidents due to the building's aging problems	2	9	**D**	**No**
2. The structure of the build- ing is safe/ dangerous	3.66	4.29	2.81	0.01	**D**	The structure of the building is safe/dangerous	2	1	**U**	**-**
3. The lifts function properly/ improperly	3.27	3.14	0.45	0.65	**H**	The lifts function properly/ improperly	4	12	**D**	**No**

4. Close to/Away from shopping center	3.47	2.53	3.71	0.00	**S**	Close to/Away from shopping center	20	1	**S**	**Yes**
5. Decoration materials and furniture are hazardous /not hazardous to health	2.94	3.52	2.76	0.01	**D**	Decoration materials and furniture are hazardous/not hazardous to health	2	2	**U**	**-**
6. The unit is big/small	3.92	1.31	10.59	0.00	**S**	The unit is big/small	20	6	**S**	**Yes**
7. The security guard's service is good/bad	2.58	2.47	0.43	0.67	**H**	The security guard's service is good/bad	16	15	**H**	**Yes**
8. The electricity and water supply are steady/not steady	3.56	4.21	2.97	0.01	**D**	The electricity and Water supply are steady/not steady	2	8	**D**	**Yes**
9. There is rumor/no rumor of ghost appearance	2.21	2.38	0.09	0.93	**H**	No such incident	0	0	**U**	**-**
10. The pipes of the kitchen are often/ seldom clogged	3.29	4.18	3.55	0.00	**D**	Absence/Presence of water leakage problem**	3	19	**D**	**Yes**
11. Waiting time of the lifts is short/long	3.00	2.23	2.29	0.03	**S**	Waiting time of the lifts is short/long	4	4	**U**	**-**
12. Close to/Away from the bus stops and my university	3.22	2.46	2.96	0.01	**S**	Close to/Away from the bus stops and my university	22	9	**S**	**Yes**

13. High/ Low quality of neigh borhood	2.82	1.66	4.45	0.00	**S**	Complaints/Compliments to neighbors	37	64	**D**	**No**
14. Quiet/ Noisy environment	3.45	3.26	0.81	0.43	**H**	Complaints/Compliments to acoustic environmental factors	31	70	**D**	**No**
15. There is no/is security measures like close-circuit TV installed in the building	2.94	1.80	3.51	0.00	**S**	There is no/is security measures like close-circuit TV installed in the building	4	1	**U**	**-**
16. The floor layout makes it easy/difficult to arrange the furniture	2.92	2.03	4.23	0.00	**S**	The layout and interior design is good/bad	21	7	**S**	**Yes**
17. The street outside has sufficient/ insufficient lighting	2.92	3.32	1.64	0.11	**H**	The street outside has sufficient/insufficient lighting	2	9	**D**	**No**
18. The pipes of the toilet are often/ seldom clogged	3.41	4.11	3.27	0.00	**D**	Absence/Presence of water leakage problem**	3	19	**D**	**Yes**
19. The direction the unit faces is good/bad	2.95	2.26	2.90	0.01	**S**	Good/bad scenery or direction faced provides good/bad scenery	23	1	**S**	**Yes**
20. Leisure facilities are available/ unavailable	2.29	1.20	4.73	0.00	**S**	Leisure facilities are available/unavailable	21	1	**S**	**Yes**
21. Sufficient /insufficient sunlight goes inside the unit	3.31	2.72	2.40	0.02	**S**	Sufficient/insufficient sunlight goes inside the unit	12	2	**S**	**Yes**

22. Environ-mental hygiene is good/bad	3.81	3.35	2.14	0.04	**S**	Complaints/Compliments to environmental hygiene	52	71	**H**	**No**
23. Air is fresh/not fresh	3.87	3.54	1.80	0.08	**H**	Air quality is good/bad	18	17	**H**	**Yes**
24. Can/Can't see graveyards from the window.	2.47	2.26	0.68	0.50	**H**	No such incident	0	0	**U**	-
25. Public safety is good/bad	4.16	3.73	1.99	0.55	**H**	Complaints/Compliments to public safety	17	18	**H**	**Yes**
26. (Not explored in the focus group for ICT)	-	-	-	-	-	Complaints / Compliments to the property management's allowance of pets rearing	1	9	**D**	-
27. (Not explored in the focus group for ICT)	-	-	-	-	-	Sufficient/Insufficient of ventilation of building	8	2	**S**	-

Remarks: *: S = Satisfier; D = Dissatisfier; H = Hybrid; U = Unconcluded due to insufficient (i.e., < 10) incidents.
*****: This attribute has been used twice as comparable attribute, one for attribute 10 and one for attribute 18.***
Other attributes explored by CIT only but with insufficient incidents are ignored and not shown.

Validation process

To validate the ICT results, we replicated the study using CIT following for the most part the critical steps and procedures suggested by Gremler (2004) (e.g., definition of a critical incident was unambiguously communicated to respondents and the interviewers were trained).

The validation process was conducted after a sufficient time lag (i.e., months). Phone interviews of the students were conducted by two research assistants. The respondents were asked about their experience with their living places. We adapted the question asked by Herzberg et al. (1959) but we sought two positive and two negative incidents from each respondent. So we asked the following question:

> *Think of two times in the past when you felt especially good and two times especially bad about your living place. It may have been in your current living place or any other. Can you think of such high and low points in your feelings about your living place? Please tell me about it.*

The respondents were given sufficient time to think about the question. They could choose to answer the question then or in a follow-up call. We contacted 242 students (virtually all of them were not respondents of

the ICT questionnaire), and 169 interviews were successfully conducted. Altogether, 743 incidents were collected (some respondents provided more then 2 + 2 incidents). The incidents were than content analyzed and classified into different attributes. In the classification process, a conclusion was reached only when both of the research assistants agreed on what attribute an incident belonged to (i.e., absolute agreement). Incidents on which they disagreed (very few) were discarded.

Cross Comparison of Results

As discussed previously, one limitation of CIT is its lack of statistical validity. It is difficult to set statistically valid cut-off points to determine whether an attribute is a satisfier, dissatisfier or hybrid. Nevertheless, for the sake of cross comparison, however arbitrarily, we still need to set such points. Hence, the following rules were adopted:

- *Attributes with fewer than 10 incidents are regarded as unconcluded attributes (U) because of the insufficient number of incidents.*

- *When there are a sufficient number of incidents, attributes with at least 50% more positive than negative incidents are regarded as satisfiers (S)*

- *When there are a sufficient number of incidents, attributes with at least 50% more negative than positive incidents are regarded as dissatisfiers (D)*

- *When there are a sufficient number of incidents, the attributes that do not fall into the above "S" or "D" categories are regarded as hybrids (H)*

Following the above rules, we classified each of the attributes identified by CIT as a satisfier, dissatisfier or hybrid. The results are shown on the right side of Table 1. If we compare them with those on the left side, then we can see that some attributes of ICT do not have equivalent attributes in CIT that have sufficient incidents (i.e., at least 10) for analysis, thus, they are conclusive in ICT but not CIT. Six attributes (2, 5, 9, 11, 15 and 24) fall into this category. In contrast, two attributes (26, 27) are conclusive in CIT but have not been explored in ICT. Of the nineteen attributes that are conclusive in both ICT and CIT, thirteen (4, 6, 7, 8, 10, 12, 16, 18, 19, 20, 21, 23 and 25) have the same identification as satisfier, dissatisfier or hybrid in both methods (consistent results), whereas the remaining six (1, 3, 13, 14, 17 and 22) have different identifications (discrepancies).

FINDINGS

It is difficult to determine the precision of ICT simply by comparing its results with those of CIT because in the case of a discrepancy, it is unclear whether it is due to the inaccuracy of one or the other method. Nevertheless, it is worth taking a closer look at those unmatched attributes and seeking for clues as to whether ICT or CIT is responsible for the discrepancies. In attribute 3, the CIT result is believed to be more accurate than the ICT result because the respondents in the latter case might not be able to figure out how dissatisfying the situation will be when lifts do not function properly without experiencing such an incident. A careful examination of the other five unmatched attributes (1, 13, 14, 17 and 22) reveals something very interesting – they are all more dissatisfying in CIT than in ICT (i.e., attribute 1: satisfier in ICT/dissatisfier in CIT; attribute 13: satisfier in ICT/dissatisfier in CIT; attribute 14: hybrid in ICT/dissatisfier in CIT; attribute 17: hybrid in ICT/dissatisfier in CIT; attribute 22: satisfier in ICT/hybrid in CIT).

Regarding the discrepancies in these five attributes, we believe that they are caused

not by chance but by the limitation of CIT that Matzler and Sauerwein (2002) suggested (see the fourth limitation, "possibility of flawed conclusions", mentioned above). That is, when a respondent mentioned a negative incident (e.g., going along a dark street) related to a particular attribute (i.e., attribute 17: street illumination), there are two possibilities. The first possibility is that the respondent did not remember the occurrence of a positive incident (e.g., going along a bright streets) related to the same attribute because the positive incident is perceived by this respondent as normal and not critical and so is *not remembered* (then this attribute is truly a dissatisfier for this respondent). The second possibility is that the a positive incident related to this attribute has seldom or never occurred to this respondent (i.e., the streets nearby are always dark) and thus he/she has not been able to experience any positive incident of this attribute, even though he/she in fact perceives it to be critical. If many respondents are in such a situation, then CIT treats this attribute as more dissatisfying than it really is. We believe that this is a probable cause of the discrepancies between the ICT and CIT results for attributes 1, 13, 14, 17 and 22, because the respondents in our study are students from a lower income group whose living arrangements are not good. If our belief is true, this explained most of the unmatched results (i.e., 5 out of the 6 attributes). But of course, there is still a possibility that positive incidents had occurred but were not remembered and so one or more of these five attributes truly were dissatisfiers.

We have obtained four major findings from our validation process: 1) there are attributes that are conclusive in ICT but not CIT and vice versa; 2) when both CIT and ICT are conclusive, most of the results of these two methods are consistent; 3) the problem of the lack of statistical validity of CIT is severe (e.g., we have to set cut-off points arbitrarily; otherwise, we cannot arrive at any conclusion); and 4) the problem raised by Matzler and Sauerwein (2002) can happen in a particular context – for instance, identifying satisfiers and dissatisfiers of accommodation when the living conditions of the respondents are generally not good. In such cases, more dissatisfiers than those in reality will be identified. The third and fourth points above strengthen our belief that to identify satisfiers and dissatisfiers, qualitative CIT may best be complemented by a quantitative method, and ICT may serve as such a method.

DISCUSSION AND MANAGERIAL IMPLICATIONS

We introduced a new method for identifying satisfiers, dissatisfiers and hybrids that, despite its obviousness, has never been proposed before: intensity comparison technique (ICT). The beauty of the technique lies in its simplicity, low cost (e.g., small sample size and ease of data collection), and the ability to overcome the limitations of CIT. The technique involves comparing the intensity levels of satisfaction and dissatisfaction that even a freshman can understand. It does not suffer from any of the abovementioned limitations of CIT. First, because the respondents need not memorize anything, memory problems do not affect the data accuracy. Second, ICT can collect information on any attribute, not just extreme attributes as Johnston (1995) mentioned. Third, content analysis is not needed; thus, the analysis process is objective and unambiguous. Fourth, the possibility of flawed conclusions raised by Matzler and Sauerwein (2002) does not exist because the results have nothing to do with the number of occurrences of incidents. Fifth, the method has high statistical validity – once we decide on the degree of type one error that we can tolerate, we can determine the nature of an attribute (i.e., satisfier, dissatisfier or hybrid) simply by the statistical output of a t-test.

Although ICT does not suffer from the limitations of CIT, it has others. First, it has to be used in conjunction with an exploratory research such as focus group to explore

beforehand all of the important attributes. Second, when we ask two sides of one question, we have to make sure that the degree of emphasis of the positive and negative statements is the same, although we can overcome this limitation by having a linguistic expert assisting in the questionnaire design process. Third, the level of information richness is lower in ICT than in CIT. However, if identifying satisfiers and dissatisfiers is the sole objective, then the ICT results are sufficient to accomplish the task.

Why do managers need to distinguish dissatisfiers from satisfiers? Brand switching is more likely to occur in dissatisfaction cases than no-satisfaction cases. As the cost of acquiring new customers exceeds the cost of retaining old customers, the prevention of customer dissatisfaction should come before the creation of customer satisfaction. This implies that in resource allocation, managers need to give higher priority to product attributes that could cause dissatisfaction to prevent consumer dissatisfaction. If a manager wants to position a product at a higher end of the satisfaction-dissatisfaction spectrum, then he/she has to take care of some or more of the satisfying product attributes. Therefore, depending on the positioning strategy adopted, different product attributes should be given different priority. Managers can identify satisfiers and dissatisfiers with a higher degree of certainty if they complement their use of CIT with ICT. After the identification of satisfiers and dissatisfiers, managers should consider using conjoint analysis to examine the tradeoffs the consumers make across different product attributes.

CONCLUSION

In the identification of satisfiers and dissatisfiers, the qualitative method CIT has served us well for more than half a century. For even better results, the quantitative method ICT is a timely companion method that complements the use of CIT. Although ICT does not suffer from the limitations of CIT, it has others. It is still in its introductory stage, so future research is encouraged to further its development. Given future modification and fine-tuning, ICT may evolve to be the standard companion method to complement CIT in identifying satisfiers, dissatisfiers and hybrids.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

The major limitation of this study lies in its lack of a compelling and definite way to test the precision of ICT. In the study, the precision of ICT was tested by a validation process where the results generated by ICT were compared with those generated by CIT. We found discrepancies between the results from these two methods, but we are able only to speculate on the reasons for such discrepancies. Given the differences in the methodology of ICT and CIT, discrepancies are not surprising and are to be expected. Therefore, future studies can explore in what way these two methods are related to different antecedents and different consequences, which may provide a direction for the modification of ICT. Different attributes are of different importance to a respondent, so a possible fine-tuning of ICT can be done through the attaching of weight to the answer of each key question according to the importance of the attribute to the respondents. The weight can be obtained by asking the respondents one or more of the meta-attitudinal strength questions developed by Bassili (1996). Finally, future studies can also explore other limitations, if any, of ICT, such that the applicability of this new method in different context can be further assessed.

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