Explorative Study on the Concept of Mind Shares: Confidence, Resistance and Loyalty

Hui-Hsin HUANG[*]

Aletheia University

In practices and academics, the growth/decline of a brand or product sales is often measured with market shares. However, this method does not really gain insight into loyalty and perception of consumers toward brands and products. This paper proposes a concept of Mind Shares which combines confidence and resistance as the main contents of loyalty to establish a new theoretic foundation and develop the calculation method for the quantification of this model. The data from questionnaire survey showed that confidence and resistance are both positively correlated with loyalty, and these two variables are capable of predictability on loyalty. It is considered that this paper lays down the theoretic foundation of Mind Shares and contributes applications.

Keywords: *loyalty, confidence, Mind Share, resistance*

JEL Classification: *M31*

1. Introduction

In present rapidly changing marketing environment, consumers are faced with a variety of product choices. How can a brand employ all kinds of marketing strategies to influence cognitions and attitudes of customers so that they are prompted to make purchases? How can a product with a certain market share manage to maintain customers' loyalty amid an array of the same products, in order to secure its competitive position in the market? These are important issues in marketing.

In the past, most brands resort to the concept of market shares to measure the increase/decrease of their sales, in order to evaluate the effectiveness of their own promotion efforts against competitors. They seek to identify relative positions for themselves and map out their positioning strategies. However, when it comes to comparisons with competitors, the marketing effects are not only reflected in the final purchase behavior (sales). But also something else, Market shares based on sales cannot completely reveal the consumers' loyalty and their attitudes to certain brands or product. Accordingly, it is important to construct a research on the so-called Mind Share which differs from that of the concept of market shares.

Some previous studies on marketing though also mention similar concepts such as Mind Shares versus brands; however these are not the main role of their studies. There has been no basic research of Mind Share so far. Up to now, few literature but Keegan (2002) defines Mind Shares (MS) in his book. But still, there is not more concrete on deep discussion about it. Thus, this paper sets out its research purposes as follows:

(1) To extend the concept of Mind Share proposed by Keegan and to create of new contents and put more insight in order to establish a foundation of new theories;

(2) To develop some method of measure of formulae Mind Shares which is computable so as to ensure applicability of the theory to facilitate subsequent empirical researches.

In terms of theoretic foundation, this paper extends on the Mind Share concept of Keegan (2002) by incorporating with the concept of loyalty. This paper proposes new perspectives and theoretic architectures by linking the loyalty concept with confidence and resistance to compose the theoretic contents of Mind Shares. Loyalty has been an important issue in the marketing studies of today, with varying interpretations, viewpoints and empirical studies by different scholars over the years. This paper sets its examinations on the basis of loyalty and integrates it with consumers' confidence of the brand and resistance against other brands in order to deduct the formula of Mind Shares.

To sum up, this paper is based on the following framework:

(1) Mind Shares as the indicator to the quality of customers' loyalty

As for the planning of corporate marketing strategies, companies not only can compare their Mind Shares with those of competitors, but also be able to understand customers' confidence with their brands and resistance against other brands in the competitive landscape.

(2) A new decomposition of loyalty into two phases which are main factors of Mind Shares

Loyalty consists of confidence and resistance. The higher the Mind Shares that consumer have possessed for a brand commands, the higher the faith of the consumers' loyalty. In other words, these consumers have stronger confidence toward this brand and are more able to resist the persuasion from other brands (including advertising, promotions).

2. Literature Review

The term "Mind Share" does not appear much in marketing literature. Madden (1991, pp.8-10) mentions "Mind Share" but it refers to short-term memory, such as the impact of personal experience to brand marketing. It does not belong to the scope of this paper. The Mind Share of similar concepts tackles the issue in practices. It analyzes the brand value by qualitative method and investigates consumer trust from a practical viewpoint, but it lacks of systematic theoretical foundation. However, Keegan (2002) elaborates on the concept of Mind Shares and provides a complete structural links and explanations. This paper starts with the original definition of Keegan (2002) on Mind Shares through a proper interpretation on the contents and then extends this concept and connects with the theory of "loyalty".

Keegan's Original Concept

Keegan's (2002) argument on Mind Shares appeared in his book "18 Guiding Principles of the Marketing Company". In Keegan's structure, the concept of loyalty is the topping principle of guidance. Subsequent marketing steps (including Mind Shares and market shares) must be based on this core concept. This is the original structural design according to the definition by Keegan (2002). It can also be used as the theoretic foundation of Mind Shares.

Under this structure, this paper starts at loyalty and gives new meanings to Mind Shares. According to Keegan, the establishment of credibility and trustworthiness of the company to consumers will make consumers have confidence and have credibility in the mind of customers. In this way, they will be willing to follow the company and the result is the Mind Shares claimed by the company. The concepts of confidence and trust can be linked to the orientation of loyalty (Costabile et al., 2002, pp.66-67 ; Dick and Basu, 1994, pp.99-114). To make consumers loyal to a certain brand, it is necessary to establish their trust and confidence. Similarly, it is possible to discuss the levels of customer loyalty with brand trust and confidence. Loyalty is the topping guidance principle in Mind Shares. Based on the concept of loyalty, this paper develops the constructs of Mind Shares from the perspectives of loyalty.

2.1. The Concept of Loyalty

Customers' loyalty is one of the important sources of company competitiveness. It also helps in the devise of the marketing strategies and plans (Lam et al, 2004, pp.293-311. The concept of customer loyalty plays an important role in marketing studies. Over the years, many scholars have come up with different viewpoints and definitions. The studies of loyalty can be roughly divided into three phases (Fournier and Yao, 1997, pp.415-437; Garland and Gendall, 2004, pp.81-87):

(1) Consumers' behavior:

This approach adopts some quantitative model of repeat purchases to calculate and examine loyalty. One example is to apply Dirichlet Model (Uncles et al., 1994, pp.375-385; Danaher et al., 2003, pp.461-476;

Bhattacharya, 1997, pp.421-436; Fader and Schmittlein, 1993, pp.478-494) to discuss relationships among market shares, penetration and re-purchases.

(2)   Cognitive process

Loyalty is considered as a correlation between attitudes and behavior (Disk and Basu, 1994, pp.99-114), and is moderated by variables such as an individual's current circumstance or the particular situation or both. This concept is also based on biased perspectives and argues that loyalty is a specific, non-random expression.

(3)   Favorable attitudes or beliefs

This approach tackles the issue from the psychological points of view. Loyalty is defined as the connection between favorable attitudes and beliefs (Selin et al, 1988, pp.210-223).

However, loyalty is not a single dimension, it may be two-dimensional, i.e. it consists of attitude and behavior (Costabile et al., 2002, pp.66-67; Garland and Gendall, 2004, 81-87).

2.2. Loyalty and Confidence

Day et al. (1969, pp.29-39) integrate two elements of attitude and behavior. The consideration of loyalty cannot stand alone by simply dealing with attitudes or behavioral concepts. Rather, these two elements and the relationship between them should be included. For example, Dick and Basu (1994, pp.99-114) propose the customer loyalty model and discuss the loyalty matrix that consists of repeat patronage and relative attitude. Loyalty is deemed as a process; hence, the sequential relationship between antecedents and consequences should be dealt with.

Part of the examinations on the relationship between attitude and behaviors appear in the studies of attitudes (Berger and Mitchell, 1989, pp.269-279). To be more specific, the discussion of attitude confidence or attitude accessibility places its focus on the moderating variables that link attitude and behavior. This point of view suggests that attitudes can directly predict behavior. Rather, this standpoint argues that the consumers' direct experience, motivations, exposure to repeated information all affect their attitudes and confidence, such as factors of behavior. In the concept of loyalty if attitude to behavior is a continuous process, confidence will play a pivotal role (Loaroche and Howard, 1980, pp.377-389; Howard et al., 1988, pp.5-14). In the process from attitude to behavior, confidence represents an individual's certainty of assessment of his/her attitude. The greater the confidence, the more the attitude is related to behavior (Fazio and Zanna, 1978, pp.228-244). Beside the perspective of attitude-behavior, confidence is also an important issue in the study of loyalty. When consumers have confidence and trust in a product or brand, they are likely to have brand loyalty (Keegan, 2002; Lam et al., 2004, pp.293-311. Focusing on confidence perspectives, this paper discusses the link of the loyalty of consumers in attitude and behavior (such as repeated purchases). The more certain the consumers' attitude of loyalty to a brand or product, the stronger their confidence is in this brand or product. Hence, it can be inferred that the link to their behavioral loyalty is stronger. However, it is necessary to first clarify that confidence as a moderating variable between attitude and behavior and the confidence in a brand as part of loyalty are somewhat different. The former refers to cognitive certainty an individual holds and it is included in the implication and also is a concept of meta-cognition. The latter refers to trust and confidence in a broad sense. The differences between the former and the latter will be explained later and the quantitative measurement of the latter will be provided in the following sections.

In the study of loyalty, confidence is one of the variables to explain loyalty in a broad sense. It is also one of the moderating variables of loyal attitude and behavior inclination (the link between attitude and behavior). Therefore, this paper incorporates confidence into the concept of Mind Shares that carry the implications of loyalty. The higher the certainty of a positive attitude toward a brand, the higher the scales relevant to Mind Shares it possess. This reflects the importance of the links between loyalty implications and loyal attitude to loyal behavior.

2.3. Loyalty and Resistance

Pritchard et al. (1999, pp.333-349) find that the most important moderating variable between commitment and loyalty is a concept of resistance to change. Loyalty exists because people refuse to change and want to maintain their existing choices. This is because consumers need to bear the risks of changes for switching the brands. As a result, consumers are afraid of bearing the risks associated with changes in their behavioral pattern and tend to keep their original preferences. The resistance to changes is to maintain the consistency in cognition. Consumers tend to establish a harmonious and consistent relationship between their belief, attitude and behavior. Under this cognition system, inconsistency will create psychological pressures. To remove such pressures, consumers try to avoid inconsistency from their existing perceptions, imbalanced information or proposals (Sheth and Parvatiyar, 1995, pp.255-272). Hence, resistance is a response of loyalty.

A loyal consumer holds a positive attitude and ignores or event resists the persuasive communications from the competitors. They have immunity against competitors (Stum and Thiry, 1991, pp.34-37; Caruana, 2004, pp.256-269). When saying consumers demonstrate persistent support and loyalty to a certain brand, the other side of the coin is that it is hoped that they exhibit a certain degree of resistance to the persuasive and marketing strategies of competitors.

The Mind Share concept starts with the basis of loyalty. In the attitude theory, confidence links attitude and behavior. It is also an important concept that links the two dimensions of loyalty. In the attitude theory, resistance is discussed heavily in the change dimension, which strengthens the resistance of consumers against competitors of their loyal brand. Starting with attitude loyalty, this paper attempts to reduce the discrepancy between "confidence" concept and loyal behavior, and supplement the "resistance" concept as an alternative interpretation of "loyalty". "Loyalty" refers to the quality connotation of Mind Share, and is differentiated from the concept of loyalty in a broad sense generally used.

2.4. Confidence: Attitude Orientation and Loyalty Orientation

As previously mentioned, the confidence in the attitude implications refers to belief confidence. Belief confidence is the level of certainty level of one's subjective perception toward the product attributes (Fishbein and Ajzen, 1975; Smith and Swinyard, 1988, pp.3-14; Yi, 1990, pp.47-63). Thus, it is a meta-cognition concept, which is defined as thinking about one's thoughts. (Brinol et al, 2004, pp.559-573).

Confidence can be distinguished from belief strength (Spreng and Page, 2001, pp.1187-1204). It stems from expectancy value theory (Fishbein and Ajzen, 1975) and the subsequent modifications (Bennett and Harrell, 1975, pp.110-117; Smith and Swinyard, 1988, pp.3-14). Belief strength is a subjective perception which consumers possess toward the product attributes. It represents subjective probabilities of association between the product and its perceived attribution. Different degrees of belief strength are the probabilities with which consumers perceive certain attributes of a product. Confidence is the certainty with which consumers can make their own judgments. Two persons who assign the same subjective probability to a given position on the content dimension may vary in their confidence associated with this probability estimate. Disk and Basu (1994, pp.99-114) suggest that attitude, like probably distributions, is the mean of the distribution of a certain subject or attitude. Confidence or certainty is like the variance of the distribution. Different individuals may have similar probability distributions when it comes to attitudes toward something, but their confidence may vary. This is because confidence reflects the level of certainty of one's attitude. The measurement method is to inquire consumers how certain they are in their beliefs, ranging from very certain to very uncertain.

In the literature on loyalty, confidence refers to the sense of trust that consumers possess toward a certain brand and the confidence they derive. Compared to less loyal consumers, highly loyal consumers pose more positive attitude toward the brand and are more certain in the confidence of their attitude judgment. Therefore, the strength of the positive attitude consumers have toward a certain brand and the assurance of their judgment certainty can boost loyalty.

This study establishes the indicators to Mind Shares from the loyalty perspectives. Hence, the confidence mentioned in this paper also starts from loyalty. The confidence defined in this paper consists of attitude side and it's certainty of judgment, rather than pure confidence.

2.4.1. Confidence Research and its Antecedents

The previous studies of confidence mostly focus on the role of confidence as a predicator of attitude and behavior (Fazio and Zanna, 1978, pp.228-244). In the studies of consumer persuasion (Brinol et al, 2004, pp.559-573; Petty et al, 2002, pp.722-741), confidence is examined in expectations as a moderating variable that influences the relationships established in the disconfirmation-of-expectations model (Spreng and Page, 2001, pp.1187-1204). These studies all mention information as an antecedent that affects confidence. These include information volume, information consistency and information credibility (Smith and Swinyard, 1988, pp.3-14). Berger and Mitchell (1989, pp.269-279) (Dick & Basu, 1994, pp.99-114) find that the repeated exposures to consistent information and the decision processes associated with perception of the brand can enhance consumers' confidence.

To examine the role of confidence in attitude and its relationship with behavior from the information perspective, it is found that when there is sufficient information to assist consumers to evaluate product attributes so as to reduce their uncertainty in purchase decision making, their confidence will increase and as a result, the link between attitude to behavior intention will be strengthened (Fazio and Zanna,1978, pp.228-244; Laroche et al., 1996, pp.115-121 ; Bennett and Harrell, 1975, pp.110-117; Zuwerink and Devine, 1996, pp.931-933; Pomerantz et al., 1995, pp.408-419). In other words, if the risks associated with uncertainties borne by consumers in their purchase decisions can be reduced, consumers will increase their confidence

(Bennett and Harrell, 1975, pp.110-117). For example, if the sources of product information come respectively from advertisements and direct experience of consumers, the former will create a lower acceptance and higher cognitive resistance for consumers. This higher cognitive resistance will result in a potential reduction of belief strength, which links with the perceived product attributes (Smith and Swinyard, 1988, pp.3-14). Also, direct experience will enhance the acceptance of information and make consumers' beliefs firmer, and thus it, affects their purchase decisions.

2.5. Resistance

The term "resistance" first appears in persuasive communications mentioned by Hovland et al. (1953). Resistance occurs in the face of persuasion that aims to change attitudes. Resistance usually occurs when individuals experience unfavorable thoughts through distorting the original information or downgrading the reliability of information sources. Research on resistance is also a regular topic in psychology and it includes the effects of personal motivations, self-involvements, importance of attitudes, and the impacts of personal emotions toward resistance against information (Zuwerink and Devine, 1996, pp.931-933).

In the marketing studies of the persuasive effects of advertising messages, resistance is one of the variables. It is used to discuss what kind of the design of informational structure can be accepted by consumers more easily without experiencing resistance. Besides consumers have a positive attitude toward advertising (Zuwerink and Devine, 1996, pp.931-933). Beclch (1981, pp.333-349) finds that comparative advertising messages and repeated showings enhance consumers' resistance to competing brands. Selin (1988, pp.210-223) also finds that loyalty is a moderating variable in the effects of repeated advertisements (Dick & Basu, 1994, pp.99-114). In other word, clear resistance to counter persuasion is related to loyalty.

In the literature regarding loyalty, resistance is the factor that shapes loyalty, and meanwhile the resistance against the persuasion from competitors is also an expression of loyalty. According to the past studies, as long as consumers can successfully resist powerful persuasion, they become more certain of their original belief (Tormala and Petty, 2002, pp.1298-1313). Resistance deepens loyalty and assures loyalty. It is a process to defend a personal attitude. By supporting this original attitude, an individual can selectively avoid the information inconsistent with his original attitude or avoid negative emotions. By slandering the message of persuader or contributing the persuasive message to negative emotions, an individual becomes more certain of his attitude. Thus the process in which an individual resists the attacks of persuasions in fact further confirms his original attitude (Tormala and Petty, 2004, pp.427-442). In other words, the previous exposure to the attacks of persuasions enhances the immunity to future attacks. This process can also be explained with meta-cognition. The cognition of an individual is subject to the influence of his own perceptions. When people resist persuasions, they sense their own resistance and infer it to the relevant attitude. This is why the resistance augments their attitude. In the study of Mind Shares in this paper, the process in which loyal consumers resist the persuasive messages of other brands in effect further deepens their loyalty and generates immunity for them to fight persuasive marketing strategy of other brands.

Tormala and Petty (2004, pp.427-442) also mention that this resistance process varies in accordance with the strength of persuasive messages. When an individual resists a strong persuasive message, his original attitude becomes more established. However, if an individual senses that the persuasive message is weak, the successful resistance does not affect his confirmation of the original attitude. Therefore, this paper infers that loyal consumers of a certain brand, in face of extremely tempting persuasive messages from competing and being able to successfully resist such messages, will be more certain of their brand loyalty. This confirmed loyalty will also boost future resistance.

2.5.1. Antecedent of Resistance

Similar to confidence, knowledge is also an important factor in the path that links attitude with resistance. When an individual has more information connections, he becomes more empowered to resist persuasion (Pomerantz et al, 1995, pp.408-419). The literature regarding confidence mentions that the more information an individual collects, the more confident their attitude becomes. In a similar vein, information is also an important variable in the literature dealing with resistance. Thus, both confidence and resistance work side by side. The confidence boosted by information enhances resistance against persuasion from the opposition. Similarly, on the basis of loyalty, this paper incorporates resistance into the meaning of Mind Shares. In other words, Mind Shares represent consumers' resistance against the persuasion of other brands and gauges the level of resistance to changes (brand switching). The method of some quantification of resistance will be provided in the deduction and formula section.

2.6. Relationships between Confidence and Resistance and Mind Shares

In the literature regarding loyalty, confidence is a cognitive antecedent and resistance is a consequence of customer loyalty in the structure (Dick & Basu, 1994, pp.99-114). In other words, when consumers have confidence in a brand, the link between their loyal attitude and behavior gets stronger. Loyalty is expressed in the form of resistance against persuasive messages from competing brands. Accordingly, confidence is the internal antecedent of loyalty and resistance is the external sequence of loyalty.

In the studies on persuasion, confidence and resistance are both in the domain of meta-cognition. Confidence is the judgment on the certainty of one's belief (Fishbein and Ajzen, 1975; Simth and Swinyard, 1988, pp.3-14). On the other hand, resistance is formed, in part, due to the experience of being persuaded. It becomes a part of belief knowledge (Friestad and Wright, 1994, pp.1-31; Petty and Tormala, 2004, pp.427-442), and then affects the subsequent resistance and consumer behavior. From the perspectives of information, confidence and resistance are positively correlated. The more information collected as regards to products, the stronger the confidence and also the stronger the resistance (Pomerantz et al., 1995, pp.408-419). When there are two sources of information, such as advertising and direct experience, advertising generates lower acceptance and higher cognitive resistance, which in turn, decreases confidence strength.

From the perspectives of loyalty, confidence and resistance are like two sides of the same coin. In the mind of consumers, confidence is internal and it deals with the brand in question; on the other hand, resistance deals with competitors. As far as loyalty is concerned, confidence in the brand in question is not sufficient. Despite strong loyalty consumers may have, they may still be lured over to other brands under the attraction of tempting persuasive messages or marketing techniques from other brands. Also, consumers may have certain levels of confidence in several brands at the same time. Thus, the immunity against other brands is a prerequisite. In other words, consumers should have confidence in the brand in question and resistance in other brands.

To sum up the previous discussion on confidence and resistance, this paper defines Mind Shares as the confidence (belief certainty) consumers have in a certain brand and the level of their resistance to switching to other brands. And this reveals the loyalty. The higher Mind Shares a brand commands, the stronger consumers' loyalty is. The following chart shows the content of the mind-share concept is as:
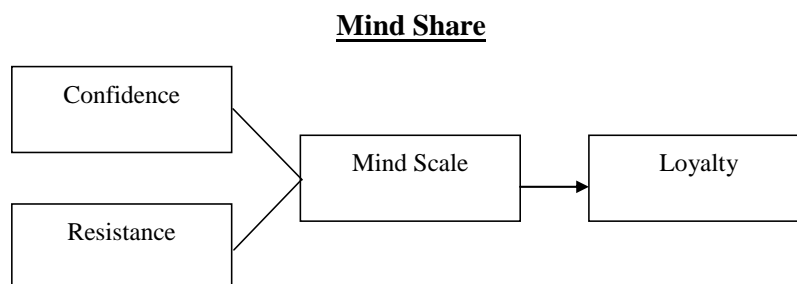
Mind Share

Figure 1. *The Conceptual Framework of Mind Share*

According to the above diagram, Mind Scale consists of confidence and resistance compose of Mind Scale for a brand or product and so contents of loyalty are incorporated.

3. Derivation Of Some Related Quantities

In the following, we define some quantities which reflect the degree of confidence that a customer has in his mind for a certain brand or product and also the degree of resistance of a persuasions to other brands of a customer. Finally, we conclude a percentage in terms of those previously defined quantities which can be considered as an index of Mind Share for a customer toward a certain brand.

3.1. Confidence Scale

This paper establishes Confidence Scales from the perspective of loyalty. In other words, the contents of loyalty of confidence consist of attitude toward the brand and the judgment certainty. The measurement of attitude toward the brand is five points from positive (very satisfy) to negative (very dissatisfy). The certainty of attitude judgment is the level of certainty consumers' posse regarding their judgment of the connection with product attributes attitude. It ranges from very certain to very uncertain. Attitude certainty can be measured with five points or seven points scale. If consumers are very sure of their judgment regarding product attributes attitude, it means they have high belief certainty. On the contrary, if they are not too sure of their own judgment

of product attributes, they have low belief certainty. Confidence Scale C_x for x brand consists of elements of perceived product attitudes and level of judgment certainty of these attribute from customers. Now , we define C_x as follows:

$$C_x = \sum_{i=1}^{n}\sum_{j=1}^{m} (bs_{xji} \times ac_{xji}) \tag{1}$$

When bs_{xij} and ac_{xij} denotes respectively the attitude side bs and attitude judgment certainty ac from customer i ($i=1...m$) to attribute j ($j=1...n$) of brand Confidence Scale of the i-th consumer in the brand . It is our main concern to explore the construct of confidence in Mind Shares from the perspective of loyalty. Therefore, the confidence in a certain brand consists of attitude level and judgment certainty. This concept is similar to the ECV model, thus, this method is used to calculate Confidence Scale in Mind Shares.

3.2. Resistance Scale
The previous studies on resistance resort to self-reports of the respondents, who are asked to write down counter-arguments (Tormala, Clarkson and Petty, 2006, pp.423-435; Tormala and Petty, 2004, pp.427-442, 2002, pp.1298-1313). However, this paper tackles the issue from the perspective of loyalty. Resistance refers to consumers' refusal of changes. It is a commitment in the form of resistance against brand switching. Resistance to switching is a personal mechanism to maintain perceived stability and internal consistency. In literature discussions, scholars from different fields have come up with various ideas and viewpoints. However, in marketing and loyalty maneuvers, resistance refers to the loyalty of consumers who can resist the vast array of marketing messages from competitors and stay with their original brands. Hence, it deals with brand switching.

Hence we discard self-reports of respondents conventionally seen in other researches. Rather, it designs a questionnaire based on the related topics of switching to measure the resistance levels of consumers.

$$R_x = \sum_{i=1}^{n}(T_{ix}) \tag{2}$$

Hence, Resistance Scale R_x of brand x is the sum of the total resistance scores.
When T_{ix} denotes the Resistance Scale measuring the resistance of the i-th consumer switching to other brands. When T_{ix} denotes the Resistance Scale of the i-th consumer switching to other brands.

3.3. Mind Shares
Mind Share is a kind of percentage concept. In the same product category, Mind Share shows percentage of some related quantity that composes of confidence and resistance of a certain brand against that of some quantity related to all brands. To the exact, we define it as follows:

$$MS_x = \frac{R_x \times C_x}{\sum_{j=1}^{k}(R_j \times C_j)} \tag{3}$$

Where MS_x stands for Mind Share of brand x and R_j and C_i have been defined previously and k denotes total number of brands that belong to some category of products.

Mind Shares are the product of Confidence Scale and Resistance Scale in the market corresponding to the brand in question. For its convenience, we name the product of Confidence Scale and Resistance Scale as the "Mind Scale". Mind Share of a certain brand is the Mind Scale of the brand divided by the Mind Scale of total brands.

4. Application

For a certain market, we can compute quantitative Mind Share of some brand in this market to show the attitude of consumers to this brand. The calculations are based on Confidence Scale and Resistance Scale

which have been defined before. Shortly speaking, the calculated percentage of Mind Share of certain brand is an index which shows that indicates the level of loyalty of a customer to this brand.

This paper selects a market to investigate Confidence Scale, Resistance Scale and Mind Scale of various brands and compute Mind Shares of each individual brand, in order to illustrate the formula of Mind Shares.

4.1. Hypotheses

Based on the quantified value of Mind Share percentage and focus on a specified market, we are interested in testing the following four hypotheses based on the sample that are taken from the specified market. Since the samples contain random mechanism, statistical tool for testing is appropriate and powerful.

H1: Confidence and loyalty are positively correlated.

While loyalty in a concept which has many phases to indicate its strength, Mind Share is one of them. In defining measurement of Mind Share, quantity of measuring confidence is closely related to Mind Share scale Therefore H1 is naturally an important topic to be discussed.

The following is a parallel but different statement of H1.

H2: Resistance and loyalty are positively correlated.

Confidence and resistance are different in its quality, however, both of them are positively correlated in its quantitative construction of measurement of Mind Share scale, yet H2 is still an important issue to be studied.

The main purpose of this paper is to establish theoretic contents of Mind Shares through the measurement of confidence and resistance so that Mind Share includes the implications of loyalty. As a result, this paper hopes to construct the formula of Mind Shares and establishes the meaning of loyalty through selecting one category product market and examining it's users.. The following hypotheses are proposed on the basis of the previous literature.

H3: Mind Scale and loyalty are positively correlated.

In addition to the validations of the above hypotheses on confidence, resistance and Mind Scale as individual variables and their relationship with loyalty, it is also desirable to understand the predictability of both confidence and resistance to loyalty. If there is a high level of interaction or correlation between confidence and resistance, the predictability of level of loyalty using the two variables at the same time will be redundant.

In the following it is desired to know whether it is only the level of confidence or the level of resistance is enough to explain loyalty.

H4: Confidence and resistance are able to explain loyalty independently.

4.2. Illustration of a real data set

In this paper we focus on the mobile telecommunications market in Taiwan as a case study. After fierce competition and industry consolidation, there are only three mobile service providers remaining in Taiwan. We are going to study it via calculating their Mind Shares. Since college students are one of main group s using mobile phones. We choose undergraduate students of Tamkang University for this study. The questionnaires were issued to the undergraduate students of Tamkang University. A total of 174 questionnaires were released and retrieved. In order to reduce the bias due to the number of customers with particular operators and the potential distortion of Mind Share estimates, we controls to take 42 respondents for each brand. The contents of the questionnaire include the brand of the mobile service providers, Confidence Scale in the current brand and resistance to switches to other brands. The results of the questionnaires are used to compute the related quantities' Confidence Scale, the Resistance Scale of the respondents and finally the Mind Shares toward each brand.

The questionnaire surveys brand loyalty of individual consumers. A relational analysis on brand loyalty scale, Confidence Scale and Resistance Scale is performed in order to test the correlation between loyalty and the two variables. Finally, this paper tests the correlation between Mind Shares and average loyalty scales of individual brands in order to test the Mind Share concept proposed by this paper and the relationship between confidence, resistance (as components) and loyalty.

4.3. Measurement

This paper needs to measure three items: loyalty of consumers to their own mobile service providers, confidence in their own mobile service providers and resistance against other mobile service providers. These three variables are surveyed through question sets in the questionnaire. The content of the questionnaire on loyalty covers both attitude and behavior (including reputations, preferences and behavior) and is measured

with the five points Likert scale. The standardized Cronbach α is valued at 0.898. The content on confidence measures attitude side and judgment certainty. Attitude judgment certainty refers to the level of sureness of consumers in their own judgment of the association to product attributes. It ranges from "extreme certainty" to "extreme uncertainty" and can be measured with a five-point scale. In terms of the reliability of attitude side, the standardized Cronbach α stands at 0.902; in terms of the reliability of judgment certainty, the standardized Cronbach α is 0.936. The five points Likert scale is also used to measure resistance of consumers against brand switching. The standardized Cronbach α is 0.849.

4.4. Results

4.4.1. Confidence Scales, Resistance Scales, Mind Scales and Mind Shares of Individual Brand

There are 42 samples for the subscribers of each mobile service provider and in total, there are 126 samples. Attitude side and judgment certainty are calculated through the formula of Confidence Scale (defining by (1)), that of resistance by the formula of Resistance Scale (defining by (2)). Finally, this paper derives the Mind Shares (defining by (3)) of the three mobile service providers in the market. The Loyalty Scales are shown as follows:

Table 1. Confidence Scales, Resistance Scales, Mind Scales and Mind Shares of Individual

Loyalty	Confidence	Resistance	Mind Scale	Mind Share
Chunghwa Telecom	36.667	39.574	43.644	1734.986
Taiwan Mobile	31.929	33.669	42.310	1417.279
FarEastone	30.452	30.360	40.786	1273.779

In terms of loyalty, confidence, resistance, Mind Scales and Mind Shares, Chunghwa Telecom obviously shows higher Mind Share and also loyalty than the other two, Taiwan Mobile and Fareastone. The clearly describes the structure concerning loyalty and Mind Shares in this marketing.

4.1.2. Hypothesis Validation

The first step is to validate the correlation between loyalty and each variable (H-1, H-2 and H-3). Their coefficients are as follows:

Table 2. Confidence Scales, Resistance Scales, Mind Scales and Mind Shares of Individual

Loyalty	Confidence	Resistance	Mind Scale	Mind Share
Loyalty	.434**	.395**	.515**	.434**

**p<.001

The above table shows that there is significantly positive correlation between respectively variables confidence, resistance, Mind Scale and loyalty. As a result, the hypotheses H-1, H-2 and H-3 are not rejected.

In addition to the individual correlation, author purpose of this paper is to establish that Mind Share as indicators that contain confidence and resistance is one of main components of loyalty. We consider regression model and assigns loyalty as a dependent variable and confidence and resistance as independent variables, to measure the explanatory power of confidence and resistance to loyalty.

The stepwise regression method is adopted. During the first stage, confidence as a variable is selected and included, because it explains 18.2% of variance in loyalty ($F_{(1,8)}=28.782$, *p=.00*).The second chosen variable is resistance, which explains 11.4% of variance in loyalty by itself ($F_{(1,8)}=20.019$, *p=.00*). As a result, the two models together can explain 29.1% of variance of dependence variable ($F_{(1,8)}=26.608$, *p=.00*). As Durbin-Watson is valued at 1.981, it shows that there is no interaction between confidence and resistance as variables. As the two variables demonstrate good predictability of loyalty, therefore paper contains H4 is accepted.

5. Conclusion

This paper finds that confidence and resistance are able to explain loyalty and there is no interaction between confidence and resistance. There are respectively significant correlations of confidence, resistance and Mind Share with loyalty. Hence, it is reasonable to use Mind Shares (composed of confidence and

resistance) as an indicator to represent the concept of loyalty. This paper incorporated results of the retrieved questionnaires issued to mobile subscribers in Taiwan to compute some proposed measures of confidence and resistance in order to validate the feasibility of Mind Share computations and the practicability of the relevant theory.

The main contribution of this paper is to construct some theoretic contents of Mind Shares and propose some quantified measurement of it. This gives an alternative interpretation of loyalty. Mind Shares reflect the level of confidence consumers in their mind for a certain brand and the resistance against the persuasion of competing brands. The concept of Mind Share can also serve as on alternative point of view of loyalty, newly defined by this paper, as the combination of confidence and resistance. Confidence is for some brand in mind; while resistance is against other brands. However, when it comes to connect loyalty, confidence alone is not sufficient. Immunity against other brands is also needed. Combination of these phases represents Mind Shares. The higher Mind Shares for a brand commands, the higher quality of consumers' loyalty attains. In the mind of these consumers, the higher the confidence in the brand, the stronger the resistance against the persuasion of other brands. As a result, Mind Shares reflect consumers' loyalty in the psychological sense. Therefore, it differs from that of the usual market share, which suggests only the fluctuations of sales in market.

6. Discussion

Most of the studies on confidence and resistance focus on cognition processes (Pomerantz et al,1995, pp.408-419; Berger and Mitchell,1989, pp.269-279; Smith and Swinyard, 1988, pp.3-14) and advertising persuasion process (Tormala and Petty, 2004, pp.427-442, 2002, pp.1298-1313; Pomerantz et al,1995, pp.408-419; Brinol et al, 2004, pp.559-573; Petty et al, 2002, pp.722-741). Few scholars apply these two concepts in the theoretic study of loyalty. Different from past studies, the main purpose of the variable of resistance in persuasion theory such as advertising study is to reduce consumers' resistance against advertising message, yet in the study of loyalty, resistance plays a positive role. Although there are research findings on confidence and resistance as variables (confidence and resistance as moderating variables to the effects of persuasion), the moderating effect of confidence and resistance and their impact on loyalty as antecedents may be different. The relationship between these antecedents (such as the strength of information) and confidence or resistance may be varied. Thus, the roles played by confidence and resistance in loyalty are unique and important. They are worthy of attention from subsequent researchers.

Below is the discussion on the theory of loyalty, confidence, resistance and Mind Shares.

6.1. Confidence, Resistance and Mind Shares

The relationships between confidence, loyalty and resistance are not necessarily in juxtaposition. They may have sequential or causal relationships. Mind Shares are composed of confidence and resistance. Therefore, these two concepts are referred from loyalty in this paper. According to the proceeding study, the higher Mind Shares of a brand or product commands, the higher the quality of consumers' loyalty, confidence and resistance it has compared to its peers. However, the causal relationship between confidence, resistance and loyalty is not addressed in this paper. None of the vast amount of previous literature deals with the correlation among these three. However, according to the literature and studies on loyalty, this paper finds that confidence is a cognitive antecedent of loyalty (Dick and Basu, 1994, pp.99-114). Confidence in a certain brand is likely to enhance brand loyalty (Keegan, 2002). Thus, brand loyalty may start with confidence in the brand and then be followed by resistance as the result. Because of their loyalty, consumers are able to resist the persuasion from competing brands. The repeated mental processes of confidence or resistance lead to self reinforcement in the mind of consumers (Tormala and Petty, 2004, pp.427-442, 2002, pp.1298-1313). In this paper we explain and discuss these two main factors together and through merging or fusion them to creative the concept of loyalty. However, they may not be the same in terms of their positions in the hierarchy or sequence. The psychological process of these variables may lead to interactions and self-reinforcements.

6.2. Loyalty and Mind Share

In addition, to predict loyalty in practice with Mind Shares, it is necessary to first clarify the relationship among these three and their respective roles in sequence. It is essential to confirm the dimensional meanings which relate to that loyalty represents before the actual applications is possible. This is because the measurement of loyalty by itself carries multiple dimensions. Some studies use the frequency, quantity and intervals of repeated purchases as the indicators to loyalty; while others measures the psychological loyalty of consumers (Costabile, 2000, pp.66-67). The contents of the questionnaire adopted by this paper cover both

attitude and behavior. It is suggested that for different aspects of loyalty, it can be performed in order to examine its relationship with confidence and resistance respectively. This paper discusses loyalty in terms of Mind Shares in the conceptual level. However, the follow-up researches will be focused on the measurement of loyalty in order to clarify the relationship between Mind Share and loyalty.

6.3. Resistance and Confidence

When reviewing confidence or resistance separately, it is found that the emerging of confidence and resistance is related to the information on products or brands that consumers possess in their mind. These issues can be the credibility of information sources and information volume. According to the past studies, the more credible the information or the more direct experience an individual has, the higher the association with information it becomes. Consequently, confidence and resistance also get a boost. According to the Mind Share argument in this paper, the enhancement of confidence and resistance increases Mind Shares. Hence, information characteristics are also important variables that affect Mind Shares. However, this paper does not include the study of the relationship between information and confidence, information and resistance and which is a good topic of future research.

In order to carry out a practical application, we have proposed some quantitative measurements of Resistance Scale by combing subjective and objective factors in the perception of consumers into switching cost. This does not only translate the cognition of consumers into switching cost but also decompose the switching concept into moneyed unite. For example, the Monroe (2003) formula calculates in detail the actual purchase prices and the maximum acceptable switching prices. The result is compared against the perceived gap in the subjective evaluations by consumers. In the special product market where there are specification variances and compatibility issues, the concept of network effect can be incorporated (Shankar, 2003, pp. 375-390) as a representative indicator in the calculation process.

The computation of the overall Mind Shares is most suitable for the comparisons of different products/sub-brands of the same product category. It may not be suitable to compare different products, indifferent category or different industries because consumers have varying cognition, confidence and resistance levels for products/brands of different categories. The Mind Share analysis will be distorted if it is used to compare different categories because the baselines are different for different categories. The proposed Mind Shares can be used to measure different brands of the same product category and the results may be compared with the increase/decrease of market shares so that inference concerning loyalty and sales can be obtained and which greatly assists strategic planning in marketing.

7. Acknowledgements

8. References

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