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個人社會價值觀、企業文化、與社會責任決策行為框架：框架
效果法(第3年)

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行政院國家科學委員會專題研究計畫結案報告

個人社會價值觀、企業文化、與社會責任決策行為框架：框架效果法？

Personal societal values, firm culture, and social responsibility decision
behavior framing: A framing effect approach

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中文摘要

企業社會責任須立基於價值、利害關係人的判斷、以及需深入關切的社會議題上。又，人的決策受到訊息框架影響：當決策情境在邏輯上相似，但訊息陳述方式不同時，人們會有不同的決策偏好。據此，本計畫以實驗設計法在過去一年完成企業社會責任與消費者在經驗產品上之關聯性，主要在證明企業社會責任(CSR)的市場誘因與效果，比如企業的 CSR 活動或行為是否能刺激顧客購買 CSR 相關高價商品，又或者當顧客知道他們購買的商品廠商有從事 CSR 活動時，是否會更忠於該廠商，且此效果是否擴及少有或從未購買 CSR 相關產品的顧客上。研究結果已完成初步驗證，顯示在產品外觀相同的情況下，即使價格相對較高，顧客會樂意購買有實施 CSR 公司的產品。主要是希望發掘社會大眾對倫理相關議題的回應，以更了解 CSR 在企業經營上的效用。目前正撰稿投到明年 AOM 年會及企業倫理相關期刊中。

關鍵字：企業社會責任(CSR)、CSR 誘因、CSR 認知、實驗設計、經驗性商品

Abstract

Corporate social responsibility (CSR) is value oriented, based on the perspectives of stakeholders and issues that they consider essential. Further, people exhibit patterns of decision making in relation to information framing in that different frames may change completely people's mindset for decision choices even though the information context remains similar. Using experimental design, this study designs scenarios in terms of consumer's prior purchase experience with firms associated to CSRs. The purpose aims to demonstrate the marketing effect of CSR initiative whereby it stimulates consumers to purchase a high priced CSR-related product or stay with such a product when they are aware of the CSR-based deeds of the seller. Further, this effect can extend to consumers of less or no prior experience of purchasing CSR-related goods. We have finished preliminary analyses. Our goal is to explore the response of general public on ethics relevant issues for better understanding of CSR in business. Improved drafts are being prepared for the next year's AOM or DSI conference and business ethics related journal.

Keywords: Corporate Social Responsibility (CSR), CSR initiative, CSR awareness, experiment design, experience goods.

Chapter 1 Introduction

1.1. Motive and Background

The growing awareness of negative and side effects of business activities has drawn public attention on business social liabilities (e.g., Gibson, 2000). Corporate Social Responsibility (CSR) can be generally interpreted as a firm's obligations and legitimate requirements to use its resources in ways to benefit societies (e.g., Hartlieb and Jones, 2009; Jamali and Neville, 2011). It requires to be built upon a set of guiding ethical principles that can influence strongly organization decision-making process (Paine, 1994). "CSR" thus is a broad concept wherein companies go beyond their economic and legal responsibilities in the management of business, to take responsibility for their impact on the society by minimizing negative effects and maximizing positive impacts possible to the society as a whole.

To operate, companies of all size inevitably extracts and utilizes resources from the society and community. The resources include human capital, natural resources, tangible resources such as machinery and property, as well as intangible resources such as brand image and knowledge. For being CSR conscientiousness, businesses are urged to response to not just their shareholders, but a broader set of stakeholders, including employees, consumers, and local communities (Cavalho et al., 2010). They should integrate social concerns in business operation and in interaction with stakeholders on a voluntary basis (Commission of the European Communities, 2001).

As one primary stakeholder, consumer-based responses to CSR initiatives are prudent to provide markets with guidance. Smith (2000) indicates that there is a positive correlation between CSR and consumer patronage. Bronn and Vrioni (2001) show that customers tend to favor the socially responsible companies and their products when they perceive price and quality as the same. Scholars go further to suggest that consumers may be willing to pay a higher price for similar products from companies of which they perceive to be ethical and socially responsible (Auger et al., 2003; Barone et al., 2000; Campbell, 1999a, b; Strahilevitz, 1999). Recently, Carvalho et al. (2010) prove the presence of positive correlation between consumer's CSR perception and purchase intention when the CSR associated product is priced 10% higher. They further show that price fairness plays a significant mediator between CSR perception and purchase intention. It appears that CSR initiative to consumers is not simply a symbol of ethics, but an economic one.

Consumers are convinced to purchase goods based on sellers' quality cues, such as advertising (e.g., Kihlstrom and Riordan, 1984), price (e.g., Bagwell and Riordan, 1991), brand, reputation (e.g., Rao, Qu and Ruekert, 1999), warranties (e.g., Chatterjee, Kand and Mishra, 2005; Fang, Gammoh, and Voss, 2013), and CSR actions (e.g., Anselmsson and Johansson, 2007; Klein and Dawar, 2004). Review of these studies echoes that consumers

who lack the ability to determine a product's value before purchasing are more likely to associate CSR as a positive signal indicating the firm's honesty and reliability (McWilliams and Siegel, 2001; Siegel and Vitaliano, 2007). This is especially evident in experience products, products' whose quality cannot be evaluated or determined by inspection prior purchase. Firms selling experience products are indeed more likely to gain consumers' product favor and purchase support through positive CSR activities (Tian et al., 2011).

1.2. The Purposes

But what if consumers have previously purchased the experience good, product quality is known and so CSR no longer has to be used a signal to undergo the product quality, will CSR still have the same positive effect on purchase intention? Little research has been done to determine the effect of purchase experience on the relation between perceived CSR and purchase intention. Based on consumers' reaction to CSR and their previous buy experience, we have demonstrated the following works in this second year project:

- (1) CSR marketing effect on experience goods: For this, we first demonstrate that consumers are more likely to purchase a higher priced CSR-related product or stay with such a product than one similar, non-CSR-related product. Secondly, we prove that consumers' awareness of a firm's CSR actions affects positively on their intention to buy a product from the firm even if its price is higher than the others' due to its CRS deeds.
- (2) CSR moderating effect: For this, we show that consumers' prior experience of CSR-related products moderate the impact of consumers' CSR awareness on their purchase intention of goods from the firm.

To investigate the proposed questions, an experimental design was conducted as the methodology, using milk as an example. Milk was chosen as an example of experience goods for several reasons. Firstly, CSR in the food industry is particularly important due to the various potential benefits, with food safety becoming the ultimate CSR concern (Kong, 2012). With China's milk scandal in 2008, products of 22 brands, exceeding 90% of liquid milk and 50% in powdered milk of total market share was confirmed to be contaminated with melamine (Chao, 2008), consumers are now more cautious when purchasing milk. In addition, milk is commonly consumed product in Taiwan, purchased by consumers of all age as it is relatively affordable, this allows less limitation in the sampling process to obtain a general picture of all consumers.

Chapter 2 Review of Literature

2.1. Corporate Social Responsibility (CSR) and Relevance

Corporate social responsibility (CSR) has been claimed synonymous with varying concepts, including human rights, fair and equal treatment of employees, equal right between sex and between religious groups, as well as protection of the environment and support of community (e.g., Maresca, 2000; Anselmsson and Johansson, 2007). Sen and Bhattacharya (2001) based on a search of 600 firms' actions suggest six categories of business social liability: product (e.g., product safety, product-harm disputes), environment (e.g., environment friendly products, waste management), diversity (e.g., sex, race, disability-based initiatives), non-domestic operations (e.g., overseas labor and practices), workforce (e.g., employee job security, safety concern), and support of community (e.g., support of health programs and educational activities).

Though CSR can be summarized as a firm's obligation to use its resources in ways to benefit society as a whole, this broad definition also reveals its contingency and difficulty in measurement. For instance, Hartlieb and Jones (2009) assess the contribution of UK ethics and social and environmental labeling schemes to sustainable consumption and production, through a qualitative survey of fifteen UK initiatives regarding social justice, food processing, animal welfare, environmental sustainability and others. Castaldo et al., (2009) instead suggest investigate the link between consumers' perception about whether a firm is socially oriented and their purchase intention of buying products from that firm. In particular, they indicate that a definition of CSR should be oriented at the following two conditions: (1) The products sold by the firm comply with social requirements or ethical standards; (2) The firm has an acknowledged commitment to protect consumer rights and interests, or equivalently prior CSR reputation. Earlier, Freeman (1984) from business ethic perspective specifies three elements, that it must be value-base, include the relevant stakeholders of the organization, and deal with the issues it regards as salient.

In use of experimental scenarios, product-harm researches study the benefit of CSR on, for instance, reduction of consumers' emotional anger (Assiouras, Ozgen, and Skourtis, 2011), adjustment of consumers' attributions (Klein and Dawar, 2004), regain of a firm's good reputation (Minor and Morgan, 2011), and sustainment of consumer trust and purchase intention (Lin et al., 2011). Overall, these scenario include the following three sets of variables: (1) triggers (e.g., disclosure of publicity); (2) organization background (e.g., SR reputation, firm response); (3) influence (e.g., sales or profit loss), or consumer reactions. However, the three elements—value-base, relevant stakeholders, and SR issues regarded as salient—of Freeman (1984), from business ethic perspective, appear to be more precise, and

analogous to the psychological value function and neutral reference concept of experimental framing.

2.2 CSR as a Marketing Approach

Can CSR be an Approach for Marketing? The answer appears to be “Yes”. For example, As much as 90% of the *Fortune* 500 companies have shown explicit CSR initiatives (Kotler and Lee 2004; Lichtenstein, Drumwright, and Bridgette 2004). In addition, cause-related marketing (CRM) has been demonstrated a practice of marketing a product, service, brand or company by associating it with a social cause, such as breast cancer detection and treatment (Berglind and Nakata, 2005). As a sub-stream of CSR, the use of CRM is increasing worldwide, benefiting both firms and causes (Polonsky and Macdonald, 2000), making managers and marketers aware of CSR benefits in brand building, better firm reputation, and improved sales (Berglind and Nakata, 2005).

Together, these practices and scholarly studies demonstrate that consumers tend to be more favorable towards brands that are tied and associated to a social cause as compared to those that aren't (Webb and Mohr, 1998), which enables the visibility and respect of the firms to portray them a social responsible mindedness and even patriotism image (Varadarajan and Menon, 1988).

2.2.1. CSR in food industry

Nonetheless, use of CSR as a marketing tool should be dealt with care, excess manipulation may cause negative effects. As Morsing (2003) argues, “communicating corporate social responsibility is a delicate issue” and that “shareholders are reluctant to receive too much information about companies' CSR engagements”.

CSR is especially important in the food industry. The increasing tendency to publish CSR reports can be explained consumers' high expectations (Assiouras et al., 2013). Studies have shown that UK's large food retailers are increasingly keen to report their commitment to CSR, integrating it as an element of their core business (Jones et al., 2005). Food retailers and producers use many different methods to communicate CSR in their stores. Messages such as fair trade, fitness, healthy living, healthy eating, organic production, sustainability, employment policies, charitable giving, and support for local communities are all used by British food producers (Jones et al., 2007).

Anselmsson and Johansson (2007) in terms of consumer-based organic retailing further conclude three generalized CSR ingredients in food industry: (1) product responsibility to produce healthy and environmentally-friendly products; (2) human responsibility to produce products by means of good animal farming and positive work conditions; (3) environmental responsibility to be responsible for product defects and quality, content declaration, and live-

up expectations. Apparently, product safety to human body is the most concern of consumers in food retailing.

2.2.2 Product category

Based on Nelson's (1970) definition, products can be classified in three categories: search, experience and credence. Search products are those whose attributes and quality can be evaluated by inspection or research prior purchase, whereas the quality of experience products cannot be. The value of credence products cannot be determined even after use (Darby and Karni, 1973).

Seigel and Vitaliano (2007) found that firm's level of enthusiasm about CSR depends on consumer's purchase intention in relation to CSR initiative. They further indicate that this initiative varies and correlates with product category: Firms of experience products are more likely to engage in CSR marketing because experience goods must be consumed or used to determine the true value (Nelson, 1970). Particularly, consumers tend to associate experience goods with CSR, using CSR support as a signal for product honesty and reliability of a firm (McWilliams and Siegel, 2001; Siegel and Vitaliano, 2007). In turn, CSR is not only ethical and ideological imperative, but also an economic one.

2.2.3 The current research

Practice of CSR allows firms to build a reliable and honest reputation that may act as a signal when consumers purchase experience products (McWilliams and Siegel, 2001; Siegel and Vitaliano, 2007). Hence, in terms of an experience food example, we first assumes that CSR can generate marketing effect. That is,

H1: Consumers have higher intent to purchase a CSR-related product even if its price is higher than a similar one which is non-CSR-related.

From previous research, it is evident that consumers are not only willing to purchase CSR-related products, but are often willing to pay higher prices for products from companies in which they are aware of (Auger et al., 2003; Barone et al., 2000; Campbell, 1999a, b ; Strahilevitz, 1999). In other words, the marketing effect of CSR is weaker in relation to consumers' previous purchase experience of a non-CSR related product, due to the fact that they will acknowledge the quality and value of the product and thus less need to rely on CSR as a signal. Or alternatively, it is stronger when consumers are used to purchasing a CSR-related product. Thus,

H2: Consumers is more willing to stay with a CSR-related product even if its price is higher, when this product is their often-buy than one which is not.

The positive linkage between CSR and customer patronage has allowed managers to realize that in today's marketplace (Smith, 2000). We thus assume that customers' CSR awareness would affect positively on their purchase intention of a higher priced CSR-related product:

H3: Consumers' awareness of a firm's CSR actions is positively related to their intention of buying a higher priced CSR-related product from the firm.

As mentioned above, the marketing effect of CSR is related to consumers' previous purchase experience, which is weaker (stronger) when they acknowledge (or not) the quality and value of the product due to previous experience, and thus less (more) need to rely on CSR as a signal. In other words, consumers' previous use or purchase experience will moderate the positive relationship between CSR awareness and purchase intention of a CSR-related product assumed in H3:

H4: Consumers' often-buy experience will moderate the relationship between their CSR awareness and purchase intention of the firm's higher priced CSR-related product:

H4a: The relationship is stronger when this often bought product is CSR-related, and

H4b: Weaker when it is not.

Chapter 3 The Procedure

3.1. Research design

As shown in Figure 3-1, the research framework comprises the CRS-related deeds performed by a firm and how these deeds impact on both the general public's awareness of the firm's CSR behavior and the individual's prior experience in relation to CSR for purchasing the firm's products. Based on the framework, we propose the four hypotheses addressed above.

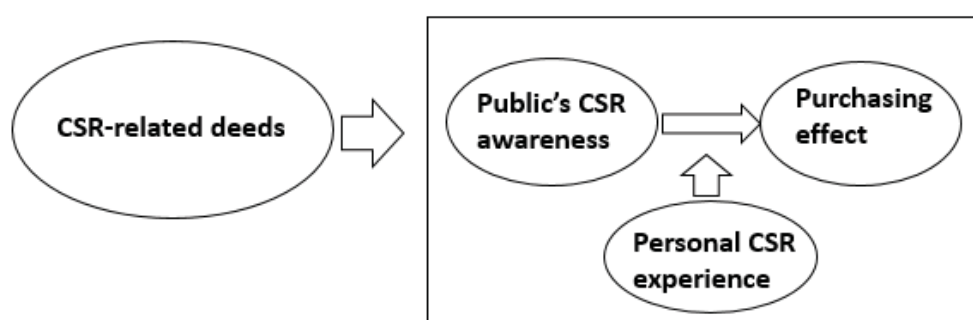


Figure 1: The research framework

To verify the propositions, we utilizes experimental design approach to testify the hypotheses under an identical CSR exposure with different hypothetical scenarios of consumer's CSR product purchase experience. In order to associate with a familiar, experience goods for the experiment, a frequently consumed and affordable product, milk, is chosen as the subject product. Due to the wide range of benefits, food safety being the ultimate concern, and CSR is particularly important in the food industry (Kong, 2012). In addition, due the 2008 milk melamine contamination crisis outbreak, most serious CSR crisis in China, consumers tend to be more cautious when buying such consuming products. Therefore, choosing milk as the target goods is appropriate.

A questionnaire, each with a storyline and four measurements other than respondent's profile, is developed. The story comprises a poster of a firm's CSR doings, different personal purchase experience of CSR-related products, which is milk in this study, and a choice between CSR and non-CSR brand of milk with the former priced 10% higher. Namely, whilst the questionnaire items are all identical, the storyline differs in the personal CSR purchase experience. Three CSR purchase experience scenarios are designed. Respondents are randomly given one of the three scenarios to fill out in their own time and presence to ensure confidentiality of response. We describe the details according to the order of story, measurements, and sampling below.

3.2. The storyline

3.2.1. CSR poster

Using milk as the target goods, we first create an illustrating poster regarding the CSR deeds of a milk provided company shown in Figure 2 to begin the story. All respondents are exposed to this same CSR poster of Brand X illustrated below. The purpose is to portray the strong, positive CSR image of Brand X. At the same time, the respondents are informed that the price of the CSR related Brand X is 10%, in this case NT\$15, more expensive than the non-CSR Brand Y.



Figure 2: Brand X CSR poster

3.2.2. The three scenarios of personal CSR experience

To examine the impact of personal CSR experience, we create three scenarios: No previous purchase experience as the control group, and previous frequent-buy experience of CSR and non-CSR milk goods. These three types of personal CSR experience are designed as below.

Scenario 1: No previous purchase experience of CSR goods

Suppose you enter a supermarket to buy milk, only Brand X and Brand Y milk are available, but you have not purchased them before. There is no difference in volume or appearance, but the price is different: Brand X NT\$ 174 and Brand Y NT\$159.

Scenario 2: Previous purchase of CSR product

Suppose you always buy Brand X milk. One day, when you go to the supermarket to buy Brand X milk, you see a new Brand Y milk. Compared to Brand X, there is no difference in volume or appearance, but yet there is a difference in price: Brand X NT\$ 174 and Brand Y NT\$159.

Scenario 3: Previous purchase of non-CSR product

Suppose you always buy Brand Y milk. One day, when you go to the supermarket to buy Brand Y milk, you see a new Brand X milk. Compared to Brand Y, there is no difference in volume or appearance, but yet there is a difference in price: Brand X NT\$ 174 and Brand Y NT\$159.

3.2.3. CSR and non-CSR brand choice

Each respondent was shown randomly only one of the three scenarios with the same picture of Figure 3. Figure 3 illustrates two milks, X brand is from the CSR firm shown in Figure 2 and Y brand is not, of similar appearance and different prices, where the price of X is \$15 higher. This way divides the respondents into three groups with each group differing in prior buy experience of a CSR goods based on the two choices of different CSR-signaled and priced products.



Figure 3: Brand X and Brand Y milk

3.2.4. Manipulation check

In order to ensure the design validity, two manipulation checks apply to eliminate respondents who do not fully understand the story. The first question, “Which brand of milk do you usually purchase according to the story given,” examines if respondents read the personal CSR experience scenarios right. The answer should be simply Brand X, Brand Y, or neither depending on which scenario given. The second question asks respondents if they understand the content of Brand X’s CSR poster. The answer is ranged on a 5-point scale (1= Totally don't understand; 5= Totally understand). Respondents who (1) misunderstood the given personal CSR experience scenario, or (2) rated totally don’t understand the content of Brand X’s CSR poster, are removed from further analysis.

3.3. The measurements

3.3.1 Consumer’s support of CSR

This scale defines personal attitude towards CSR. Five items adopted from Ramasamy et al. (2010) consists the measurement. As shown, they aim to measure the extent to which a customer is willing to pay, even needing to pay for a higher price, for a CSR-related product. The choice option uses a seven point Likert scale with 1 representing strongly disagree and 7 strongly agree.

-
1. I consider the ethical reputation of businesses when I shop.
 2. I avoid buying products from companies that have engaged in immoral actions.
 3. I would pay more to buy products from companies that show care for the well-being of our society.
 4. I would pay more to buy products from a socially responsible company.
 5. If the price and quality of two products are the same, I would buy from a firm that has a socially responsible reputation.
-

3.3.2 Consumer’s expectation of CSR

This scale defines consumers’ expectation of CSR, as part of personal CSR-attitude. Four items adopted from Creyer (1997) consists the measurement. As shown, they aim to measure the extent to which a customer would tolerate the unethical behavior of a firm in general. The choice option uses a seven point Likert scale with 1 representing strongly disagree and 7 strongly agree.

-
1. Firms have a responsibility not to ever act unethically.
 2. Firms have a responsibility to always act with the highest of ethical standards.
 3. I expect the firms that I deal with to act ethically at all times.
 4. All firms will be unethically sometimes: it is normal.
-

3.3.3 Consumer's CSR Awareness

This scale defines the extent to which a customer is aware of a firm in performing CSR deeds. Commission of the European Communities (2001) define CSR as “A concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis”. Accordingly, for the current experimental purpose, we design this measurement as the extent to which a customer is aware of the Brand X's CSR deeds he or she is exposed to as given in the poster of Figure 1. The choice option uses a seven point Likert scale with 1 representing strongly disagree and 7 strongly agree with the given Brand X's CSR poster.

-
1. Brand X demonstrates that it is concerned with the environment.
 2. Brand X is involved in the community and makes investment in worthwhile causes.
 3. Brand X demonstrates focus on employee benefit and provides excellent work environment.
 4. Brand X implements good corporate governance and information transparency.
-

3.3.4 Purchase intention in relation to CSR and non-CSR brand choice

This scale defines the intention to which a customer is more willing to buy between a higher priced CSR goods and a lower priced non-CSR goods, whereby both seemingly have the same quality. Four items consists the measurement. They are modified from the purchase intention measures of Jamieson and Bass (1989) and Carvalho et al. (2006). Respondents are asked to choose between Brand X and Brand Y on a semantic differential seven-point scale item (1 = Brand X; 7 = Brand Y).

-
1. Buying which brand will make you feel good about yourself?
 2. Buying which brand will make you feel that you are doing the right thing?
 3. Which brand has a higher probability of you purchasing it?
 4. Which brand are you more willing to buy?
-

3.4 Sampling

Since the product, milk, under purchasing consideration in this experimental design, is a commonly consumed product, easily purchased and affordable, the sampling is not restricted. This study targets a wide variety of respondents in terms of age, education level, occupation and income to depict an overall image of consumer response to the marketing effect of CSR.

In attempt to investigate a sample of broader demographic characteristics, different questionnaire distribution channels such as direct distribution in shopping malls and

supermarkets, online surveys via Facebook and PTT were all used simultaneously to approach the general public. All scenarios were randomly distributed together to minimize the demographic characteristic among different scenarios.

To understand the profile of the sample, demographic information such as sex, age, education level, occupation and monthly disposable income are collected for analysis to ensure they are similar in all three scenarios.

Chapter 4 The Results

4.1 Manipulation check

We approached respondents via paper questionnaires and Internet surveys on Facebook, PTT, as well as in shopping malls during 20th April to 2nd May 2015. Of the 346 questionnaires returned, a total of 35 were invalid and removed from further data analysis because they either (1) misunderstood the purchasing experience that they were supposed to play with given in the three CSR experience scenarios, or (2) they indicated that they totally did not understand the content of Brand X's poster. Eventually, a total of 311 respondents and questionnaires remain for further data analysis. The sample size and the removed number of each scenario is outlined in Table 4-1.

Table 4-1: Sample size of each scenario

| | Scenario 1 No previous purchase | Scenario 2 Previous purchase of CSR Brand X | Scenario 3 Previous purchase of non-CSR Brand Y | Total |
|---------|---|--|--|-------|
| Total | 114 | 115 | 117 | 346 |
| Invalid | 12 | 16 | 7 | 25 |
| Valid | 102 | 99 | 110 | 311 |

4.2 The sample profile

In order to confirm that the sample distributions among the three scenarios are random as designed, we first examine if there is statistically significant difference among the three groups. The results are displayed in Table 4-2. As shown, no significant sample characteristic differences, including sex, age, education level, occupation and monthly disposable income (NT\$), are found among the three scenarios.

Of the total sample profile, the proportions between male and female respondents are fairly even: Scenario 1 being the least even had 55.9% of male respondents with the remaining being females. The most dominant age category of all respondents is "21-25 years

old” for all three scenarios, respectively 43.1 %, 43.4% and 57.3% for scenarios 1, 2 and 3. Most respondents have a master’s degree and are currently still students - this is the case in all three scenarios. As for monthly disposable income (NT\$), categories “5,001-10,000” and “10,001 – 20,000” together compose the majority of respondents in the three scenarios: 54.9%, 61.6% and 67.3% for scenarios 1, 2 and 3 respectively.

Table 4-2: Characteristics of Respondents (n=311)

| Items | | Scenario 1 (n=102) | | Scenario 2 (n = 99) | | Scenario 3 (n = 110) | |
|----------------------------------|------------------------------------|-----------------------|----------|------------------------|----------|-------------------------|----------|
| | | n | Pct. (%) | n | Pct. (%) | n | Pct. (%) |
| Sex | Male | 57 | 55.9 | 51 | 51.5 | 52 | 47.3 |
| | Female | 45 | 44.1 | 48 | 48.5 | 58 | 52.7 |
| Age | Under 20 | 9 | 8.8 | 4 | 4.0 | 5 | 4.5 |
| | 21-25 | 44 | 43.1 | 43 | 43.4 | 62 | 57.3 |
| | 26-30 | 15 | 14.7 | 4 | 4.0 | 18 | 16.4 |
| | 31-35 | 10 | 9.8 | 9 | 9.1 | 5 | 4.5 |
| | 36-40 | 16 | 15.7 | 25 | 25.3 | 12 | 10.9 |
| | Over 40 | 8 | 7.8 | 14 | 14.1 | 7 | 6.4 |
| Level of education | High school or below | 25 | 24.5 | 30 | 30.3 | 18 | 16.4 |
| | Bachelor’s degree | 28 | 27.5 | 31 | 31.3 | 36 | 32.7 |
| | Master’s degree or above | 49 | 48.0 | 38 | 38.4 | 56 | 50.9 |
| Occupation | Student | 56 | 54.9 | 48 | 48.5 | 71 | 64.5 |
| | Manufacture / electronics industry | 4 | 3.9 | 11 | 11.1 | 7 | 6.4 |
| | Business & service industry | 7 | 6.9 | 10 | 10.1 | 7 | 6.4 |
| | Government organization | 10 | 9.8 | 8 | 8.1 | 3 | 2.7 |
| | Retail & logistics | 9 | 8.8 | 10 | 10.1 | 8 | 7.3 |
| | Education | 7 | 6.9 | 7 | 7.1 | 5 | 4.5 |
| | Finance & insurance industry | 4 | 3.9 | 5 | 5.1 | 4 | 3.6 |
| | Others | 5 | 4.9 | 0 | 0 | 5 | 4.5 |
| Monthly disposable income (NT\$) | Below 5,000 | 11 | 10.8 | 6 | 6.1 | 12 | 10.9 |
| | 5,001 – 10,000 | 23 | 22.5 | 28 | 28.3 | 41 | 37.3 |
| | 10,001 – 20,000 | 33 | 32.4 | 33 | 33.3 | 33 | 30.3 |
| | 20,001 – 30,000 | 16 | 15.7 | 8 | 8.1 | 10 | 9.1 |
| | 30,001 – 40,000 | 11 | 10.8 | 11 | 11.1 | 8 | 7.3 |
| | Above 40,000 | 8 | 7.8 | 13 | 13.1 | 6 | 5.5 |

4.3 Factor analysis and reliability

Factor analysis applies to extract factors and assess the discriminant and convergent validity of the measure. Four main indicators are used as the standard criteria of validity analysis in this research: factor loading over 0.6, Eigenvalue over 1, total explained variation over 60% and KMO over 0.6. Internal consistency of Cronbach’s Alpha of each measurement

is confirmed using reliability test. Standards such as Item-to-total is over 0.3, and Cronbach's Alpha over 0.7 are the reliability criteria.

Table 4-3: Results of Factor Analysis and Reliability Analysis

| Item | Factor loading | Eigen-value | Explained variation | KMO | Item-to-total | α |
|--|----------------|-------------|---------------------|-------|---------------|----------|
| Support of CSR | | | | | | |
| 1. I consider the ethical reputation of businesses when I shop | 0.772 | 2.517 | 62.9% | 0.644 | 0.582 | 0.801 |
| 2. I avoid buying products from companies that have engaged in immoral actions | 0.698 | | | | 0.486 | |
| 3. I would pay more to buy products from companies that show care for the well-being of our society | 0.851 | | | | 0.723 | |
| 4. I would pay more to buy products from a socially responsible company | 0.842 | | | | 0.707 | |
| 5. If the price and quality of two products are the same, I would buy from a firm that has a socially responsible reputation | deleted | | | | deleted | |
| Expectation of CSR | | | | | | |
| 1. Firms have a responsibility not to ever act unethically | deleted | 1.926 | 64.2 % | 0.662 | deleted | 0.720 |
| 2. Firms have a responsibility to always act with the highest of ethical standards | 0.801 | | | | 0.539 | |
| 3. I expect the firms that I deal with to act ethically at all times | 0.742 | | | | 0.600 | |
| 4. All firms will be unethically sometimes: it is normal | 0.758 | | | | 0.487 | |
| Perceived CSR | | | | | | |
| 1. Brand X demonstrates that it is concerned with the environment. | 0.914 | 3.226 | 80.6% | 0.854 | 0.805 | 0.920 |
| 2. Brand X is involved in the community and makes investment in worthwhile causes. | 0.895 | | | | 0.804 | |
| 3. Brand X demonstrates focus on employee benefit and provides excellent work environment. | 0.892 | | | | 0.811 | |
| 4. Brand X implements good corporate governance and information transparency. | 0.891 | | | | 0.841 | |
| Purchase intention (Buying choice) | | | | | | |
| 1. Buying which brand will make you feel good about yourself? | 0.901 | 3.083 | 77.1% | 0.681 | 0.705 | 0.901 |
| 2. Buying which brand will make you feel that you are doing the right thing? | 0.881 | | | | 0.742 | |
| 3. Which brand has a higher probability of you purchasing it? | 0.876 | | | | 0.854 | |
| 4. Which brand are you more willing to buy? | 0.854 | | | | 0.825 | |

Recommended value: Factor loading: >0.6; Eigenvalue: >1; Total explained variation: > 60%; KMO > 0.6
Item-to-total: >0.3; Cronbach's Alpha > 0.7

Since the factor loading of Q5 in Support of CSR was only 0.519, it did not exceed the standard of 0.6, thus deleted from further data analysis. Since the total explained variation of Expectation of CSR only reached 54.581%, below the 60% criteria, Q1 with the lowest factor loading, 0.628, was deleted. Details regarding the validity and reliability tests of the four sets of measurement are displayed in Table 4-3.

4.4 Mean analysis of CSR research variables

To determine the CSR characteristics among the three scenario groups, mean values of the four CSR-related research variables were displayed in Table 4-4. As shown in the first two rows, there is no significant difference in the two means of CSR support and expectation among the three scenarios. Other than personal profiles listed in Table 4-2, the results of these two rows suggest the similar personal CSR characteristics across the three scenarios, which further indicates the appropriateness of random approach applied in the current experiment.

The presences of significant difference in CSR awareness and purchase intention are due to the design difference in the purchase experience of the three scenarios. Apparently, scenario 2, which is the group of CSR purchase experience or frequent buy the CSR brand X, has a score of 1.26 most close to 1. While, on the contrary, scenario 3, which is the group of non-CSR purchase experience, has a score of 2.50 most far away from 1. Therefore, consisting with our design and hypothesis (H2), respondents who are assigned to scenario2 are most likely to choose the higher priced CSR brand X to buy, while those assigned to scenarios3 are least likely, and scenario1, the control group, is in the middle. Further, probably as well because of the prior CSR purchase experience scenario, scenaio2 – the group of CSR prior experience for role play – also has the significant highest aware score about the brand X CSR poster.

Table 4-4: Mean differences in the four CSR-related research variables among the three purchase experience scenarios

| Consumers' | Scenarios | | | F-value |
|---|---|--|--|-----------|
| | 1. No particular experience (Control group) | 2. CSR purchase experience (frequent buy of X) | 3. Non-CSR purchase experience (frequent buy of Y) | |
| Support of CSR ^{a.} | 6.03 | 6.12 | 6.08 | 0.432 |
| Expectation of CSR ^{a.} | 6.34 | 6.44 | 6.27 | 2.013 |
| Awareness of a firm's CSR deeds ^{b.} | 5.96 | 6.37 | 6.10 | 6.831** |
| Purchase intention for brand X or Y ^{c.} | 2.08 | 1.26 | 2.50 | 12.681*** |

a. 7-Likert scale: 1 strongly disagree; 7 strongly agree with the given statement.

b. 7-Likert scale: 1 strongly disagree; 7 strongly agree with the given Brand X's CSR poster.

c. Semantic differential 7-point scale: 1 = higher priced CSR Brand X; 7 = non-CSR lower priced Brand Y.

4.5 Buying choice across the three scenarios

As Table 4-4 shows, the buying choice between CSR brand (X) and non-CSR brand (Y) is significantly different. K-means clustering further applies to determine the percentages of choice between the two brands: Those with scores smaller than the mean are identified as choices of X, and those over the mean are choices of Y. Table 4-5 displays these results.

The three significant t-tests in the last column of the table indicates that the choice percentages of X across the three scenarios are all significantly over those of Y. Together, they support hypothesis H1 that consumers have higher intent to purchase a CSR-related product even if its price is higher than a similar one which is non-CSR-related, regardless whether their frequent buy is CSR related.

The F-test in the last row of Table 4-5 indicates a significant difference across the three scenarios: Scenario2, i.e., CSR purchase experience group, has the highest percentage (88%), followed by scenario1 of no particular prior experience (81%), and the last scenario 3 of non-CSR purchase experience (65%). In other words, respondents who play with the assigned role that they frequently buy CSR-related goods are most prone to continue to buy, or stay with, the CSR brand X even if its price is 10% higher than the non-CSR brand. Thus, Hypothesis H2 is supported.

Table 4-5: Buying choice between CSR and non-CSR products across the scenarios

| | Choice of X (%) | Choice of Y (%) | <i>t</i> -test |
|---|--------------------|--------------------|----------------|
| Scenario 1 No particular experience (Control group) | 81% | 19% | 15.333*** |
| Scenario 2 CSR purchase experience (frequent buy of CSR X) | 88% | 12% | 16.727*** |
| Scenario 3 Non-CSR purchase experience (frequent buy of non-CSR Y) | 65% | 35% | 17.985*** |
| F-test | 4.560* | | |

* $p < .05$; ** $p < .01$; *** $p < .001$

4.6 The relationship hierarchical regression modeling

Hierarchical regression applies to test the relationship between consumers' awareness of a firm's CSR deeds and intention to buy its high priced CSR product, and if this relationship is moderated by their frequent-buy experience for hypotheses H3 and H4. For the moderation, we uses two 0, 1 dummy variables to represent respectively the two contingencies of scenario2 and scenario3. Further, demographics, including sex, age, level of education,

occupation, and monthly disposable income, are treated as control variables. Since none of them are significant, they are not removed. Table 4-6 displays the results.

Model-1 in Table 4-6 reveal a significant positive relationship (.461***) between consumer CSR awareness and purchase intention of CSR Brand. Model-2 shows that this significance remains (.464***), after the two purchase experience variables D1 and D2 and their moderations insert. Thus, hypothesis H3 is supported.

Other than the significant direct impacts of consumer CSR awareness (.464***) and purchase experience scenario on CSR brand purchasing (-.199***), Model 2 also reveal the moderating effect of the scenario due to scenario2, the CSR brand purchase experience (.113*). To simplify the comparisons, Figure 4.1 show the moderating effects among the three scenarios.

As addressed in hypothesis H4, the marketing effect of CSR is related to consumers' previous purchase experience, which is weaker (stronger) when they acknowledge (or not) the quality and value of the product due to previous experience, and thus less (more) need to rely on CSR as a signal. In other words, consumers' previous use or purchase experience will moderate the positive relationship between CSR awareness and purchase intention of a CSR-related product. Model 2 in Table 4-6 as well as Figure 4.1 support this proposition, where scenario2, the CSR experience purchase group, has the largest slope, followed by scenario 1, the no prior experience group. Scenario 3, the non-CSR experience group, has the lowest intention score and slope for choosing the CSR product. Hypothesis 4 is supported.

Table 4-6: Results of Hierarchical Regression Analysis (n=311)

| | Purchase intention of CSR brand X | |
|---|-----------------------------------|------------------|
| | Model 1 | Model 2 |
| Consumer awareness of firm's CSR (Z) | 0.461*** | 0.464*** |
| Scenario 2: CSR purchase experience (D1) | | 0.051 |
| Scenario 3: Non-CSR purchase experience (D2) | | -0.199** |
| Z × D1 | | 0.113* |
| Z × D2 | | 0.043 |
| F-Value | 83.203*** | 22.991*** |
| R ² | 0.212 | 0.274 |
| Δ R ² | - | 0.062 |
| VIF Range | 1.000 | 1.000 – 1.453 |

Note: *p < .05; **p < .01; ***p < .001

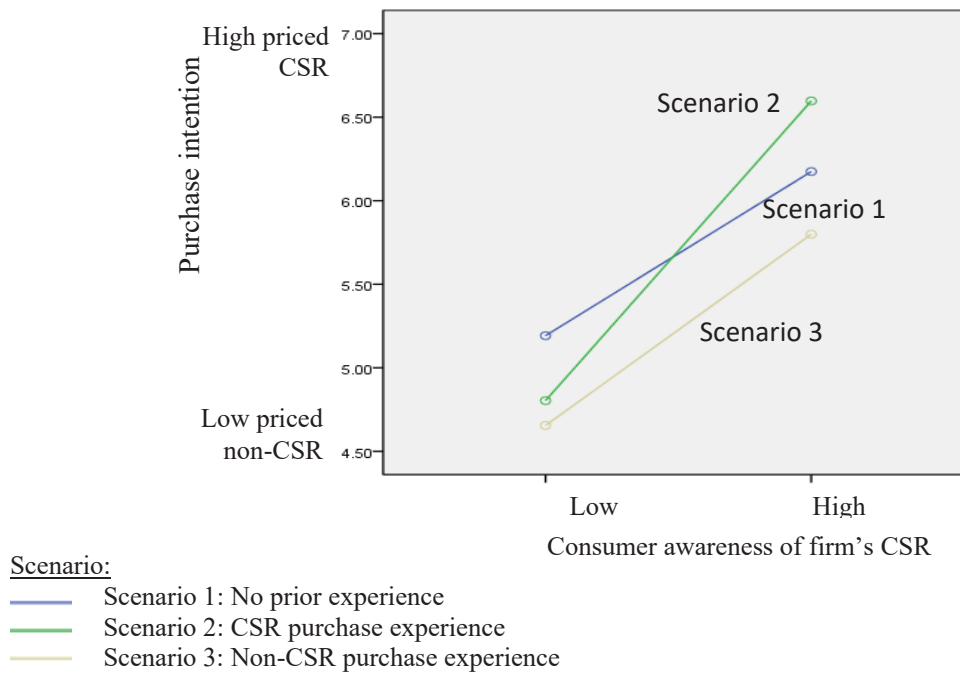


Figure 4.1: Moderating Diagram

4.7 Tolerance of price increment

To test the price gap that consumers would tolerate to buy the CSR milk good when they originally choose to buy the high priced CSR milk of \$15 more, \$174 and \$159, a price increment table is designed. Table 4-7 show these ratings based on a 7-point scale, where 1 implies definitely staying with the CSR milk, while 7 definitely not. Therefore, a rating of 3 or below implies intention of staying with the CSR one, otherwise it is not. As shown, it thus is apparent that scenario 2, the CSR frequent buy group, has the highest tolerance up to \$40, followed by scenario 1 of no particular experience which is up to \$30. As before, scenario3, the non-CSR frequent buy group, has the least tolerance of price increment, \$25.

Table 4-7: Tolerance of price increment to stay with the CSR milk when originally choosing the high priced CSR milk of \$15 more

| If the price gap ^a increased to: | Scenario 1 No particular experience (Control group) | Scenario 2 CSR purchase experience (frequent buy of CSR X) | Scenario 3 Non-CSR purchase experience (frequent buy of non-CSR Y) |
|---|---|--|--|
| \$20 | 2.05 | 1.56 | 2.41 |
| \$25 | 2.56 | 1.83 | 3.10 |
| \$30 | 3.22 | 2.18 | 3.85 |
| \$35 | 4.09 | 2.81 | 4.65 |
| \$40 | 4.68 | 3.19 | 5.03 |

a. Originally, the price of CSR brand X is \$174, and non-CSR brand Y is \$159.

Chapter 5 Concluding Remark

In the competitive market today, CSR has become a popular practice. Businesses of all sizes take resources from the society and community where they exist. In return, they require to contribute beyond their obligations required by the law. Taking milk as an example for experiment, this study demonstrates that consumers' awareness of a firm's CSR doings and their prior personal purchase experience – purchase of CSR or non-CSR product, is related to their intention of buying a high priced CSR product from the firm. It appears that CSR can create a positive marketing effect to both the society and the firm. Overall, we have demonstrated the following works in this second year project:

- (1) CSR creates marketing effect in that it can enhance consumer's purchase intention of high priced CSR goods after they receive and are aware of CSR related advertisements about the firm's CSR performance. Although this result is similar to the prior research of Carvalho et al. (2010), we further found that the price gap tolerance for the consumers to stay with a CSR product can be up to more than twenty percent difference.
- (2) Different from the prior research, this project contributes to the CSR marketing literature by exposing how consumers with different prior purchase experience, either frequent buy of a CSR product or not, can influence their staying with a CSR related product when they are aware of the CSR deeds of the firm. In particular, a firm that conducts CSRs seemingly is able to attract consumers to buy their products more than one which does not do so. It appears that CSR implies better product quality and high acceptable price to customers.
- (3) Further, this prior experience of frequent buy can moderate the impact of a firm's CSRs on consumers' choice of this firm's high priced CSR product. The impact is stronger for those who are used to, or have no prior experience of, buying CSR goods, while weaker for those who are not. This is because that CSR effect is weaker when consumers acknowledge the quality and value of the product due to previous experience, and thus less need to rely on CSR as a signal. Regardless, CSR seemingly able to generate consumer's loyalty.
- (4) In addition, it was evident that consumers' tolerance of price difference may vary depending on their previous purchase experience. Consumers who have previous purchase experience of CSR product appear to be relatively higher tolerance to price difference between CSR and non-CSR product. This means their determination to support CSR products is stronger as they would continue purchasing it even if they are more expensive, which as shown can be up to twenty percent difference.

Overall, due to its effectively retaining old customers and further attract new ones with no previous purchase experience, we may conclude the positive effects of CSR. However, firms must confirm their CSR deeds and reputation. Advertisement or allowing consumers to acknowledge the firm's CSR practices next to the products may help to increase the exposure of the firms for their CSR deeds. The level of CSR support via purchasing behavior does vary among consumers of different purchase experience: consumers with previous purchase of CSR product are the most supportive, followed by no previous purchase experience, and finally consumers with previous purchase of non-CSR product. This means that with the presence of CSR, consumers can accept a higher price, which can be up to twenty percent as shown.

There are some limitations in this research. First of all, a relatively cheap commodity was used in this experiment. Hence it is uncertain whether or not the current results would be identical for different products. Secondly, this study focuses only on CSR advertisement in supermarkets. However, other advertising mediums on the Internet are highly common today. Future research can determine the effect of CSR advertisement on the Internet and other media to depict a bigger picture. In conclusion, firms should acknowledge the importance of CSR activities.

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Arguing the Value of Product Quality Signaling in the Presence of Negative Publicity

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Drawing on argumentation and signaling theories, this study designs an escalating warrant model and examines the manner in which it connects to the influence of negative publicity. A parsimonious framework is developed for forming the multiple product warranties and assessment of the separate and simultaneous effects. The experiment shows that consumers do reason with sellers' product quality information, while they are easier to convince and infer a higher level of seller credibility when there are more types of warrant. However, this positivity can be reversed and cause significantly greater damage to the seller's standing in the face of negative publicity.

INTRODUCTION

Information asymmetry grants sellers better knowledge about the quality of their products than consumers have, especially for experience goods (Akerlof, 1970; Spence, 1974; Rap & Nergem 1992; Fang, Gammoh & Voss, 2013). Seeking to reduce their risk and avoid being cheated, consumers seek extrinsic market cues of unobservable product quality (Chatterjee, Kand & Mishra, 2005). In response, sellers issue product claims, from which consumers draw inferences and product quality predictions. By reasoning on the basis of the available data and evidence provided by sellers, consumers determine the argument in practice. Analyzing such claim–inference links to clarify the communication structure between two parties, such that one side seeks to interpret the claim and signals issued by the other party as credible or not in practice, is important (Toulmin, 2003). Yet insufficient empirical studies describe how consumers assess product quality cues from an argumentation perspective.

Signaling theory identifies multiple marketplace quality cues that high-quality sellers can use to distinguish their products from those of lower quality providers (Kirmani & Rao, 2000), such as advertising (e.g., Kihlstrom & Riordan, 1984), price (e.g., Bagwell & Riordan, 1991), brand, reputation (e.g., Erdem & Swait, 1998; Rao, Qu & Ruekert, 1999), warranties, and third-party certification (e.g., Wiener, 1985; Boulding & Kirmani, 1993; Chatterjee et al., 2005; Dewally & Ederington, 2006; Chu & Chintagunta, 2011; Akdeniz, Calantone, & Voorhees, 2012; Fang, Gammoh, & Voss, 2013). Although their marketing purposes differ, these signals are similar in their effects for reducing information asymmetry, because they enable consumers to make their own quality inferences about unobservable product features (Kirmani & Raom 2000). Sellers also provide multiple cues, including both marketing-related signals (e.g., packaging, advertising, warranties) and nonmarketing-associated ones (e.g., third-party reviews) (e.g., Akdeniz et al., 2012). In the food industry for example, sellers often provide warranties (e.g., “Money back if not satisfied”) together with certification information (e.g., “USDA organic”). Third-party certifications differ from

warranties in that they require upfront investments by the seller, to meet the standards for accreditation by a certifying institution (Rao et al., 1999). This additional layer of complexity in the quality evaluation process demands further investigation, to explicate how the signals might combine to induce greater recognition (Akdeniz et al., 2012).

Therefore, this study seeks to address two key quality signaling research questions. First, drawing on Toulmin's (1958, 2003) arguments and Brockriede & Ehninger's (1960) warrant theory, we investigate if more different signals cause consumers to deem quality information more credible. We propose an escalating quality signaling model, which starts with product features, then adds signals pertaining to the warranty, insurance, and third-party certification, to test this notion. Second, drawing on negative publicity (Mizerski, 1982; Dean, 2004) and negativity effect (Herr, Kardes & Kim, 1991; Ahluwalia, 2002) theory, we consider perceived credibility changes of seller's standing that result from the influence of situational information, in interaction with consumers' quality concerns. To test this effect, we investigate a negative context, because adverse situations tend to have greater influences on consumption-related attitudes (Herr et al., 1991; Dean, 2004).

In turn, this study makes several contributions to quality signaling research. First, we provide a parsimonious conceptual framework for describing the presence of multiple product warranty signals and assessing their separate, simultaneous, and relative effects. Second, the related experiment reveals that more warrants result in greater perceptions of credibility-related information. However, this positive effect reverses and becomes significantly negative if a negative product incident prompts consumers to shift their focus away from the seller-provided signals and toward the negative information. Consumers also might be less tolerant of sellers that bluff and try to cheat them by issuing signals of quality but not genuine quality. We also show that consumers' sensitivity to quality, rather than price or convenience, moderates this negative effect.

ARGUMENT PATTERNS

In practice, people rarely apply highly disciplined logic, but a consistent argument model can explicate their implicit practical reasoning structures (Toulmin, 1953; 2003; Berente, Hansen, Pike & Bateman, 2011). Toulmin (2003) identifies six elements that constitute an argument in practice: claims, data, warrants, backing, qualifiers, and rebuttals. Thus an entity makes an explicit claim and substantiates it with data and warrants, to persuade others to accept it, while also anticipating counterclaims or disputes. A claim in this context refers to "the conclusion whose merits we are seeking to establish," and the data are "the facts we appeal to as a foundation for the claim" (Toulmin, 2003, p. 90). Warrants connect the claim with its supporting data, such that they reflect the principles of inference that indicate whether moving from the data to the claim is appropriate (Berente et al., 2011). Backing pertains to other assurances, without which the warrants would possess no authority (Whithaus, 2012).

This theory has been applied successfully in empirical studies in various contexts, including business ethics (Schmidt, 1986), classroom discourses (Jimenez-Alexiandre, Rodriguez & Duschl, 2000), Internet learning (Clark & Sampson, 2007), website Q&As (Savolainen, 2012), organizational studies (Green, Li & Nohria, 2009), and virtual worlds (Berente et al., 2011). Yet experiments based on argument theory still confront challenges. In particular, scholars have questioned how to distinguish objectively among the data, warrant, and backing elements (e.g., Clark & Sampson, 2007). The difficulty associated with differentiating data from warrant, and warrant from backing, can produce inaccurate results (Savolainen, 2012). In addition, because qualifiers serve as the boundary of a claim, and rebuttals envisage its objection, these two elements are not forms of evidence but rather are field-dependent actions that may alter the direction of an argument (Whithaus, 2012). Argumentation is not restricted to dealing with overt disagreements or establishing what is objectively true; it also can constitute the details of what a person considers to be true (Savolainen, 2012). Therefore, some limited models exclude qualifiers and rebuttals and employ only the first four elements—claim, data, warrants, and backing—to verify the claim-evidence relationship associated with an argument. Eeduran, Osborne & Simon (2005) also recommend collapsing data, warrants, and backing into a single "grounds" category that reflects the structural aspects of an argument. Fairclough (2003) instead suggests three core patterns: claim, grounds, and warrants, where grounds denote data or evidence, and warrants include backing. Savolainen (2012) instead applies a composite grounds category together with two new components, counterclaim and support, in his conceptual framework.

These diverse applications and models concur about the legitimacy of a limited version of Toulmin's (2003) model for everyday discourse though. A limited argument process, which moves the recipient from a naïve or unforeseen status to a claim, through the endorsement of various warrants, is analogous to the process by which sellers deliver product quality cues to consumers to relieve their doubts or increase their trust. Although the connections depend on the field, product feature descriptions tend to be explicit, similar to data, whereas warranties or certifications are implicit, similar to warrants assured by backing (Brockriede & Ehninger, 1960). Therefore, we focus on the composite category of warrants as factors that form the argument underlying quality claims.

STUDY 1: NUMBER OF WARRANTS AND THE ESCALATING EFFECT

Studies of signaling theory usually assume that the parties involved in a deal possess different amounts of information, and this difference in the information and the terms of deal between the parties, or information asymmetry, significantly affects the deal (Akelof, 1970; Spence, 1974). To achieve better balance, the parties that possess more information, such as sellers, send "warrants" to support the claims they make.

On the basis of the monetary costs incurred, Rao et al. (1999) identify two broad categories of quality signals: dissipative, such as certifications, which require upfront expenditures to meet accreditation standards, and nondissipative, such as warranties, which do not demand upfront investments but promise compensation for future losses if the quality claim fails. Kirmani & Rao (2000) refer to these two types as default-independent and default-contingent signals, because monetary detriments depend on whether firms default on their claims. Akdeniz et al. (2012), in comparing the moderating influences of brand reputation and third-party reviews, instead suggest labeling certifications as nonmarketing-controlled cues, whereas brand, price, and warranty represents marketing-controlled cues. With their focus on consumption behavior, Chatterjee et al. (2005) regard certifications as promotion focused and warranties as prevention focused, because consumers are motivated to seek some gain (certification) or avoid some loss (warranty). Across these different frameworks though, regardless of whether the purpose is financial or marketing, product quality cues serve as warrants for arguments, designed to inspire consumers to move from a sense of doubt toward trusting the seller's claim as appropriate.

Brockriede & Ehninger (1960), using Toulmin's (1958) theory, identify seven types of warrants: cause, sign, generalization, analogy, parallel case, authority, and principle. Berente et al. (2011) study discursive sensemaking by business professionals in a virtual word and recategorize the warrants into five modes of rationality, related to various theories associated with information, cognition, institution, and organizational values. For example, *causal* refers to rational sensemaking based on information processing and contingency theories; *analogy* and *parallel* constitute anchored sensemaking, in relation to experienced phenomena, reflecting theories of social representations and frames of reference; *sign* implies mimetic sensemaking generated through imitation; and *authority* relies on standards, founded on institutional and cultural norm theories.

We adopt Berente et al.'s (2011) warrant model of argumentation to design an escalating warrant model of product signals as claims. We assume equal effects across various warrants, even though some signals for some products may be more effective than others, which might depend on investment amounts (e.g., Chatterjee et al., 2005; Dewally & Ederington, 2006). Our model comprises four warrant arrays of different types, starting with product features (causal warrant), escalating in stages to a money-back guarantee (analogy warrant), insurance (authority warrant), and certification (authorized sign warrant). Because consumers often consider each product cue in reference to the others, we propose that consumers use sellers' claims of various warrants in product signaling to argue to themselves about the amount of warrants contained in the claim, as well as whether the warrants are comprehensive and useful for supporting that claim. Thus,

- H1: When there are more warrants of different kinds in a seller's product claim, consumers self-argue that the seller offers a stronger warrant and believe that the warrants are more comprehensive and useful to allow them to accept the claim.

H2: Consumers' perceptions of a seller's credibility increase with the number of warrants self-argued by consumers in support of the claim of the seller.

STUDY 2: INFLUENCE OF NEGATIVE INFORMATION ON WARRANTS

Marketers hope that their target consumers' positive impressions of product warrants enhance their brand's standing. However, problems can arise if the warrants are involved with negative publicity that damages the brand's public credibility. Despite the need for attention to this potential effect, academic literature seldom considers the influence of reversed credibility, in accordance with elaborations on warrant signaling.

Publicity is more influential than company-controlled activities (Bond & Kirshenbaum, 1998). A wealth of scholarly examples reveal its benefits and risks, including the outcomes for firm reputation, goodwill, and publicity (Decker, 2012); interactions of advertising coupled with positive and negative publicity (Kim, Yoon & Lee, 2010); anger and negative word of mouth due to crises that lower product purchases (Coombs & Holladay, 2007); the effect of negative publicity on celebrity endorsements (Thwaites, Lowe, Monkhouse & Barnes, 2012); and claims of corporate social responsibility in crisis communication, as a means to counter negative publicity (Vanhamme & Grobben, 2009). Most research affirms a stronger effect of negative information on people's beliefs and judgments compared with similar amounts of neutral or favorable information (e.g., Baumeister, et al., 2001; Kensinger & Corkin, 2003). People tend to weight negative information more than positive information in evaluating people, objects, and ideas (Mizerski, 1982). Because of its higher credibility and the negativity effect, popular media also prefer to report bad news (Dennis & Merrill, 1996).

On the basis of negativity effect theory, Louie & Obermiller (2002) show that after a negative event, consumers develop more unfavorable attitudes toward an endorser they perceive as responsible than one that they regard as irresponsible. White et al. (2009) go further and explain the phenomenon according to transference of affect theory, such that negative meaning becomes part of the endorser's bundle of meaning, and consumers metaphorically transform them into perceptions of the endorsed product. Thwaites et al. (2012) also show that negative publicity has the most damaging impact when a celebrity signal appears well matched with a product, in terms of the celebrity's credibility, but the impact is less severe when the celebrity's signal constitutes a poor match with the endorsed product. The better the match, the greater the discontent when the promised credibility gets damaged by negative information. Chatterjee, Kang & Mishra (2005) indicate that consumers associate a warranty or certification with judgments of power; consistent with their elevated expectations, they express greater dissatisfaction if the signal proves to be false. Similarly, consumers should perceive less credibility in a claim with multiple types of warrants than in one with fewer types when they confront negative information. Thus,

H3: Negative information negatively influences consumers' perceptions of a seller's credibility in relation to its claim of a product warrant; the magnitude of this negative influence increases with the number of different warrants signaled in the claim.

Signals attract consumers differently, depending on their tendency to engage spontaneously in effortful thinking (Cacioppo & Petty, 1982). Those who are more thoughtful are more likely to engage in complicated thinking and trace information cues. Chatterjee, Kang & Mishra (2005) assert that three issues likely moderate the relative persuasive power of signals to consumers: (1) need for cognition, which implies that cognitive sophistication is required to recognize relative signaling nuances (Cacioppo & Petty, 1982); (2) a motivation to seek gain or avoid losses, in line with regulatory focus theory (Higgins, 1997); and (3) information that conflicts with the signal, according to an information processing perspective (Maheswaran & Meyers-Levy, 1990), which asserts that consumers are more careful when processing negative information, because the publicized information does not come from the sellers, so they consider it more objective.

Previous research on the boundary conditions of negativity effects also identifies a difference between committed and non-committed consumers when they process the same negative information. Ahluwalia et al. (2000, 2002) show that committed consumers tend to counterargue against negative information about a beloved brand rather than passively accept it; non-committed consumers accept it. Thwaites et al. (2012)

study different levels of product involvement and their effects in moderating the influence of negativity on consumers' attitudes toward endorsers' credibility. Consumers who exhibit sophisticated thinking are less likely to take publicized negative information for granted. In turn, consumers who focus more on quality should be more likely to confirm the nature of the quality warrants, to which they pay routine attention. Thus, with regard to customers focused on quality or on other elements, we predict:

H4: Consumers' quality concerns moderate the influence of negative information on their perceptions of a seller's credibility in relation to its claim of a product warrant, such that the negative impact is weaker for consumers who have a stronger quality focus than among those with a weaker quality focus.

EXPERIMENTAL PROCEDURE

Quality Signaling Model of Escalating Warrants

To examine the research questions, we adopt an experimental approach with two hypothetical situations to measure changes in perceived credibility due to a negative publicity incident. Experimental approaches have been used widely to test the significance and implications of crisis management (Laufer et al., 2005; Lee, 2004; Siomkos & Kurzbard, 1994). In the first stage, we present the scenario design and the seller's quality signaling, with bubble tea as the focal product. This Taiwanese product refers to a wide variety of small, refreshing tea beverages that stores can serve cold or hot, with chewy, natural tapioca balls that consumers suck up through a fat straw. Its average price is about US\$2 for each 400 cc cup (~TW\$60). Taste, price, quality, and food safety are the central selection attributes. In addition, a series of well-publicized food safety incidents in Taiwan recently make this product setting appropriate (<http://en.wikipedia.org/wiki>).

As illustrated in FIGURE 1, Experiment 1 comprises four scenarios that tell a similar story but vary in their signals of quality warrants, escalating from one to four warrants of different types. The first scenario provides only the product attribute information as the warrant: "100% Natural Tea Drink, Absolutely Nothing Artificial!" The second scenario describes the same product attributes but also adds a warranty to induce a sense of gain if something bad were to happen, to facilitate risk avoidance: "Guaranteed Compensation of US\$16 if Found Fake by Governmental Food Safety Regulation!" (i.e., eight times the original price). A third scenario goes further by adding a large, insured monetary compensation: "US\$650,000 Insurance to Cover All Losses!" (325,000 times of the original price, which makes the payback difficult to count). Finally, the fourth scenario included a third-party certification, with the statement, "International SGS Certification: No. VA/2013/57439," appearing next to a bright-colored, round logo with mark "ISO 9001 and SGS System Certification."

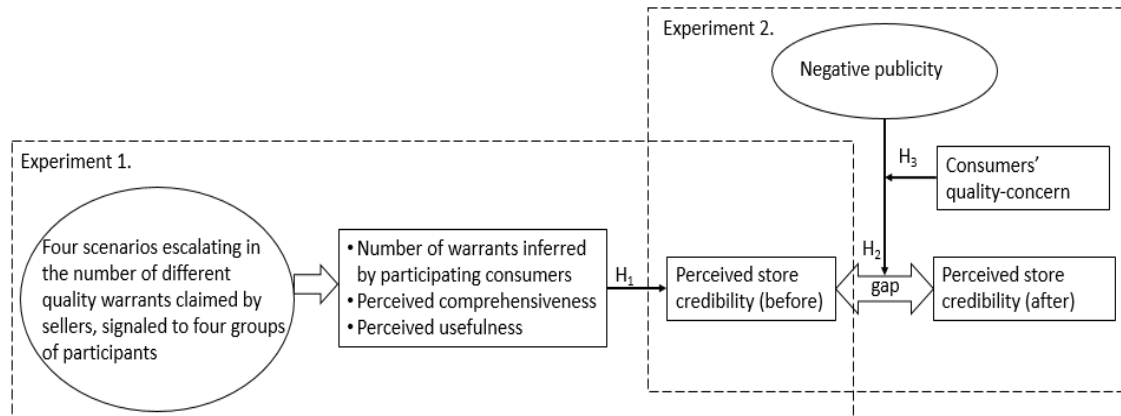
The story for Experiment 1 indicates that two friends walk by a tea store and see a machine that standardizes the amount of sugar included in the tea. They start talking about how well the machine could help the tea store and shorten customer wait times, thus improving the efficiency of the purchase process. During this conversation, they also see the store's claim of "warrants" for its tea products. Each participant then read one of the four escalating warrant scenarios, through a random assignment. Next, participants completed the first part of a questionnaire, which measured their awareness of the number of warrants signaled in the scenario, their perceptions of the comprehensiveness and usefulness of product quality information revealed in the scenario, and their overall perceptions of the credibility of the store. The respondents were 180 graduate and undergraduate students at a large university in Taiwan.

These same participants then continued on to Experiment 2, which presented a news report by a well-recognized consumer foundation that explains:

Recently it has become popular for local tea stores to use a kind of sugar-giving machine in tea making (a picture of the machine is attached). Although it expedites the process, according to our recent tests, the machine seems unable to function with naturally made cane sugar, because it can only fully process thick liquid. Natural sugar instead is made of natural water and easily crystallizes at room temperature. Therefore, stores that use these machines probably are using non-natural sugar in their tea products. Consumers diagnosed with the following diseases should avoid consuming too much artificial sugar: blood vessel disease, fat liver, high pressure, diabetes, dementia, etc.

After reading this news report, the participants completed the second part of the questionnaire, which featured the same store credibility measures and also asked for demographic data (gender, age, tea purchasing frequency), and ratings of the participants' personal attention to food safety in their daily practices (1 = very rare to 5 = very often).

FIGURE 1
THE RESEARCH FRAMEWORK



Measurements

Manipulation Check.

To check the validity of the escalating warrant model, we used a single item and asked participants to indicate how many warrants they found in Experiment 1. Rebuttals are anticipated, and biases are possible in argument claims (Toulmin, 2003). Therefore, the number of warrants self-argued by participants should match the actual number of warrants signaled, to confirm validity.

Argument Comprehensiveness and Usefulness.

These two measures pertain to consumers' sense of the comprehensiveness and usefulness of the information contained in the four escalating warrant scenarios. Argument comprehensiveness consists of three self-reported items pertaining to the completeness, sufficiency, and accuracy of the claim (Siegal, 2003; Bailey and Pearson, 1983). Information usefulness also comprises three items, asking participants if they perceive that the information is valuable, informative, and helpful (Siegal, 2003; Bailey & Pearson, 1983). Both measures use two-sided, seven-point, question-based option scales (e.g., incomplete–complete, insufficient–sufficient, not valuable–valuable). Thus, a rating at the midpoint of 4 implies a neutral evaluation. Confirmatory factor analyses indicated the discriminant and convergent validity of both measures. The Cronbach's alpha reliabilities were 0.911 for comprehensiveness and 0.901 for information usefulness.

Store Credibility Change due to Negative Publicity.

We measured consumers' perceptions of the store's credibility, in response to the four escalating warrant scenarios, both before and after they read the negative publicity report. The six items include questions about whether the store is experienced, skillful, possessed of know-how, trustworthy, dependable, and honest (modified from Newell & Goldsmith, 2001). The first three items thus refer to professionalism, and the latter three are about reliability. The factor analysis suggested integrating these six items into one factor for both the pre- and post-publicity situations. Confirmatory factor analyses also revealed satisfactory discriminant and convergent validity; the Cronbach's alpha reliabilities were 0.884 and 0.893, respectively. The difference between the pre- and post-publicity ratings, "after minus before", indicated the changes in perceived store credibility, due to negative publicity.

RESULTS

Manipulation Check

TABLE 1 first verifies whether the escalating effects among the four warrant scenarios are recognized by the participating consumers using the following regression model:

$$\text{Number of warrants inferred by consumers} = 0.79^* \times \text{Product features} + 0.48^{**} \times \text{Money back} + 0.87^{***} \times \text{Insurance} + 0.72^{***} \times \text{Certification [claimed by sellers]} \quad (1)$$

where, as designed, each warrant is set as a (1, 0) binary variable in terms of the four warrant scenarios, starting with a simple description of the product features, then a warrant is added each time in the order of money back warranty, insurance compensation, and third-party certification (** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$).

The model has a R^2 value of 0.532 and an F value of 27.903^{***}, and the four β coefficients are all significant, thus confirming the escalation. The higher significance of the β values in model (1) also suggests that the effects of the two warrants that are backed up by a third party, namely insurance ($\beta = 0.87$, $p < 0.001$) and certification ($\beta = 0.72$, $p < 0.001$), are more significant than the two self-supported warrants of product features ($\beta = 0.79$, $p < 0.05$) and a money-back guarantee ($\beta = 0.48$, $p < 0.01$).

Different Warrant Types Make the Information More Convincing

TABLE 1 also illustrates the standard errors associated with the β coefficients and the differences in the perceived usefulness and comprehensiveness of the information between the escalating warrant scenarios of the seller and the number of warrants inferred by the consumers. FIGURE 2 goes further to give a graphic interpretation of these variables. Together, these numerical and graphic data explain that the warrants inferred by consumers deviate from those that the sellers intend to deliver. Through self-argument, the participating consumers decide what they consider to be true regarding the claims of the sellers, and generate their own ideas regarding the information to argue for the quality. Apparently, according to the findings in TABLE 1 and FIGURE 2, when sellers claim more types—not just quantity—of warrants, consumers acknowledge a larger number of warrants and in turn find the information to be more comprehensive and useful. Thus, in support of H1, we conclude that consumers do argue with sellers' product cues, and that they are easier to convince when there are more types of warrants available.

TABLE 1
SIGNIFICANCE OF THE FOUR WARRANT SCENARIOS, NO. OF WARRANTS INFERRED AND THEIR INFORMATION COMPREHENSIVENESS AND USEFULNESS

| Scenario | | No. of warrants inferred by consumers | | | | | | | Perception ^{b. c.} | |
|----------------------------------|-----------------------|---------------------------------------|-----|-----|-----|-----|------------------------|----------------------|-----------------------------|-------------------|
| No. of warrant claimed by seller | The escalated warrant | 0 | 1 | 2 | 3 | 4 | Average | β a. b. coeff. | Usefulness | Comprehensiveness |
| 1 (N=40) | Product features only | 8 | 20 | 12 | 0 | 0 | 1.0 | 0.79* | 3.7 | 3.4 |
| 2 (N=42) | Money back | 5 | 18 | 13 | 6 | 0 | 1.5 | 0.48** | 4.7 | 4.5 |
| 3 (N=49) | Insurance | 0 | 5 | 24 | 16 | 4 | 2.4 | 0.87*** | 4.8 | 4.6 |
| 4 (N=49) | Certification | 0 | 0 | 11 | 23 | 5 | 3.1 | 0.72*** | 4.9 | 4.8 |
| | Usefulness | 2.7 | 3.9 | 4.6 | 4.8 | 5.2 | F-value: 8.71*** b. d. | | | |
| | Comprehensiveness | 3.2 | 3.9 | 4.7 | 5.0 | 5.5 | F-value: 9.17*** b. d. | | | |

a. Result of regression with each warrant set as (0, 1) binary

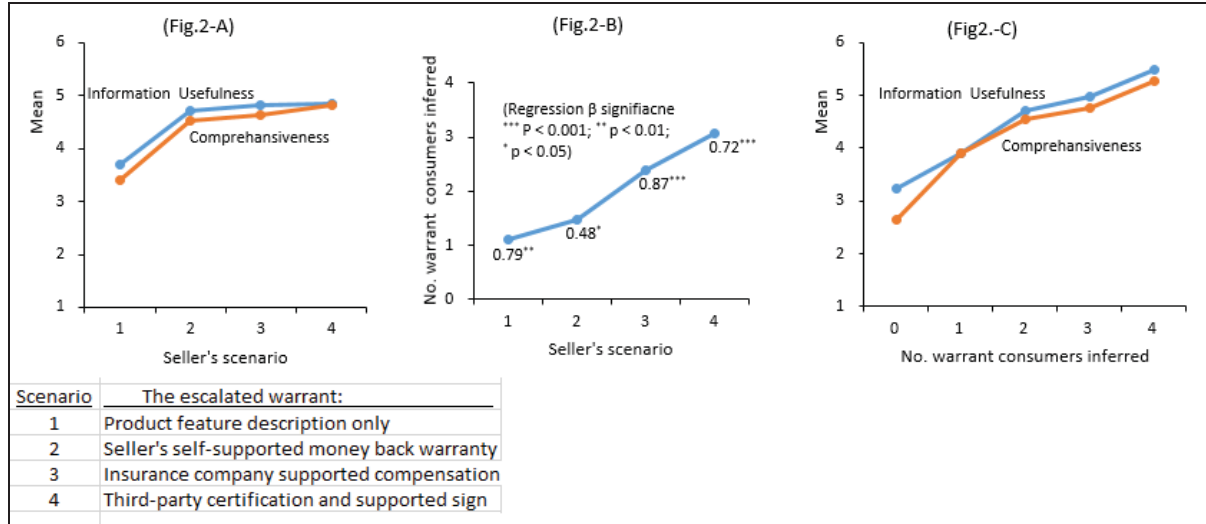
b. The model controlled the effects of sex, education, monthly allowance, and purchase frequency.

c. The differences are only significant between the first two.

d. The differences are significant between each pair of the four scenarios.

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

FIGURE 2
EXPLANATION OF TABLE 1 IN TERMS OF DIAGRAMS



The More Inferred Warrants, the Higher the Store Credibility

Store credibility concerns the consumer-based perception of a store's overall standing, whereby its relations with particular product warrants are apparently not direct. Moreover, as addressed, due to argument deviation, the inferences of consumers often differ from those intended by the sellers. Thus, it is the consumers' interpretation of the sellers' cues that counts. This divergent and indirect relationship suggests that a seller's product cues affect store credibility through the consumers' inferences. A mediation approach, which considers the mediation of a consumer's inferred number of warrants and their usefulness and comprehensiveness for argument, is thus applied to solve the connection. Several criteria must be met to demonstrate that the value differences account for a mediator: first, the assumed mediator should predict the dependent variables; second, when the mediator and independent variables are simultaneously entered into a model to predict the dependent variable, the coefficient of the independent variables should decrease, and the coefficient of the mediator should be less affected (Baron & Kenny, 1986). The effects of the demographic variables are controlled.

Following these criteria, TABLE 2 shows the results of three models: Model 1 refers to the effect of a single warrant claimed by the seller, Models 2 insert the mediator of number of warrants inferred by consumers, and Model 3 inserts all variables, including information usefulness and comprehensiveness. Comparing these three models, it can be seen that the significant effect given by the single variable of a seller's claimed warrant in Model 1 disappears in Models 2, when the consumer's inferred number of warrants enters and has a significant effect. In Model 3, the consumer's inferred warrant and the perceived comprehensiveness of the argument are the two variables of significance. Thus, in support of H2, by arguing the claimed warrant and its comprehensiveness, consumers infer the store credibility, and the more warrants they infer, the higher the store's perceived credibility.

Influence of Negative Publicity: More Inferred Warrants Lead to More Credibility Loss

TABLE 3 shows the effect of negative publicity on consumers' perceived store credibility. As shown, before consumers are given the negative information, the perceived store credibility increases with the number of inferred warrants, but afterward the value becomes random. In particular, the difference between before- and after- the negative publicity, "the after minus the before," is negative and the magnitude increases with the number of warrants that consumers infer. Therefore, in support of H3, negative information has a negative influence on the consumers' perceived store credibility, and the magnitude of this negative effect increases with the number of different product warrants claimed.

TABLE 2
THE MEDIATION OF NO. OF WARRANTS INFERRED ON THE RELATIONSHIP BETWEEN
SELLER'S WARRANT CLAIM AND PERCEIVED STORE CREDIBILITY ^a.

| Dependent Independent variables | Consumers' Perceived Store Credibility | | |
|--|--|---------|----------|
| | Model 1 | Model 2 | Model 3 |
| No. warrants claimed by seller | .24*** | -.04 | -.07 |
| No. warrants inferred by consumers | | .37*** | .21* |
| Perceived comprehensiveness for argument | | | .37*** |
| Perceived usefulness for argument | | | .11 |
| Model F-value | 4.25*** | 4.79*** | 11.37*** |
| R2 | .11 | .18 | .35 |
| Δ R2 (Compared to Model 1) | --- | .07*** | .24*** |

a. All models controlled sex, education, monthly allowance, and purchase frequency.

*** P < 0.001; ** p < 0.01; * p < 0.05

TABLE 3
CHANGE OF PERCEIVED STORE CREDIBILITY DUE TO NEGATIVE PUBLICITY:
AFTER-BEFORE DIFFERENCE

| No. warrants inferred by consumers | Perceived store credibility | | |
|---------------------------------------|----------------------------------|---------------------------------|----------------------------|
| | Before the negative publicity | After the negative publicity | After-before difference |
| 0 (N=13) | 3.39 | 2.55 | -0.84 |
| 1 (N=43) | 4.31 | 3.21 | -1.10 |
| 2 (N=60) | 4.49 | 3.02 | -1.47 |
| 3 (N=46) | 4.88 | 3.13 | -1.74 |
| 4 (N=19) | 5.09 | 3.33 | -1.76 |
| F-value ^a . | 7.48*** | 1.28 | 3.58** |

a. The effects of sex, education, monthly allowance, and purchase frequency are controlled.

*** P < 0.001; ** p < 0.01

Consumers' Quality Concerns' Moderation of the Influence of Negative Publicity

FIGURE 3 illustrates in graphical form how consumers' quality concerns affect the loss of store credibility due to negative publicity. It is drawn in line with the moderating regression model:

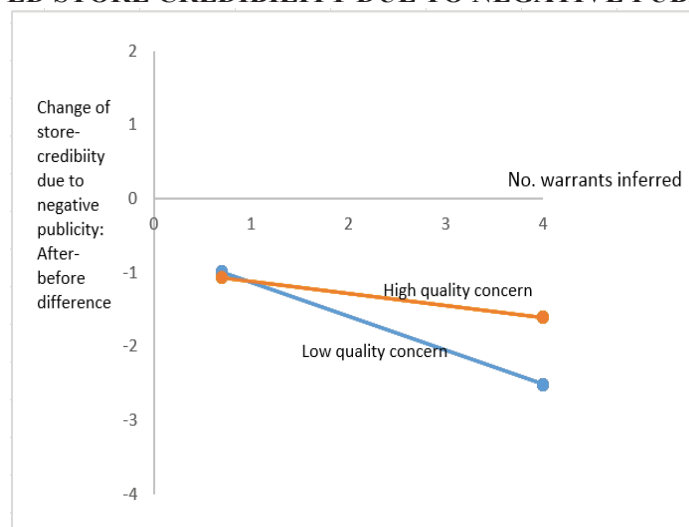
Loss of store credibility due to negative publicity: after-before difference = $-0.59^{***} \times \text{Number of inferred product warrants} + 0.10 \times \text{High/low quality concern} + 0.11^{+} \times \text{Interaction of the two} + \text{controlling of personal data (insignificant)}$ (2)

where *** p < 0.001, + p < 0.10, and the effects of sex, education, monthly allowance, and tea milk purchasing frequency are controlled. The high- and low-quality concern groups are those who respectively rated above (N = 45) and below (N = 60) the medium score 3, excluding 3, of the 5-point product feature scale during daily food shopping. The significant positive correlation, $r = 0.37^{***}$, between this high/low grouping and the quality caring variable—product quality receiving the most care in shopping—verifies the

appropriateness of this grouping procedure. The correlation test also shows that the high-quality concern group has a lower purchase frequency than the one of low concern ($r = -0.27^{**}$, $^{**}p < 0.01$). The consumers who are most concerned about high quality are more cautious in making purchases.

FIGURE 3 provides a visual depiction of the differences in the slope and intercept of this moderation model. It shows that, with a smaller negative slope, the high concern group accounts for less of the decrease in the store credibility. Stated another way, consumers who care less about product quality are more easily affected by negative publicity and are more likely to lower their previously good impression of a store. Thus, in support of H4, consumers' quality concerns moderate the influence of negative information, whereby a negative effect is larger with consumers who are less concerned about quality than among those who are more concerned.

FIGURE 3
THE MODERATING OF CONSUMERS' HIGH/LOW QUALITY CONCERN ON THE CHANGE OF PERCEIVED STORE CREDIBILITY DUE TO NEGATIVE PUBLICITY



DISCUSSION AND CONCLUSION

In the promotion of product quality, although the sellers initiate the signals, it is the consumers who evaluate the implications to make the final quality inference. However, in practice, people seldom use highly disciplined logic in processing information (Toulmin, 2003). Rather, they apply a range of common sense justifications to argue the veracity of sellers' claims and decide whether they want to move to the claims based on the evidence provided. Thus far, the quality-signaling literature fails to consider this. Our findings add to the literature, through an explicit, consistent argument model, the ability to make consumers' implicit structures of practical reasoning on the simultaneous effects of multiple cues explicable for analysis.

Toulmin Model as Methodological Tool to Design Multiple Quality Signaling

Building on the literature, this study designs four product warrant scenarios, using a quality signaling model of escalating warrants. The first scenario contains only product feature information as the warrant because product information is the foundation of product quality. The second scenario increases a seller's self-supported money-back warranty. The third increases an insurance company's compensative support. The fourth increases a certification with authorization from a recognized third party. The experiment thus comprises four scenarios escalating from one to four warrants types, with each scenario randomly assigned to a group of participants for review and response. Our regression analyses show that each of these four warrants are significantly different in that each contributes significantly to the number of warrants they

inferred. In other words, the types of warrant, rather than simply the total quantity, decide the simultaneous effects of multiple signaling.

However, given differences in the conceptual frameworks, these findings differ from the recent findings of Chu & Chintagunta (2011) and Fang et al. (2013) regarding the warranty as an informational signal in the automobile and electronic product markets. They find that when consumers are confident in a seller's brand, any further signaling, regardless of the type of signal added, is redundant in consumer-based quality inference. In fact, in contrast to their findings, we find that the last two warrants—an insurance company's compensation warranty and the third-party certified proof, both supported by an external institution—had a greater effect than the first two added-in, self-supported warrants, namely the product-feature statement and money-back guarantee. In particular, these contrasts, with minor deviations from the message the sellers intend to deliver, suggest that consumers do disagree on the warrant information claimed by the sellers. Further, the more warrant types they claim, the greater the amount of warrants consumers infer. Thus, in contrast to other experimented products, we attribute the distinction to our structure of signaling on Toulmin's argument patterns.

Specifically, it is consumers who evaluate sellers' quality claims along with informational cues. Berente et al. (2011) indicate that people make decisions from a smattering of perceptions, experiences, and motivations. They go further to suggest that, although this pragmatic position of reasoning allows varied forms of argument, the claim-ground-warrant model of Toulmin provides a tool whereby we could rigorously capture the implied logic without fitting the findings to preformed assumptions about human rationality. Particularly, Toulmin's model (2003) asserts that a human's argument pattern is determined by the warrant brought to bear. Built on various social theories, including information, cognition, institution, organization, and social values, Berente and colleagues indicate that the forms of sensemaking-oriented discourses match broadly with five types of warrant: causal, analogy, generalization, sign, and authority (Berente et al., 2011; Brockriede & Ehninger, 1960). Following these assumptions and characterizing different forms of warrant in a multiple quality-signaling model proves to be one of the key contributions of this study.

Influence of Negative Publicity and Consumers' Quality Concerns

The current mediation test reveals that through evaluation of the informational product warrants, consumers would go further to conclude the seller's credibility, and the connection is positive—the more warrants inferred, the higher the perceived seller credibility. However, further tests indicate that this positivity can be completely destroyed in the face of negative publicity. In light of publicized yet unverified negative information about its production process in this study, a seller's credibility was instantly reduced to an unsatisfactory level, regardless of any of the warrants. More interestingly, this reduced amount, the before- and after-publicity difference, appeared to have a significantly negative relationship with the consumers' inferred number of warrants. That is, the more warrants inferred, the larger the amount of credibility lost. Fortunately, consumers who are more concerned with quality than with price or other factors experience a smaller reduction in their perception of the seller credibility. Consumers who are more easily affected by negative information tend to care less about product quality.

Although there are differences in the subjects, our result regarding an increasing loss of credibility with the endorsed warrants, is in congruence with those of several studies (e.g., Louie & Obermiller, 2002; White et al., 2009; Thwaites et al., 2012), that note how the influence of negative information regarding an endorsement may extend to the endorsed product or brand. Above all, a small amount of negative publicity can reduce the public's perception, and the more warrants, the larger the negativity. The underlying consideration is that making a claim does not stop after the claim, but rather serves as a beginning to produce better products. A seller should carefully manage its claims of warrant, and should especially ensure that the claim will not go against any quality that is essential in the actual production process, such as the use of low-cost material against a claim of natural ingredients, or a dishonest description of product features against a claim of third-party certification. We also propose that sellers can argue, as a consumer, to see how the potential consumers might reflect upon their claims.

Limitations

We conclude this study by explaining several limitations and possible directions for future research. First, although Toulmin's argumentation theory provides us clear guidance in building the seller-claim-

warrant—consumer-reason-inference relationship model for analysis of the unseen conversation between sellers and consumers, the experiment is not without difficulty. Specifically, the means to objectively discern the elements of data, warrant, and backing, and whether the results thus derived are reliable, require further confirmation. For instance, we had difficulty discerning the boundary of a seller's money-back guarantee and the compensated amount of an insurance company in developing the escalating warrants. The clarification between the roles of insurance and certification was also an issue in the composition. Primarily, if based on a financial expenditure point of view, both insurance and certification are dissipative signals because their investments are made up front to meet certain accredited standards (Rao, Qu and Ruekert, 1999). However, if based on a marketing perspective, in which consumers may be motivated to avoid losses or to seek gains, then insurance illustrates a focus on prevention, and certification a focus on promotion (Chatterjee, Kand & Mishra, 2005). Currently, we define them as two equal warrants of different definitions—institutional (insurance) and authorized sign (certification), respectively—based on the argument warrant theory (Brockriede & Ehninger, 1960; Berente et al., 2011). Our findings confirm the equal significance of these two warrants in a multiple product-signaling model. Our purpose herein is not to compare the various theories, but to serve as a reminder of the caution required in the experiment of these theories.

Second, this study only examines the inferences of potential consumers on seller's claims of warrant, without checking further how and why there were deviations between their arguments and the scenarios delivered by the sellers. Although these minor discrepancies could attribute to the natural biases or anticipated rebuttals of a practical argument (Toulmin, 2003), future research would need to dissect the relative reasons at varying warrant levels. The use of a series of focus groups or in-depth interviews may allow a deeper understanding of exactly how and why the inferences are different in the same scenario.

Third, we also need to urge caution in interpreting the findings of increasing negative influence due to negative publicity because pretest-posttest research designs are often difficult to explain, and one can never be certain whether the differences are due to the independent variables measured or a lack of reliability in the measures (Thwaites et al., 2012). Moreover, the warrant is not self-validating. The use of alternative age groups would allow a comparison to uncover specific differences in attitudes across generations regarding different personal characteristics, which may provide an improved validity check for the data. Fourth, our experiment was carried out over a relatively short timeline, which may make the influence of negative publicity more apparent than in real life, even though we requested that “no retrospect” be considered in the experiment. A firm's reputation concerns the evolution of the firm's consistent communicating actions with its target consumers about its product quality and service over time (e.g., Nguyen & Leblanc, 2001). A longitudinal study over a period of time may be able to adjust the potential biases.

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Exploring the Marketing Effect of Corporate Social Responsibility – An Experimental Design Approach

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Abstract Corporate social responsibility (CSR) is value oriented, based on the perspectives of stakeholders and issues considered essential. Using experimental design, this study designs scenarios in terms of consumer's prior purchase experience with firms associated to CSRs. The purpose aims to demonstrate the marketing effect of CSR initiative whereby it stimulates consumers to purchase a high priced CSR-related product or stay with such a product when they are aware of the CSR behavior of the seller. Such effect is examined further for those of less or no prior experience in purchasing CSR-related goods. Our goal is to explore the response of general consumers on ethics relevant issues for better understanding of CSR in business.

Keywords Corporate Social Responsibility (CSR), CSR initiative, CSR awareness, experiment design, experience goods

consumers prefer to choose products of similar price and quality from socially responsible companies [15]. This is especially evident in experience goods – products whose quality cannot be evaluated or determined by inspection prior to purchase. Through positive CSR activities, firms that sell experience products appear to be more likely to gain consumers' trust and favor of their products, and eventually their purchasing support [16]. Studies even show that buyers are willing to pay higher prices for products of similar quality that are perceived ethical and socially responsible [17-21]. This positivity of CSR initiatives in relation to experience goods raises the question: What if consumers have previously purchase experience such that the quality of the product is known, and that CSR is no longer a cue to undergo the product quality, will the same level of CSR effect remain? Little CSR or marketing research has been done to determine the value of CSR in contrast to CSR signaling and personal prior purchase experience.

People exhibit patterns of decision making in relation to information framing in that different frames may change completely people's mindset for decision choices even though the information context remains similar. To answer the question, this study draws on CSR significance supplementary with signaling theory for experience goods. The research procedure involves experimental design in terms of consumer's prior purchase experience with production firms associated to CSRs. The purpose aims to demonstrate the effect of CSR initiative whereby it stimulates consumers to purchase a high priced CSR-related product, and that this effect can extend to consumers of less or no prior experience of purchasing CSR-related goods. Milk was chosen as the experimental target, because CSR in the food industry is particularly important due to the various potential benefits with food safety becoming the ultimate CSR concern [22]. In addition, milk is a commonly consumed product, concerned by all age to allow to obtain a general picture of general public. We first demonstrate that consumers are more likely to purchase and stay with a higher priced CSR-related product, and further, they would not switch to a lower priced one without CSR attempt. We then

1. Introduction

Corporate Social Responsibility (CSR) refers to a firm's obligations and legitimate requirements to use its resources in ways to benefit societies (E.g.: [1-3]). It concerns ethical principles that go beyond the economic and legal responsibilities in the management of business [4]. It thus is value oriented, based on the perspectives of stakeholders and issues that they consider essential. Specifically, information asymmetry grants firms better knowledge about the quality of their products than buyers have [5]. To reduce risk and avoid being cheated, buyers look for extrinsic cues of unobservable product quality [6]. In response, firms issue product quality signals, such as advertising [7], price [8], brand, reputation [9], warranties [5], and CSR actions [10,11]. Among which, CSR appears increasingly dominant, because buyers who lack the ability to determine a product's value before purchasing are more likely to associate CSR as a positive sign that connects to the firm's honesty and reliability [12,13].

Indeed, because of support of CSR initiatives [14],

show that prior purchase experience moderates this relationship. Boundary of the price extent is also examined. As one primary stakeholder, consumer-based response to CSR initiatives is prudent. The findings add to the CSR literature in that CSR is not simply a symbol of ethics, but also an economic niche to provide businesses with guidance.

2. Materials and Methods

2.1 Review of Literature and Hypotheses

Though scholarly studies have proven the benefits of CSR, its broad definitions makes it difficult in measurement. Earlier, Freeman [23] from business ethic perspective specifies varied elements, of which the measuring instrument must be value-based and include the relevant stakeholders of the organization to deal with the issues it regards as salient. Recently, most scholars suggest that an application of CSR should be oriented at two conditions: (1) The products sold need to comply with social requirements or ethical standards; (2) The firm has an acknowledged commitment to protect consumer rights and interests, or equivalently prior CSR reputation (E.g.: [1-3]). In use of experimental scenarios, product-harm researches study the benefit of CSR on reduction of consumers' emotional anger [24], adjustment of consumers' attributions [12], regain of a firm's good reputation [25], and sustainment of consumer trust and purchase intention [26].

As one most affected social benefit issues [22], food safety has been an important consumer-based CSR issue. In turn, food retailers and producers are driven to apply methods to communicate with CSR and report their commitment [27]. Three types of generalized CSR ingredients are categorized in food businesses: product responsibility that concerns producing healthy and environmentally-friendly products; human responsibility that concerns products by means of good animal farming and positive work conditions; environmental responsibility that cares for product defects and quality, content declaration, and live-up expectations [10]. Messages such as fair trade, fitness, healthy living, healthy eating, organic production, sustainability, employment policies, charitable giving, and support for local communities have all been used by food producers. The increasing publicized CSR reports in the industry can explain the public's high expectation [24]. Apparently, CSR has been integrated as a core business element in the food industry [28].

The above literature reveals that CSR experiment usually comprises three sets of variables: triggers (e.g., disclosure of publicity); organization background (e.g., social responsibility reputation, firm response); and influence (e.g., sales or profit loss), or consumer reactions. Practices of CSR in all industries allows firms to build a reliable and honest reputation that may act as a signal when consumers purchase experience products [12,13]. Thus, viewing CSR initiatives as the trigger, milk industry as the business

background, and marketing effect as the influence, we first assume,

H1: Buyers have higher intent to purchase a CSR-related product even if its price is higher than a similar one which is non-CSR-related.

From previous research, it is evident that consumers are not only willing to purchase CSR-related products, but are often willing to pay higher prices for products from companies in which they are aware of [17-20]. In other words, the marketing effect of CSR is weaker in relation to consumers' previous purchase experience of a non-CSR related product, due to the fact that they will acknowledge the quality and value of the product and thus less need to rely on CSR as a signal. Or alternatively, it is stronger when consumers are used to purchasing a CSR-related product. Thus,

H2: Buyers are more willing to stay with a CSR-related product even if its price is higher, when this product is their often-buy than one which is not.

The positive linkage between CSR and customer patronage has allowed managers to realize that in today's marketplace [14]. We thus assume that customers' CSR awareness would affect positively on their purchase intention of a higher priced CSR-related product:

H3: Buyers' awareness of a firm's CSR actions is positively related to their intention of buying a higher priced CSR-related product from the firm.

As mentioned above, the marketing effect of CSR is related to consumers' previous purchase experience, which is weaker (stronger) when they acknowledge (or not) the quality and value of the product due to previous experience, and thus less (more) need to rely on CSR as a signal. In other words, buyers' previous use or purchase experience will moderate the positive relationship between CSR awareness and purchase intention of a CSR-related product assumed in H3:

H4: Buyers' often-buy experience will moderate the relationship between their CSR awareness and purchase intention of the firm's higher priced CSR-related product:

H4a: The relationship is stronger when this often bought product is CSR-related, and

H4b: Weaker when it is not.

2.2 Experiment Design Approach

As shown in Figure 1, the research framework comprises the CRS initiatives performed by the firm and how buyers respond to it when they are aware of the firm's CSR actions, and if their prior purchase experience of CSR-related goods moderates the relationship. The response, namely the marketing effect, is measured by purchase intention and choice. Based on the framework, we propose the four

hypotheses addressed above.

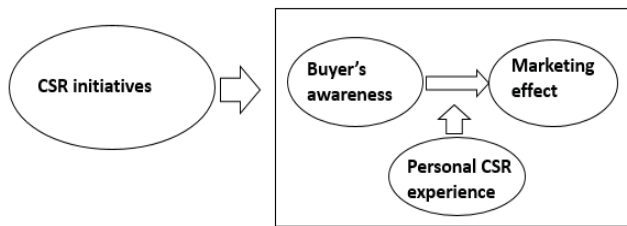


Figure 1. The research framework

To verify the propositions, we utilize an experimental design approach to testify the hypotheses. In order to associate with a familiar, experience goods, a frequently consumed and affordable product, milk, is chosen as the subject product. A questionnaire, each with a storyline and measurements other than respondent's profile, is developed. The story comprises a poster of a firm's CSR doings, different personal purchase experience of CSR-related products, and a choice between CSR and non-CSR brand of milk with the former priced 10% higher. Namely, whilst the questionnaire items are all identical, the storyline differs in the personal CSR purchase experience. Three CSR purchase experience scenarios are designed. Respondents are randomly given one of the three scenarios to fill out in their own time and presence to ensure confidentiality of response. We describe the details according to the order of story, measurements, and sampling below.

2.3 The CSR Poster

Using milk as the target goods, we first create an illustrating poster regarding the CSR initiatives of Milk A from company A shown in Figure 2 to begin the story. All respondents are exposed to this same CSR poster of Milk A illustrated below. The purpose is to portray the strong, positive CSR image of Milk A. At the same time, the respondents are informed that the price of the CSR related Milk A is 10%, in this case NT\$15 (30NT\$: 1US\$), more expensive than the non-CSR Milk B from company B.



Figure 2. The CSR poster of Milk A

2.4 Three scenarios of CSR-product purchase experience

To examine the impact of personal CSR-product purchase experience, we create three scenarios: No previous purchase experience as the control group, and previous frequent-buy experience of CSR and non-CSR milk goods. These three types of experience are designed as below.

Scenario 1: No prior purchase experience of CSR products. Suppose you enter a supermarket to buy milk, only Milk A and Milk B are available, but you have no experience in purchasing either of them before. There is no difference in volume or appearance, but the price is different: Milk A NT\$ 174 and Milk B NT\$159.

Scenario 2: Prior purchase experience of CSR products. Suppose you always buy Milk A. One day, when you go to the supermarket to buy Milk A, you see the new Milk B. Compared to Milk A, there is no difference in volume or appearance, but yet there is a difference in price: Milk A NT\$ 174 and Milk B NT\$159.

Scenario 3: Previous purchase experience of non-CSR products. Suppose you always buy Milk B. One day, when you go to the supermarket to buy Milk B, you see the new Milk A. Compared to Milk B, there is no difference in volume or appearance, but yet there is a difference in price: Milk A NT\$ 174 and Milk B NT\$159.

Each respondent was shown randomly only one of the three scenarios. It illustrates two milks, Milk A is from the CSR firm shown in Figure 1 and Milk B is not, of similar appearance and different prices, where the price of Milk A is \$15 higher. This way divides the respondents into three groups with each group differing in prior buy experience of a CSR goods based on the two choices of different CSR-signaled and priced products.

3. Results of the Experiment

3.1. Sampling

In order to confirm that the sample distributions among the three scenarios were random as designed, we first examined if there was statistically significant different among the three groups. The results showed that there were no significant sample characteristic differences, including sex, age, education level, occupation and monthly disposable income (NT\$) among the three scenarios.

Of the total sample profile, the proportions between male and female respondents were fairly even: Although scenario 1 being the least even had 55.9% of male respondents with the remaining being females, there were no significant gender percentage differences in the three scenarios. The most dominant age category of all respondents is "21-25

years old” for all three scenarios, respectively 43.1 %, 43.4% and 57.3% for scenarios 1, 2 and 3. Most respondents have a master’s degree (48.0%, 38.4%, and 50.9% respectively) and are currently a student (54.9%, 48.5% and 64.5% respectively) among the three groups. As for monthly disposable income (NT\$), categories “5,001-10,000” and “10,001 – 20,000” together compose the majority of respondents in the three scenarios: 54.9%, 61.6% and 67.3% for scenarios 1, 2 and 3 respectively. Overall, this sample shows fairly a homogeneous profile among the three scenarios.

3.2. Manipulation Check

In order to ensure the design validity, two manipulation checks apply to eliminate respondents who do not fully understand the story. The first question, “Which milk do you usually purchase according to the story given,” examines if respondents read the personal CSR experience scenarios right. The answer should be simply Milk A, Milk B, or neither depending on which scenario given. The second question asks respondents if they understand the content of Milk A’s CSR poster. The answer is ranged on a 5-point scale (1= Totally don’t understand; 5= Totally understand). Respondents who (1) misunderstood the given personal CSR experience scenario, or (2) rated totally don’t understand the content of Milk A’s CSR poster, are removed from further analysis.

We approached respondents via paper questionnaires and Internet surveys on Facebook, as well as in shopping malls. Of the 346 questionnaires returned, a total of 35 were invalid and removed from further data analysis because they either (1) misunderstood the purchasing experience that they were supposed to play with given in the three CSR experience scenarios, or (2) they indicated that they totally did not understand the content of Milk A’s poster. Eventually, a total of 311 respondents, among which 102 were from scenario 1, 99 from scenario 2, and 110 from scenario 3, remain for further data analysis.

3.3 The Measurements and Results of Factor Analysis

Consumer’s CSR awareness. This scale defines the extent to which a customer is aware of a firm in performing CSR initiatives. Commission of the European Communities [29] define CSR as “A concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis”. Accordingly, for the current experimental purpose, we design this measurement as the extent to which a customer is aware of the Milk A’s CSR activities he or she is exposed to as given in the poster of Figure 1. Four items are designed, which include, for example, “Milk A demonstrates that it is concerned with the environment”, or “focus on employee benefit and provides excellent work environment” etc. The choice option uses a seven point Likert scale with 1 representing strongly

disagree and 7 strongly agree with the given Milk A’s CSR poster.

Purchase intention in relation to CSR and non- CSR brand choice. This scale defines the intention to which a customer is more willing to buy between a higher priced CSR goods and a lower priced non-CSR goods, whereby both seemingly have the same quality. Four items consists the measurement, including such items as “Buying which milk will make you feel good about yourself?”, and “Which milk are you more willing to buy?”. They are modified from the purchase intention measures of Jamieson and Bass [30] and [21]. The choice option is on a semantic differential seven-point scale item (7 = Milk A; 1 = Milk B). That is, the larger the higher intention to buy Milk A, otherwise, the smaller the higher intention to buy Milk B.

Factor analysis applies to extract factors and assess the discriminant and convergent validity of the measure. Four main indicators are used as the standard criteria of validity analysis in this research: factor loading over 0.6, Eigenvalue over 1, total explained variation over 60% and KMO over 0.6. Internal consistency of Cronbach’s Alpha was confirmed using reliability test. Standards such as Item-to-total is over 0.3, and Cronbach’s Alpha over 0.7 are the reliability criteria.

Other than purchase intention, respondents were also asked to choose between Milk A and Milk B on a single choice scale.

3.4 Tests of the Hypotheses

Table 1 shows that scenario 2, the group often purchases Milk A that is related to CSR poster, had a highest awareness of the CSR poster. Further, with an average below 2.50 in a 7-point scale across the three group, the three scenarios all reveal a higher purchase intention for the higher priced CSR-product of Milk A over Milk B, although scenario 2 has the highest intention score for Milk A. This significance indicates the requirement of further analysis in the buyer’s choices due to different role plays.

Table 1. Mean differences of the responses among the three scenarios

| Variables Scenarios | Awareness of Milk A CSR poster ^a | Purchase intention for Milk A or B ^b |
|---|---|---|
| 1. No prior experience (Control group) | 5.96 | 4.92 |
| 2. Often buy Milk A - related to CSR poster | 6.37 | 5.74 |
| 3. Often buy Milk B - not related to CSR poster. | 6.10 | 4.50 |
| F-values | 6.831** | 12.681*** |

a. 7-Likert scale: 1 strongly disagree; 7 strongly agree with the given Milk A CSR poster.

b. Semantic differential 7-point scale for purchase intention: 1 = Milk B; 4= no difference; 7 = Milk A.

** p< .01; *** p< .001

3.5 Buyer choices in face of different scenarios

Table 1 also shows that, among the three scenarios, scenario 2 has a score of 5.74 most close to 7, while scenario 3 has a score of 4.50 most far away from 7. The control group falls on 4.92 between the two. These significant differences allow K-means clustering to separate the sample into groups of buyer choice for either Milk A or B. Where, we separated those with purchase intention scores smaller than the overall mean 5.05 across the three scenarios as more preferring to choose Milk A, and those larger than it as more preferring to choose Milk B. Table 2 displays the results.

As shown, the results in Table 2 indicates a significant higher percentage of Milk A choice than the one of B across the three scenarios. They together support Hypothesis H1 in that consumers in general have a higher intent to purchase a CSR-related product even if its price is higher than a similar product of non-CSR-related.

Table 2 further shows: Scenario2, i.e., CSR experience group, has the highest percentage (88%), followed by scenario1 of no particular (81%), and finally scenario 3 of non-CSR experience (65%). In other words, respondents who are issued to the scenario of previously often buy a CSR-product for role play are most prone to continue to buy to stay with it, even though they realize that the price of their always-buy is higher. Thus, Hypothesis H2 is supported. Further, probably as well because of the prior purchase experience of CSR-product in the role play, the group of scenario 2 also has the significantly highest aware score about the CSR poster of Milk A as shown in Table 1.

Table 2. Choosing percentages between the two milks across the three scenarios ^a.

| Variables Scenarios | Percentage of Choosing Milk A | Percentage of Choosing Milk B |
|---|-------------------------------------|-------------------------------------|
| 1. No prior experience ^a (Control group) | 81% | 19% |
| 2. Often buy Milk A - related to CSR poster ^a . | 88% | 12% |
| 3. Often buy Milk B - not related to CSR poster ^a . | 65% | 35% |

a. The t-value of percentage difference between the pair is significant at *** p< .001

3.6 The moderating effect of CSR-product purchase experience

Hierarchical regression applies to test the relationship between consumers' awareness of a firm's CSR actions and intention to buy its high priced CSR product, and if this relationship is moderated by their prior CSR-product

purchase experience for hypotheses H3 and H4. For the moderation, we uses two (0, 1) dummy variables to represent respectively the two contingencies of scenario2 and scenario3. Further, demographics, including sex, age, level of education, occupation, and monthly disposable income, are treated as control variables. The results show that none of them are significant. Table 3 displays the results.

Model-1 in Table 3 reveal a significant positive relationship (.461***) between consumer CSR awareness and purchase intention of CSR Milk A. Model-2 shows that this significance remains (.464***), after the two purchase experience variables D1 and D2 and their moderation insert. Thus, Hypothesis H3 is supported.

Other than the significant direct impacts of consumer CSR awareness (.464***) and purchase experience scenario on CSR Milk A purchasing (-.199***), Model 2 also reveal the moderating effect of the scenario due to scenario2—the CSR milk purchase experience (.113*). To simplify the comparisons, Figure 3 show the moderating effects among the three scenarios.

Figure 3 evidence the moderating of buyer's previous CSR-product purchase experience on the marketing effect of a firm's CSR conducts. Wherein, the effect is weaker (stronger) when the buyers have (do not have) prior purchase experience of the product. This results appear consistent with the experience product feature in that when consumers have experienced a product quality, they would reduce to look for extrinsic cues of unobservable product quality, because the risk of being cheated has been reduced by personal experience. Hypothesis H4 thus is supported.

Table 3. Results of moderating regression analysis (n=311) ^a.

| | Purchase intention of Milk A | |
|--|------------------------------|-----------|
| | Model 1 | Model 2 |
| Awareness of firm's CSR behavior of Milk A (Z) | 0.461*** | 0.464*** |
| Scenario 2: Purchase experience of Milk A (D1) | | 0.051 |
| Scenario 3: Purchase experience of Milk B (D2) | | -0.199** |
| Z × D1 | | 0.113* |
| Z × D2 | | 0.043 |
| F-Value | 83.203*** | 22.991*** |
| R ² | 0.212 | 0.274 |
| Δ R ² | - | 0.062*** |

Note: *p < .05; **p < .01; ***p < .001

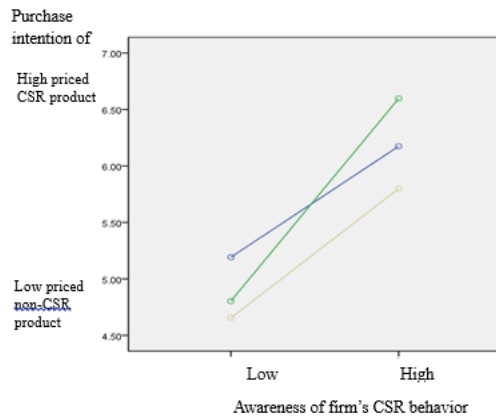


Figure 3 The moderating Diagram

3.7 Tolerance of price increment

To test the price gap that consumers would tolerate to buy the CSR milk good when they originally choose to buy the high priced CSR milk of \$15 more, \$174 and \$159, a price increment table is designed. Table 4 shows these ratings based on a 7-point scale, where 1 implies definitely staying with the CSR milk, while 7 definitely not. Therefore, a rating of 3 or below implies intention of staying with the CSR one, otherwise it is not. As shown, it appears that scenario 2—the one often buy CSR Milk A in the role play, has the highest tolerance up to \$40, followed by scenario 1 of no particular experience which is up to \$30, and finally scenario 3. As before, scenario 3—the one often buy non-CSR-product in the play, has the least tolerance of price increment \$25, which also implies a moderating effect of previous purchase experience on price tolerance.

Table 4. Tolerance of price increment to stay with Milk A – the CSR-related product - across among the scenarios

| Scenarios \ If price gap increased ^a | \$20 | \$25 | \$30 | \$35 | \$40 |
|--|------|------|------|------|------|
| 1. No prior experience ^a (Control group) | 2.1 | 2.6 | 3.2 | 4.1 | 4.7 |
| 2. Often buy Milk A - related to CSR poster ^a | 1.6 | 1.8 | 2.2 | 2.8 | 3.2 |
| 3. Often buy Milk B - not related to CSR poster ^a | 2.4 | 3.1 | 3.9 | 4.7 | 5.0 |

a. Originally, the price gap is \$15: CSR brand X \$174; non-CSR brand Y \$159 (30NT\$: 1US\$).

4. Conclusion

In the competitive market today, CSR has become a popular practice. Businesses of all sizes take resources from the society and community where they exist. In return, they require to contribute beyond their obligations required by

the law. Taking milk as an example for experiment, this study demonstrates that consumers' awareness of a firm's CSR doings, and their prior personal purchase experience – purchase of CSR or non-CSR product, is related to their intention of buying a high priced CSR product from the firm. It appears that CSR can create a positive marketing effect to both the society and the firm. Overall, this study demonstrates the following contribution.

This article make several contributions to CSR literature. We first evidence that CSR can enhance people's purchase intention of high priced CSR products when they recognize the CSR involvement of the firm, where the price gap can be up to more than twenty percent. We then expose that consumers' prior CSR-product purchase experience, either always buy a CSR or non-CSR product, moderates their decision in choosing a product of CSR-related brand. In particular, when they are more used to CSR-product, they appear more likely to stay with such products even the price is twenty percent higher. CSR initiatives appear able to communicate customers with quality cue, and motivate them to stay with buying the product.

On the other hand, may be because of having experienced the product quality and thus less need to rely on CSR as a signal, those who are lack of experience in buying a certain CSR goods are weaker than those who are used to. Even so, this lacking experience group still appears more likely to choose the CSR-product. In other words, CSR as a cue seemingly is not just able to generate consumers' dependability, but also their connection of a firm's concern in CSR to concern in product quality. This also implies that consumers' tolerance of price difference may vary dependent on their prior CSR-product purchase experience. The tolerant range of those who have the experience appear to be larger.

Overall, due to its effectively retaining old customers and further attract new ones with no previous purchase experience, we may conclude the positive marketing effects of CSR cues. However, firms must confirm their CSR actions and reputation. Advertisement or allowing consumers to acknowledge the firm's CSR practices next to the products may help to increase the exposure of the firms for their CSR activities. The level of CSR support via purchasing behavior does vary among consumers of different purchase experience: consumers with previous purchase of CSR product are the most supportive, followed by no previous purchase experience, and finally consumers with previous purchase of non-CSR product.

. There are some limitations in this research. First of all, although the proposed methodology is adaptable to a wide variety of products, only one relatively cheap commodity was experimented. Hence it is uncertain whether or not the results would be identical for different products. Secondly, this study focuses on CSR advertisement in supermarkets. Other media on the Internet are common today. Future research can determine the effect of CSR initiative on other media to depict a bigger picture. To this end, marketers should acknowledge the signaling effect of CSR.

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The impacts of Chinese firm ownership and manager leadership on subordinate work values

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Abstract: As the mechanism for sustaining new technologies, creation of innovative culture is imperative in technical workplaces. Power-distance-oriented leadership is thought ineffective in fostering subordinates innovative values. This study contributes to organisational learning literature by examining whether participative leadership plays a mediating role to adjust the undesired impact in innovative culture acculturation. The sample comes from employees in four types of firms differing in ownership across two Chinese business clusters to represent level of organisational Westernisation. The findings reveal supports for the hypothesised relationships between firm ownership and subordinate work values accounted for this Westernisation connection: The state-owned and foreign-controlled businesses appear to hold the old and the new values on the two extremes separately; the privately owned fall somewhere in between. Additional mediation analysis suggests that an adjustment of manager's leadership from power-distance to participative can help reduce the negative impacts to foster subordinates innovative values, regardless of the old.

Keywords: work values; respect; conformity; innovative values; power-distance leadership; participative leadership; firm ownership; state-owned enterprises; foreign-controlled businesses; privately owned enterprises.

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1 Introduction

Modernisation often implies adapting to Western management practices that inspire existing business cultures moving towards innovative waves against traditionalisms (Ralston et al., 2006). This Western influx has given rise to Chinese businesses of different ownerships: SOEs (State-Owned Enterprises), FCBs (Foreign-Controlled Businesses), and POEs (Privately Owned Enterprises). Among which the SOEs characterise a rigid and power-distance firm culture; the FCBs reveal a combined culture of adhocracy and market; the POEs, though also are paternalistic and clan-oriented, are much more adhocratic and less hierarchical than the SOEs (Ralston et al., 2006). These firms not only rely on the old leadership traditionality (Farh et al., 1997), but also develop employee new values at work (Bloom et al., 2012). As the key to success, creation of innovative work environment is essential. More likely, the FCBs and high-tech sectors, with new applied management approaches, have transformed Chinese businesses closer to Western style for creation of an open, innovative workplace (e.g. Chen and Godkin, 2001; Ralston et al., 2006).

To create a diversified climate, Western organisations often pursue creative contexts and encourage employees to instigate innovative, executable ideas (e.g. Claver et al., 1998). These values, although as well emphasise group harmony, differ from the Chinese collective orientation that asserts ordering relationships, conformism and reverence (e.g. Hofstede and Bond, 1988), or power-distant hierarchy (Schwartz, 1992). Instead, they stress participative decision-making and scientific appraisal for performance to ensure an easy working atmosphere in order to allow voices of employees from different position levels to be heard (e.g. Cotton et al., 1988; Bass, 1990; O'Connor and Ayers, 2005). For the purpose, the process embraces innovative values, such as risk-taking, autonomy, appraisal of performance instead of seniority, and compromise instead of avoidance in response to conflict (e.g. Zien and Buckler, 1997; O'Connor and Ayers, 2005), which in general are contrasting to Chinese power-distance-oriented leading tradition (e.g. Farh et al., 1997; Huang et al., 2006; Kirkman et al., 2009; Bloom et al., 2012). Power-distance-oriented leading thus is thought less effective than participative type leadership in fostering workers innovative values for up-to-date management practices (e.g. Jackson and Bak, 1998; Eylon and Au, 1999; Robert et al., 2000). This variance raises an interesting question: can an adjustment of leading behaviour from power-distance to participative adjust the undesired impacts on fostering employee innovative new values at work?

Based on a sample of Chinese firms of various ownerships, the purpose of this study includes twofold: (1) exploring the direct impacts of power-distance leadership on the two old Chinese values of respect and conformity, as well as on the four innovative values in risk-taking, autonomy, conflict tolerance, and values performance; and (2) investigating whether participative leadership mediates these impacts, because the presence of mediation provides more hidden, noteworthy effects by indicating how and why such impacts occur (Baron and Kenny, 1986). The samples came from employees of enterprises in two regions: Shanghai and Qingdao in China. Together, with the POEs further categorised into POEs-Tw (Taiwan) and POEs-Cn (China), this sampling procedure created a total of four types of firm ownership to provide better insights into whether participative leadership plays a mediating role to adjust the negative impacts of power-distant leadership on workplace culture, driven by the different business ideology influences that affect each ownership type (Ralston et al., 2006).

2 Review of literature

2.1 Firm ownership and organisational culture clusters in China

The open door policy that permeated foreign investment since 1980s has flourished the institution of Sino-foreign joint venture and wholly owned foreign companies in China (Studwell, 2002). This wave not only reduced the dominance of SOEs to strategic values, such as raw materials, petrochemical, telecommunication, and banking, but also arose domestic entrepreneurs to capture the privatising opportunities that allow them to operate on the option of making the collective private, such as transforming rented-out collectives to leasing terms over time (Ralston et al., 2006). Specifically, in the transition, the Chinese partners contributed land, buildings, and personal network (*guanxi*), while the foreign partners provided technology, equipment, capital, know-how, management knowledge, and marketing experience (Ralston et al., 2006). With this growth in FCBs and POEs, the state-owned appears to be no longer the only type of firm ownership in China.

However, the development of the private sector was limited until 2004 when Chinese private assets and capital were finally legalised and protected by constitution (Wang, 2004). With high taxes, and limitations in loans from state banks, market information, land and government support, the POEs had a long history of operating under constraint before they turned to private (Ralston et al., 2006). Some of the restrictions remained existing until very recently. Whereas, even though not extended the same level of incentive as were the SOEs, the POEs are considered to be the most dynamic in China's economy (Ralston et al., 2006). Recent statistics indicate that they contribute more than one-third of the country's GDP, in contrast to foreign-funded enterprises and wholly state-owned firms that respectively account for about 17% of gross industrial output (National Bureau of Statistics, 2010).

Culture change is a necessary precondition for organisational change practices to take place (Cameron, 1994). Based on Confucianism and the new reform, existing Chinese businesses reveal paternalism, power-distance; it conforms to supervisory rules and values the ethics of seniority on the one hand, and develops Western innovative and entrepreneurial practices on the other. Ralston et al. (2006) summarise and indicate that there are four types of organisational culture coexisting in Chinese businesses: Clan (consensual), Adhocracy (entrepreneurial), Hierarchy (bureaucratic), and Market

(competitive). If in terms of firm ownership, the FCB, which recognises the need of market flexibility and performs in response to the external environment, reveals a combined culture of adhocracy and market (Ralston et al., 2006). The SOE, which characterises a rigidity and power-distance firm culture, namely hierarchy and clan, has been the image of Chinese firms since the communist era because of the social-cultural environment where they operate (e.g. Schermerhorn and Nyaw, 1990; Huang et al., 2006). Though both home-grown, the POEs are much smaller and many do not have well-defined hierarchical structures compared to the SOEs; they instead are entrepreneurial and family-oriented, featuring a combined culture of adhocracy and clan (Ralston et al., 2006).

Confucianism also has spread to many other Asian regions. Taiwan, with a population of 23 million, is the largest overseas Chinese community. The isolationist policy of China before 1970s and the rapid growth of the Taiwanese economy in the 1970s–1990s put Taiwan a step ahead of mainland China. Because of the same language and similar social traditions, many Taiwanese businesses moved entirely to China since the open door policy in 1980s. Presently, there are more than two millions of Taiwanese business persons in China with most of them working for POEs owned by Taiwanese (Tw), largely placed in Shanghai area. Despite Taiwan's political positioning, a decade ahead of China in its economic and technological development, Taiwanese private enterprise tends to follow Confucianism and the Chinese family business model: paternalistic and autocratic, with centralised decision-making and low trust in subordinates (Hempel and Chang, 2002; Yeh and Xu, 2010). Yet if this characterisation is true, how have the Taiwanese private companies reconciled their traditional Chinese business values with new cultures? As the economic and technological developments of China continue, a cross-comparison in relation to Chinese firm ownership, including Taiwanese POEs in China, thus is critical because it can bring to light the interplay between old and new values. Primarily, if the culture of any POEs or SOEs varies from the one of the foreign-controlled, then we can interpret the previous reform efforts being efficacious in detaching from the old values (Ralston et al., 2006), driven by the different business ideology influences (Ralston et al., 1997) that affect each ownership type.

2.2 Power-distance leadership, employees' work values, and firm ownership

Chinese social traditionalisms were founded on Confucius' 'hierarchy for harmony' philosophy, which structured social interpersonal relationships into five dyadic relations and hierarchical duties in that most paired relations reflected a dominant–subservient situation (e.g. Redding, 1990; Buttery and Leung, 1998; Chen et al., 2000; Chen and Godkin, 2001). Five virtues, including propriety, benevolence, righteousness, wisdom, and trustworthiness, supported these relations. Also for retaining the hierarchy's harmony those in subservient positions were discouraged to voice objections. Chinese societies therefore revealed paternalism, according to which superiors looked after inferiors, youths listened to seniors, and personal interests came second to those of the group (e.g. Buttery and Leung, 1998). It is also these core values, including conformity, respect, collectivism, large power-distance, and harmonious interpersonal relationships, that constitute Chinese business mindsets, and distinguish them from the Western characteristics of individualism, integrity, and tolerance for conflict to achieve harmony (Franke et al., 1991).

The impacts of Chinese firm ownership

However, the current reforms may not imply that the old cultural values offer no advantages for modern business management (Su et al., 2003). Chinese hierarchy ideas are dynamic, in that a specific value can be either positively or negatively interpreted (Hofstede and Bond, 1988). For example, submissiveness can be viewed as either suppressed conformity, which often goes with power-distance leadership behaviour (Yau and Powell, 2004), or respect for interpersonal relationships that in turn may lead to mutual benefits between the parties (e.g. Tsang, 1998; Su et al., 2003). Research of contemporary Chinese management thus requires considering not just socio-modernisation but also this dynamic sociocultural feature.

This study includes the pair of power-distance-oriented leadership of manager and respect and conformity values of employees as the old values, because these values often go hand-in-hand to bewilder Chinese workers in listening to or confronting superiors' problematic orders. For example, the rooted 'hierarchy for harmony' tradition often causes Chinese technical workers difficulty in separating the professional conflict from the personal conflict in practice (Hempel and Chang, 2002). Owing to the rigid image and high hierarchy of Chinese SOEs and adhocracy and clan of Chinese POEs as earlier mentioned, we assume:

Hypothesis 1: Chinese SOE employees perceive strongest power-distance leadership of their managers and respect and conformity values in their workplaces, followed by the two POEs, and finally the FCB.

2.3 Participative leadership and employees' innovative work values

The current innovation ideology comprises such values as risk-taking, autonomy, conflict tolerance, and values performance instead of seniority (Miron et al., 2004). These values apparently involve the perspective of letting subordinates share business decision-making procedure, or a use of participative supervisory style in management (Robins, 1991). Participative leadership represents a Western transformational-type management, stressing sharing of decision-making power between superiors and followers (Bass, 1990; Robins, 1991). Patten of participative management varies; they may include activities such as goal setting, solution discussion, direct involvement in work decision, and selection of new co-workers to empower employees (Cotton et al., 1988), or increasing the participation of followers by providing them with greater discretion, influence, support and information, and to share them with the issue of problem-solving by consulting them before making a decision (Bass, 1990). Different benefits, such as strengthening employees' motivation, increasing their creativity and job satisfaction, secure their organisational commitment, and improving organisational productivity, due to a use of participative style management have been identified in the West (e.g. Carson, 1985; Thomas and Velthouse, 1990; Quinn and Spreitzer, 1997).

Though cross-cultural researchers indicate that participative management approach may not work well in countries with a large power-distance culture such as China (e.g. Eylon and Au, 1999; Huang and Van de Vliert, 2003), recent reports may approve the change of this situation. For instance, Chinese business managers are found in their efforts using rational persuasion, appraisal, and collaboration to build interpersonal relationships (Miron et al., 2004), and instituting outside professionals as chief executive officers instead of nepotism and passing companies on to children (Ng, 2004). In addition, the competence efficacy of Chinese short-tenure employees in SOEs appeared

pertinent to participative leadership behaviour, because of their less tolerance for bureaucratic control than the older counterparts (Huang et al., 2006). Chinese business cultures appear moving towards an innovative way, with the intervention of managers' new participative style on the old values.

As such, we may ask if the work-related values differ among the three, with the FCBs most current, the SOEs most traditional, and the POEs fall somewhere in between. Referring to the earlier discussion, participative management and innovation-related values, such as risk-taking, autonomy, conflict tolerance and values performance, constitute the new values wave. Providing these value proxies, we assume:

Hypothesis 2: Chinese FCB employees perceive strongest participative leadership style of their managers and innovative new values in their workplaces, followed by the two POEs, and finally the SOE.

2.4 Mediation of participative leadership on the effects of power-distance leadership

Even though Chinese-managed firms through the influence of FCBs are moving towards a Western innovative way, their ideologies remain unique in many characteristics (Chen and Godkin, 2001). According to Hofstede and Bond (1988), Confucian ideas reflect a dynamic-, positive- and negative-oriented perspective. On the positive side, because of deep-rooted reverence values, Chinese tended to be compliant, diligent, and respectful, which may in turn lead to mutual, trustworthy benefits among varied parties that are accumulated in times of abundance and spent in times of need and necessity (Su et al., 2003). On the negative side, people may avoid opposition for fear of disturbing the predetermined relationships, and their high respect to authority may lead them to adjust to the superior's want especially when the dispute is with their superiors (Chew and Lim, 1995).

In particular, perceived manager's power-distance leadership and followers' conformity value often occur hand in hand, because superiors who express high paternalism often turn into over control, which in turn make followers fear of voicing disagreements and high conform to positional authority (e.g. Buttery and Leung, 1998; Chen et al., 2000). In reverse to power-distance leadership that stresses tight control and submission on the administrative structure and management practices (Schermerhorn and Nyaw, 1990), participative leadership requires the superiors to share decision-making power with their subordinates (Huang et al., 2006). Specifically, participative leadership is as well a very much Western management concept, and that such a behaviour is considered incompatible with Chinese power-distance manager style (Eylon and Au, 1999; Huang and Van de Vliert, 2003). High respect for positional authority that conflicts with Western participative leading and idea sharing, dictating instead a high degree of top-down control or power-distant decision making, may cause employee risk aversion, less innovative, and avoidance rather than compromise in response to conflict (Chen et al., 2000). While oppositely, the consequence could be reversed. Does these rooted ideas, either positive or negative, never farewell? Can the impacts be mediated by a change of manager style from power-distance to participation?

We thus hypothesise that in developing workers new innovative waves, an enhancement of managers in use of participative leadership can reduce the undesirable impacts given by power-distance leading on the fostering. Our aim is to show that

modern Chinese workers through more than two decades of reform are not necessarily less interested in participative leadership practice than their Western counterparts, even if researchers have questioned its effectiveness in Chinese societies (e.g. Franke et al., 1991; Jackson and Bak, 1998; Eylon and Au, 1999). In particular, through an adjustment of leading behaviour from power-distance to participative, managers may find it more facilitating to foster employee innovative work values regardless the ongoing old values, despite the firm ownership.

Hypothesis 3: Participative leadership mediates the undesirable impacts of power-distance leadership on fostering subordinates innovative new values across firms of different ownerships.

3 Research procedure

3.1 Measuring instrument

Self-report measuring approach is appropriate for studies concerning private events (Conway and Lance, 2010; Chan, 2009). The current study involves the linkage between employees' personal perception of their managers' leading styles and their awareness of workplace culture, which are both private assessments regarding work environment climate. Subsequently, three sets of measurements, all of which use seven-point Likert-type scales, ranging from 1 ('strongly disagree') to 7 ('strongly agree'), are described. These measures appear in Table 1. To mitigate common method bias that often occurs in self-report measures, we applied Confirmatory Factor Analyses (CFAs) to confirm the discriminant and convergent validity of the measurements (Brown, 2006). Further, as displayed below, their corresponding CFA models with common variance factor (Podsakoff et al., 2003) indicate that the measurements include no common method biases.

Perceived manager leadership style: This scale defines two leadership styles, participative and power-distance, of immediate managers in supervising their subordinates. The participative style emphasises an increase in subordinates' participation by giving them greater discretion and information and by sharing problem-solving issues with them before decision-making (Bass, 1990). Conversely, the power-distance style stresses tight control and submission on administrative structures and managerial practices (Schermerhorn and Nyaw, 1990; Farh et al., 1997). CFA confirms these two leadership behaviour constructs in this 11-item measure (GFI = 0.946; AGFI = 0.914; CFI = 0.960; RMSR = 0.094; $\chi^2 = 131.227$, df = 42; Cronbach's alpha reliability = 0.84 and 0.88).

Old respect and conformity values: This scale defines the prevalent respect, social-order relationship, and conformance in Chinese work environments (Hofstede and Bond, 1988). The items include such aspects as conformance with supervisory rules, respect for authority, value of seniority, and value of personal relationships. CFA confirms the two values of respect and conformity in this six-item measure (GFI = 0.975; AGFI = 0.924; CFI = 0.957; RMSR = 0.070; $\chi^2 = 29.489$, df = 7; Cronbach's alpha reliability = 0.73 and 0.63).

Innovative new values: This scale defines existing work values in technical sectors, which focus on an open discussion and innovative management culture (e.g. Hempel and Chang, 2002; Miron et al., 2004). The items include such aspects as willingness to talk,

autonomy, risk-taking, decentralised structure, communication and compromises in response to conflict, and value competency instead of seniority. CFA confirms the four values of conflict tolerance, values performance, autonomy, and risk-taking in this 15-item measure (GFI = 0.954; AGFI = 0.931; CFI = 0.976; RMSR = 0.057; $\chi^2 = 146.202$, df = 80; Cronbach's alpha reliability = 0.81, 0.82, 0.82, and 0.85).

Table 1 The three sets of measurements

| <i>Perceived manager style (participative and power-distance):</i> |
|--|
| 1. My boss participates and discusses with us for job decisions that affect us. |
| 2. When making decisions, my boss consults first our suggestions. |
| 3. My boss wants us to clearly express our job relevant ideas. |
| 4. My boss gives us necessary job supports. |
| 5. My boss provides us clear job directions. |
| 6. My boss values rules and systems. |
| 7. My boss values organisational hierarchy in management. |
| 8. My boss emphasises top-down authority in management. |
| 9. My boss seldom interacts with us. |
| 10. My boss and we seldom talk during meeting. |
| 11. My boss keeps distance with us, perhaps due to the position difference. |
| <i>Old respect and conformity values:</i> |
| 1. My company recognises the ethic of respect seniors. |
| 2. My company values the ethic of complying with supervisor. |
| 3. My company values personal relationships. |
| 4. My company stresses individuals should conform to the company and not insist personal voices. |
| 5. My company dislikes employees proposing different ideas for working. |
| 6. In my company, employees seldom interrupt the talking of superior during meeting. |
| <i>Innovative new values:</i> |
| 1. Despite conflicts, employees in my company respect others' opinions. |
| 2. Employees here are willing to talk in meetings, even disagree with others. |
| 3. Employees in my company communicate and compromise when they come in conflict. |
| 4. My company recognises competence before seniority. |
| 5. My company values performance more than personal relationships. |
| 6. In promotion decisions, my company considers first performance, then seniority. |
| 7. My company gives employees the most work autonomy possible. |
| 8. My company allows employees to determine solutions to certain extent. |
| 9. Employees here can adjust their work schedules without delay or interrupting others. |
| 10. Leadership in my company publicly encourages innovative employees. |
| 11. My company allows employees to try new or different ways of work. |
| 12. My company is willing to try new ideas proposed by employees. |

3.2 Sampling

High-tech industries in emerging countries are often the first sectors to experience Western-style management practices. Questionnaires were distributed to knowledge-intensive or technical personnel employed in FCB, SOE, and POE high-tech firms in Shanghai and Qingdao area China, in which POEs were further separated into POEs-Cn and POEs-Tw. In total, 1000 questionnaires were distributed in Shanghai, and 500 questionnaires were distributed in Qingdao. Because the Chinese language is somewhat dissimilar in writing and meaning in these areas, the questionnaire was first designed in complicated Chinese (for those who understood only complicated Chinese) on the basis of English literature and measurements and then translated into simplified Chinese (for those who understood only simplified Chinese). The back-translation technique helped ensure the correctness of the two-stage translations. Each questionnaire contained a statement that explained the general purpose of the research, the voluntary nature of participation, and the confidentiality of all responses.

Although selection of the participating firms was not random, participants came from various sectors, including semiconductors, computers, electronics, telecommunications, precision equipment, biotechnology, and information services. Potential respondents were approached by their human resource managers or department managers, and questionnaires were delivered through the firms' internal mail system. To sort the type of firm ownership, the respondents were asked to self-rate the ownership type of their companies, including foreign investment, state-owned, and privately owned and if their firms' owners were Mainland Chinese or Taiwanese. Other firm characteristics, including self-reported firm age, number of employees, and yearly sales, were also collected to examine if the self-rated data matched with the general statistics of the four ownerships. The completed questionnaires were either returned through the firms' internal mail system or mailed directly to the authors using a postage-paid return envelope included with the questionnaire.

We received 511 (51.1%) questionnaires from Shanghai and 273 (55.6%) from Qingdao, but each set included responses from non-science and technology personnel, such as general sales, human resources, and finance personnel. After we removed these and other invalid questionnaires, 694 questionnaires (456 from Shanghai and 238 from Qingdao) remained for the final analysis. A further sorting revealed that the SOEs ($N = 125$) included 39 from Shanghai and 86 from Qingdao; the FCBs ($N = 221$) had 193 from Shanghai and 28 from Qingdao; the POE-Cn ($N = 139$) had 23 from Shanghai and 116 from Qingdao; and the POE-Tw ($N = 209$) had 201 from Shanghai and eight from Qingdao. These frequencies feature the distribution of the four ownership types in the two regions.

The sample demographics showed that approximately 36% of the respondents were women; their ages fell mostly between 26 and 35 years with an average of 31.7 years; most of them (97%) had a college degree or more education and approximately half (47%) were in a manager position. On average, they had worked for 7 years but had been with their current employers for an average of 3.3 years. Overall, these characteristics of the current sample are consistent with the general background of China's technical professionals – young, high educated, high positioned, and high job mobility, as their technological counterparts in the other parts of the world.

3.3 Data analysis methods

Since the measurements are multivariate, in proving Hypotheses 1 and 2, we apply first Covariance Analysis to examine the values differences among respondents in the four types of ownership firms, with controlling of region and respondent demographics (gender, age, education, manager position, and current job tenure). Standardised principal component scoring then follows to integrate separately the old and the new values (Sharma, 1995). The purpose is to project these values onto a perception map for values position comparison among the four types of firm ownership.

For testing of Hypothesis 3, several criteria must be met to demonstrate that the value differences account for a mediator (Baron and Kenny, 1986): first, the assumed mediator should predict the dependent variables; second, when the mediator and independent variables are simultaneously entered into a model predicting the dependent variable, the coefficient on the independent variables should decrease, while the coefficient on the mediator should be less affected. In a cross-cultural analysis, Morris et al. (1998) suggest that researchers should test first whether clan effects on the dependent variables are mediated by values that include all the relevant value dimensions and then try to locate the values responsible for the effects by examining the specific component values of interest. Following these suggestions, and for controlling of region, firm ownership, and demographics, we apply first multivariate multiple regression to exam the overall effects, followed by single regression without and with the inclusion of participative leadership mediator for examining the coefficient change between each pair of leadership and work values variables.

4 Results

4.1 Sample profile

Table 2 illustrates the percentages of the four types of ownership firms that the participating respondents were working for between the two regions and the firm characteristics. It shows that Shanghai's respondents in the current sample were mostly from FCBs (87.3%), and private enterprises owned by Taiwanese (POEs-Tw: 96.2%), while those from Qingdao were mostly working for domestic enterprises owned by government (SOEs: 68.8%) and Mainland Chinese (POE-Cn: 83.5%). Data in the lower part of Table 2 also show that the FCBs are mostly large scaled global firms, including having the most number of employees and yearly sales; the SOEs appear less efficient, because although these firms on average have more employees than have the POEs-Tw, they produce lower yearly sales. These firm data, which are consistent with the status quo that Shanghai has been China's focus of foreign direct investment and high technological centre (Sun and Wen, 2007), confirm the appropriateness of the selection of the current sample.

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Table 2 Sample profile and hypothesised culture in terms of the four firm ownerships ($N = 694$)

| | Firm ownership | | | | F-test |
|--|--|--|---|---|--------|
| | SOEs (N = 125) | FCBs (N = 221) | POE-Cn (N = 139) | POE-Tw (N = 209) | |
| Firm characteristics of each sample: | | | | | |
| Firm age (years) | 33.7 ^b | 24.2 | 9.8 | 10.5 | * |
| # employees | 2980 | 5410 ^b | 1320 | 1870 | * |
| Yearly sales (M) ^a | 4380 | 8530 ^b | 1210 | 3850 | * |
| Feature of organisational culture of the four ownerships (Ralston et al., 2006; Hempel and Chang, 2002). | Rigidity and power-distance firm culture, or a combined culture of hierarchy and clan. | Recognising the need of market flexibility, or a combined culture of adhocracy and market. | Entrepreneurial and family-oriented, or a combined culture of adhocracy and clan. | Despite the political position, featuring Chinese family business model, or a combined culture of adhocracy and clan like POE-Cn. | |

Notes: ^a Yearly sales: million RMB dollars.

^b Largest among the four groups.

* $p < 0.05$.

Further analyses on the sample demographics, including age, both total and current work years, except education, gender, and management position, all reveal significant differences across the two regions and the four firm ownerships. Education level differs significantly among the ownerships but not between the regions; female/male and manager/non-manager percentage differences in link to region and ownership are all insignificant. Overall, consistent with Shanghai's global business development characteristic (Sun and Wen, 2007), these data show that the FCBs in Shanghai are larger in size in number of employees and yearly sales, and their workers, though younger, are higher educated and more experienced than the others. In particular, firm ownership seems to affect more impacts than regional difference. To avoid the disturbance, the subsequent analyses control the effects from region, firm ownership, and respondents' demographics.

4.2 Tests of Hypotheses 1 and 2: work values differences accounted for firm ownership connection

Table 3 shows the old and the new work values differences among the four types of ownership firms by Covariance Analysis controlling of region and demographics, and by a perception map in terms of standardised principal component scores, where the old values comprise the conformity and respect values, and the new values comprise the four types of innovative values in risk-taking, values performing, autonomy, and conflict tolerance. Apparently, participative leadership is the only variable revealing insignificant difference among the four groups.

Following Table 3, the ratings of SOEs and FCBs are on the two extremes: the SOE employees perceived significantly the strongest power-distance leadership of their managers and levels of conformity and respect values in their organisations; they meanwhile report the lowest new values in all dimensions. Alternatively, the ratings of FCBs are opposite to these value dimensions of SOEs, and those given by the two POEs fall somewhere in between. However, between the two POEs, the ratings of POEs-Cn are relatively high in the two seemingly contradictory values, risk-taking and power-distance leadership, but these indications do not appear in the POEs-Tw. This distinction may be due to that the private ventures in Qingdao are younger as Table 2 characterises, thus they are more adhocratic and risk-taking, but meanwhile are more clan cultured, or paternalistic.

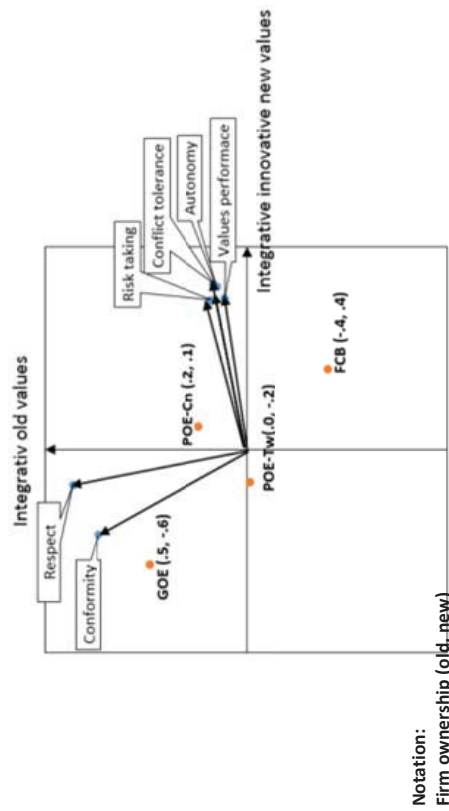
The perception map, which provides an overview of the values, further confirms these distinctions. Particularly, it stresses that the SOEs and the FCBs are on the two extremes of the old and the new values, respectively; the POEs-Cn is more inclined to the old values but meanwhile more risk-taking and innovative than the POEs-Tw. Overall, these data support for Hypotheses 1 and 2, except that all firms score equally high (all around 5.4) on participative leadership, although the FCBs score it the highest among the four.

Table 3 Old and new values differences among the four types of ownership firms: results of covariance analysis^a and standardised principal component^b

| Firm ownership | Values subordinates perceive | | Old values | | Participative leadership | | Risk-taking | | Innovative new values | |
|---------------------------|------------------------------|------------|------------------|------------------|--------------------------|------------|------------------|-------------------|-----------------------|--------------------|
| | Power-distance | leadership | Conformity | Respect | Respect | leadership | Risk-taking | Values performing | Autonomy | Conflict tolerance |
| Difference <i>F</i> -test | * | * | * | * | * | * | * | * | * | * |
| SOE (<i>N</i> = 125) | 4.1 ^c | | 4.8 ^c | 5.4 ^c | | 5.4 | 4.1 | 4.4 | 4.5 | 4.9 |
| POE-Cn (<i>N</i> = 139) | 4.0 ^c | | 4.4 | 5.2 | | 5.4 | 4.7 ^c | 4.8 | 4.8 | 5.0 |
| POE-Tw (<i>N</i> = 209) | 3.4 | | 4.4 | 5.0 | | 5.4 | 4.2 | 4.6 | 4.9 | 4.9 |
| FCB (<i>N</i> = 221) | 3.1 | | 4.1 | 4.5 | | 5.5 | 4.4 ^c | 4.9 ^c | 5.0 ^c | 5.3 ^c |

Notes: ^a ANCOVA controlling of region and demographics (gender, age, education, manager position, and job tenure).

^b Perception map of standardised principal component scores among the four firm ownerships:



^c Scores significantly higher than the overall mean on a seven-point Likert type scale with median 4.

*Significantly differ among the four groups at $p < 0.05$.

4.3 Tests of Hypothesis 3: participative leadership mediating the impacts of power-distance

Table 4 displays the reduced *F*-value effects of power-distance leadership on the two integrative values due to the mediation of participative leadership. Figures 1 and 2 show, respectively, the regression coefficients without and with participative leadership mediator. All analyses control the effects of firm ownership, region, and respondent demographics. As shown, FCBs and POEs-Cn are the only two variables effecting significantly among these controlling variables, which once again confirm the contribution of firm ownership on work culture acculturation across the two regions.

The two mediation models in Table 4 indicate that due to participative leadership mediator, the *F*-values of integrative effects in the new values model decrease from significant 13.09* to insignificant 3.10 (Model 3), while those in the old values model remain significantly large, with a minor change from 90.94* to 83.97* (Model 2). In contrast, the effects given by participative leadership are significant 18.83* for the old values and 54.03* for the new values, respectively. Figures 1 and 2 show further the coefficient details. Between the two figures, the coefficients on the four new values linked to power-distance leadership decrease from negative significances (Figure 1) to trivial numbers (Figure 2) due to participative leading mediator, but these reductions do not appear on the two old values. Moreover, the coefficients on the four new values and respect, except conformity, linked to participative leadership are all positive and significant. According to mediation theory (Baron and Kenny, 1986), these results give a full support for Hypothesis 3 that participative leadership mediates the negative impacts of power-distance leadership on fostering subordinates innovative new values.

Figure 2 also shows that the two leaderships are correlated negatively, which suggests subordinates perceive either power-distance or participative leadership style of their managers. Therefore, even though the current sample on average indicate a high level of participative leadership of their managers, some of them perceive stronger their managers a power-distant leader than the others. In turn, when subordinates perceive their managers rely less on power-distance and more on participative, they appear more inspired to bear in mind innovative values, regardless the ongoing of old values.

Table 4 Reduced *F*-value effects of power-distance leading on both the old and new values due to the mediation of participative leading^a

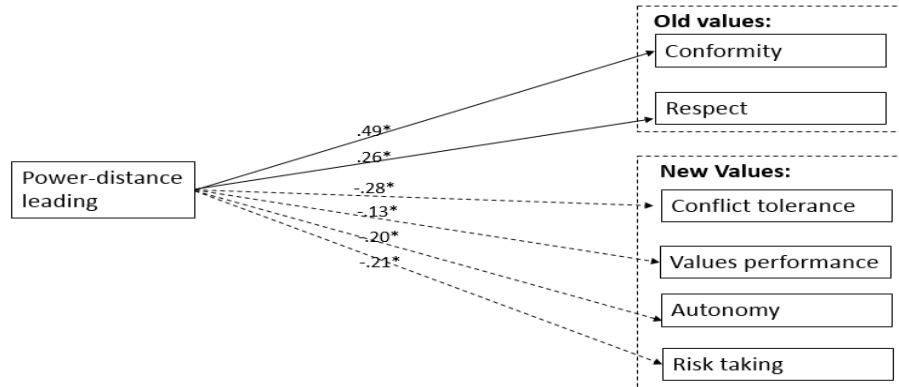
| <i>Dependent variable</i> | <i>Model 1</i> | <i>Model 2</i> | | <i>Model 3</i> | |
|-------------------------------|------------------------------|--|--------|---|--------|
| <i>Independent variables</i> | <i>Participative leading</i> | <i>Integrative old values (respect and conformity)</i> | | <i>Integrative new values (risk-taking, autonomy, conflict tolerance, values performance)</i> | |
| Power-distance leading | 90.09* | 90.94* | 83.97* | 13.09* | 3.10 |
| Participative leading | | | 18.83* | | 54.03* |
| Controlling variables: | | | | | |
| SOEs | 0.40 | 0.93 | 0.75 | 2.20 | 2.05 |
| POEs-Cn | 0.43 | 2.54 | 2.47 | 5.27* | 5.28* |
| FCBs | 0.64 | 8.60* | 9.39* | 2.77 | 2.92 |
| Region | 0.41 | 4.50 | 4.16 | 1.37 | 1.95 |
| Demographics: | | | | | |
| All insignificant (not shown) | | | | | |

Notes: ^a Results of Wilks' Lambda *F*-values of multivariate multiple regression.

**p* < 0.001.

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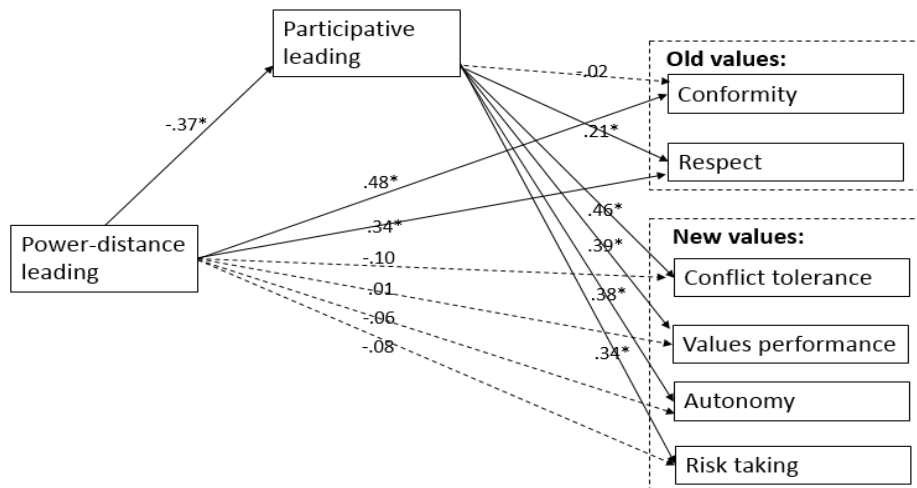
Figure 1 The impacts of power-distance leadership on both the old and new values^a



Notes: ^aResults of multivariate multiple regression with controlling of ownership, region, and demographics.

* $p < 0.001$.

Figure 2 The impacts of power-distance leadership on both the old and new values due to the mediation of participative leading^a



Notes: ^a Results of multivariate multiple regression with controlling of ownership, region, and demographics.

* $p < 0.001$.

5 Discussion

Prior research has shown the direct benefits of participative leadership behaviour in Chinese-managed firms (e.g. Lam et al., 2002; Fu et al., 2004; Han et al., 2010). Research has also confirmed the moderator of power-distance value on the impact of transformational leadership, such that a low power-distance orientation of employees can

enhance the relationship between this leadership and procedural justice (Kirkman et al., 2009). Our findings add to the evidence that manager leadership behaviour also plays a mediating role in work culture acculturation.

5.1 Observing values changes in terms of firm ownership than locality

As the prime mechanism for creating and sustaining new technologies, innovation and its related values are absolutely imperative (Zien and Buckler, 1997; O'Connor and Ayers, 2005). Such work principles apply to both the organisation and the individual employees. In the organisational level, our findings indicate that the change in terms of the emergence of firm ownership, namely the values of business originator, is apparent. Particularly, power-distance-related values studied herein reflect their hindrance and facilitation to foster innovative work values across the four types of existing Chinese firms, SOEs, FCBs, POEs-Cn, and POEs-tw. Among the four, the change of SOEs is most contradicting: on the one hand, they not only score the highest on power-distance leadership and respect and conformity tradition values but also foster the least innovative values; on the other hand, they score equally on participative leadership to other ownership firms. This may imply that although today's SOEs remain mostly traditional, performing like other large firms in mature life cycles, they are not less interested in participative leadership practice than their FCB or POE counterparts. In addition, the high scores of POEs-Cn in the two seemingly contradictory values, risk-taking and power-distance, show that these young Chinese domestic ventures, though as well are innovative as the FCBs, remain paternalistic. Traditional values appear not farewell.

This unexpected but not surprising finding may be an indication that Chinese firms have assimilated core 'business values and practices of Western market-oriented companies, as was the Chinese government's goal with the transition movement' (Ralston et al., 2006, p.839). Ralston et al. (2006) indicate that this is understandable because management education and learning of Western-style management theories and practices have received priority in China's reform strategy. In addition, Chinese managers, who have been influenced by what they learned about Western business practices, have apparently applied them in their organisations. Particularly, people from all countries prefer equal power distribution even though there are substantial firm variations in power-distance practices across countries (Huang et al., 2006). Therefore, although research has shown that participative management practices may not work effectively in Chinese-managed firms because their workers are more likely to tolerate authoritarian management (e.g. Hofstede, 2001; Huang and Van de Vliert, 2003), the current findings suggest that Chinese employees, either overseas or Mainland, may not be necessarily less interested in participative management practices.

5.2 Respect, conformity, and perceived leadership style of Chinese managers

Although the current findings confirm that subordinate conformity values and power-distance leadership of manager are paired to impact negatively on fostering the individual employee innovative values, respect as well a Chinese tradition while related positively to participative leadership, may provide positive impacts. This consistent benefit of respect with participative leadership is understandable.

Firstly, the value of respect in the Chinese tradition reflects a humanity orientation of group harmony and unanimity, emphasising superiors looking after inferiors, and personal interests come second to those of the group to create a harmonious society (e.g.

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Buttery and Leung, 1998; Su et al., 2003). In the same vein, participative leadership stresses giving followers greater discretion and supporting them by consulting them before decision-making to achieve integrative conflict management and collaborative teamwork (e.g. Fu et al., 2004). Secondly, work environments assign values and beliefs that help employees adjust and act behaviours to fit in their organisation (Schein, 1992). Thus, under the hierarchy-for-harmony social premise (Franke et al., 1991; Hofstede, 2001), Chinese leaders and managers are used to practising paternalistic and hierarchy control, and the inferiors are expected to follow. In turn, if the followers believe that their supervisors are elite and superior, they will be respectful and compliant; conversely, if they believe that their supervisors are inferior, they will lose respect and engage in conformity without conflicting voices because Chinese 'harmony' discourages voices from those in subservient positions. Consequently, in Chinese work units, respect relates positively to both participative and power-distance leaderships of managers, while high respect often turns into reserved conformity and loss of cares and voices to hamper development of innovative values for an open discussion workplace for individuals.

5.3 Adjusting undesired old values via learning of participative leading behaviour

Existing research has found the direct benefits of reduced power-distance behaviour on Chinese management (e.g. Lam et al., 2002; Fu et al., 2004; Han et al., 2010). Using mediation approach, which provides more explainable psychological effects when the individual is the relevant unit of analysis (Baron and Kenny, 1986), we find that the influence may be more complex than previously surmised.

Power-distance and participative leaderships are practically two opposite supervisory behaviours. The mediation analyses in this study show that if switching to participative type leading, managers seemly are more able to reduce the undesired impacts of power-distance-oriented leading to create a more innovative environment that comprises such work values as risk-taking, autonomy, conflict tolerance, and values performance. Participative leadership also appears to retain the old values of respect, but not conformity. In contrast, power-distance leadership seems only accounting for a significant part of subordinates' respect and conformity, but generating no effects on all innovation-related values tested. The results hence demonstrate that modern Chinese-managed firms, through intercession of participative type leading, are associated with improvements in creation of a forward-looking, conflict tolerant, values performance instead of seniority work environment.

Bloom et al. (2012) argue that there are always superior managed firms across all nations despite various local circumstances. They explain that many management aspects are non-contingent and learnable, resembling a technology. In terms of the current findings, we accentuate the incorporation of participative management in today's Chinese businesses regardless of the coexistence of traditional values.

6 Conclusion

Participative leadership is a Western-style management approach emphasising open discussion and empowering practices (Eylon and Au, 1999). It is thus considered incompatible or even unreceptive to people from large power-distance social culture.

This study provides theory and empirical evidence that this incompatibility could be reversed through adaptation of participative management. We show that by incorporating participative leadership, Chinese managers can lessen the unfavourable connection between power-distance leading and subordinates' conformance, meanwhile maintain their values of respect, to foster them such innovative values as conflict tolerance, values performance, autonomy, and risk-taking. Thus, although Chinese employees often interpret success in terms of meeting production quotas more than getting intrinsic job satisfaction (Stewart and Chong, 1990), they may not be necessarily less receptive to participative management practices (Wang, 1994). Most important, this participative type leadership needs to encompass not just goal setting and solution involvement of subordinates in decision-making, but also an adoption of performance-based control system than simply job steadiness to appraise.

Although this study recognises the role of manager participative leadership in fostering cross-cultural values, the results also suggest that the convergence cannot be assumed across Chinese cultures because old values remain. Such old values are not worthless; in some cases, the benefits, for example, the value of respect as shown currently, can be significant. These behavioural guidelines contrast with negative conceptualisations and provide a means to gauge how Chinese workers embrace these values. There are also other positive Chinese values worthy of study. For example, Chinese people are known for their diligence and hard work; they treasure every minute in their lives, which seems to contradict their worship for the past and tradition. Their social disdain for people who only enjoy physical pleasures and respect for those who pursue spiritual satisfaction also suggests some contradictions in their philosophy. Further, environmental factors, such as capitalism and educational systems, are critical determinants in economic and cultural reform. Additional research also might take into account different professions and regional technology differences, for instance, whether the current benefits coast cities such as Shanghai and Qingdao have achieved also apply to other Chinese cities, located farther away from the coast, requires additional research.

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