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Understanding the roles of loss-premium comparisons and insurance coverage in customer acceptance of insurance claim frauds

Understanding
the roles of
loss-premium

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Abstract

Purpose – The purpose of this paper is to examine the impacts of loss-premium comparisons (loss-premium comparison refers to the amount of an actual loss compared to the premium level) and insurance coverage on customer acceptance of insurance claim frauds, based on Adams' equity theory. Customer perceptions of insurance frauds have been studied in recent years.

Design/methodology/approach – A questionnaire was used as an instrument in the research. The hypotheses were tested using a 3 loss-premium comparisons (the actual loss amount was lower than, or equal to or higher than the annual premium) \times 2 insurance coverage (the loss is covered or not covered by the insurance policy) experimental design in a claim application context.

Findings – The results showed that loss-premium comparisons and insurance coverage significantly affect the final claim amounts. According to the results, age and education may relate to customer acceptance of insurance claim frauds.

Originality/value – This study proposed a first empirical investigation into the relationship between loss-premium comparisons and customer ethical decision making in the customer frauds. Insurance coverage is also specifically considered in the study.

Keywords Insurance, Premium, Customer frauds, Equity theory, Ethical decision

Paper type Research paper

Introduction

Insurance claim frauds in the insurance industry have been extensively studied over the past decade (Derrig, 2002). Some researchers have found that perceptions of fairness may affect customer attitudes toward insurance claim fraud (Dean, 2004). For example, Brinkmann (2005) showed that the perception of insurers making too much money at the consumer's expense may enhance the customers' acceptance of insurance frauds. Miyazaki (2009) found that deductible amounts will affect customers' perceptions of



whether claim padding is acceptable. Those studies provided the initial discussions of the relationship between the perception of fairness and customer acceptance of frauds. However, although the relevant discussions about “perception of fairness and customer frauds” were proposed by some researchers, little research has directed attention to how the comparative evaluations of fairness would affect customers’ decision making in the insurance frauds. In fact, studies have indicated that the perception of fairness is usually formed on a comparative basis (Adams, 1963; Ajzen *et al.*, 2000; Lopes and Fletcher, 2004; Siegel *et al.*, 2008), and therefore there are still some issues about “perception of fairness and customer frauds” which can be discussed in the literature.

The first research purpose of this study is to investigate how different loss-premium comparisons (loss-premium comparison refers to the amount of an actual loss compared to the premium level) will lead to different fairness perceptions and affect customer acceptance of frauds. A loss is the damage sustained by the insured, and an insurance premium is the financial cost of obtaining the insurance coverage. The two factors are conceptually different, while their impacts on the customer acceptance of insurance frauds could be significant. In reality, it is also observable that some customers pad an insurance claim to cover a loss and some customers pad an insurance claim to obtain a full return on the insurance premiums. In some cases, some customers may even try to obtain extra benefits, higher than the amount of a loss or premium. We think loss-premium comparisons (for instance, when the actual loss amount is significantly lower than the annual premium that has been paid to the insurer) could result in different perceptions of fairness and lead to different customer reactions to the insurance claim frauds. Therefore, the present work attempts to investigate this issue, for the purpose of increasing our understanding of customer fraud behavior.

It has also been found that, even when a loss was not covered by the insurance policy, some customers may still make the claim and believe there is nothing wrong in getting a return on the premiums they paid (Brinkmann and Lentz, 2006). Based on this, we think that the researchers who study customer claim frauds should also take the impacts of insurance coverage into account. Previous research on insurance claim frauds has seldom mentioned the relationship between insurance coverage and consumer acceptance of insurance frauds. Hence, we would like to know which insurance coverage (e.g., when the actual loss is covered by the policy or when the actual loss is not covered by the insurance policy) would lead to more unethical customer reactions to the fraud problems. In summary, this research focuses on two research questions:

- RQ1.* How do loss-premium comparisons influence customers’ acceptance of insurance claim fraud?
- RQ2.* Which insurance coverage would lead to more unethical customer reactions to the insurance claim frauds?

The importance of this research

Customer claim fraud is a serious problem in the insurance industry. According to the Federal Bureau of Investigation (FBI, 2012), insurance frauds have caused losses of 40 billion US dollars in the USA, and that means insurance fraud may cost a US family between 400 and 700 US dollars per year in the form of increased insurance premiums. However, although insurance frauds are obviously illegal and may create a heavy

financial burden for the insurers and honest policyholders, little service management research has directed attention to this issue. To protect customer interests and to maintain service quality in the insurance industry, it is necessary for practitioners and regulators to better understand how the customer frauds are construed by customers and what factors could determine its acceptability in specific situations.

Early research work has suggested a number of factors (such as demographic variables, the types of the insured cars and the age of the cars) that may influence insurance claim fraud (Loughran, 2005). Dionne and Gagne (2001) further proposed that contract factors (such as a high insurance deductible) could create incentives to commit insurance fraud, especially when the customers believe that the claim fraud has a low probability of being detected. Yet, the contract factors (e.g., deductible or insurance coverage) are usually proportional to the insurance premium, and the amounts of claim payments are often proportional to the size of the actual losses. These relationships reflect that neither premium nor loss should be ignored in the insurance fraud research. This study proposed a first empirical investigation into the relationship between loss-premium comparisons and customer ethical decision making in the customer frauds. Insurance coverage is also specifically considered in the study.

In summary, the incidence of customer claim frauds and their negative effects on insurance premium and claim services have attracted considerable attention by regulators, insurers and the general public. The customer frauds have also been acknowledged as a big problem for financial service researchers. However, the issue of loss-premium comparison is seldom mentioned in the relevant literature. This research may not only assist insurance companies in identifying what sort of loss-premium comparisons and insurance coverage may contribute to the decision process underlying customer claim frauds but it may also extend the existing knowledge of customer perception of service fairness and customer misbehaviors.

Literature

The potential influence of loss-premium comparisons on insurance claim frauds

Opportunistic frauds and planned frauds are two types of insurance claim frauds (Dionne and Gagne, 2002). According to Weisberg and Derrig (1993), opportunistic frauds involve customer attempts to pad claims for an insured event that is legitimate, while planned frauds refer to an effort to gain insurance compensation by falsifying a risk event. Previous studies have concluded that there are several reasons for customers committing the frauds. For example, it has been argued that insurance claim fraud is derived from information asymmetry problems (Dionne, 2000; Picard, 2000). Information asymmetry refers to a condition in which information is only known to specific parties, but not all participants. According to Stiglitz (2009), information asymmetry is the main cause of moral hazard.

It has also been argued that customers' perception of unfairness in relation to the insurance services could be a reason for customers accepting the fraudulent behavior (Tennyson, 1997). We think the equity theory can be used to explain this phenomenon. Adams' (1963) equity theory showed that people would make judgments of fairness by comparing their relevant inputs to the outputs they received and also by comparing the inputs–outputs ratio to those of other people. If the input (such as the premium they paid to the insurance company) is significantly higher than the output (such as the service or claim payment they receive from the insurance company),

some people may feel that this is unfair, and this may motivate them to take some actions that are undesirable to the service providers. Apart from Adams' (1963) equity theory, the concept of distributional justice has been used to predict retaliation behavior (Skarlicki and Folger, 1997). Distributive justice concerns what is fair with respect to the allocation of resources in society. Vardi and Weitz (2004) showed that detrimental activities like revenge and retaliation can be predicted by the high perceived unfairness of outcome distributions. This suggested that consumer-perceived fairness in relation to the outcome distributions may affect the customers' attitude toward insurance claim frauds.

The attribution theory has also been used to explain some types of customer misbehaviors. The attribution theory refers to how people interpret the relationships between cause and effect and how those people make judgments and decisions about the event and responsibility (Benkhoff, 1998; Maxwell, 2002; Vaidyanathan and Aggarwal, 2003). Researchers have shown that the attribution process is significantly associated with the perception of unfairness. For example, Xia *et al.* (2004) showed that the perception of price unfairness begins with a price evaluation. The evaluation can be external (e.g., the premium was increasing because the government required every insurer to increase its premium) or internal (e.g., the premium was increased simply because of the insurer's bad management and poor performance). According to the attribution theory, when an external attribution is made, the cause of the price unfairness is usually assigned to the situation and therefore the decision maker may not blame the service provider. When an internal attribution is made, the cause of the price unfairness may be assigned to the service provider and may result in customer dissatisfaction (Vaidyanathan and Aggarwal, 2003; Bolton and Alba, 2006; Chiou, 2007; Kukar-Kinney *et al.*, 2007; Xia and Monroe, 2010). Studies have further shown that customers would react negatively (e.g., negative word-of-mouth and customer switch behavior) when they believe that unfair prices are due to the service provider's misbehavior (Maxwell, 2002; Bolton *et al.*, 2003; Xia *et al.*, 2010).

In the insurance industry, loss-premium comparisons may also result in some negative customer reactions. Brinkmann and Lentz (2006) showed that the perception of premium unfairness and insurer's reputation had significant effects on customer acceptance of insurance customer dishonesty. Brinkmann and Lentz (2006) also argued that some customers are looking to get a fair return on the insurance premiums in the insurance claim frauds. Based on this finding, we think that fairness perceptions of loss-premium comparisons could affect customer acceptance of insurance claim frauds. In fact, a low loss-premium ratio (the actual loss is small while the premium is high) is observable in the insurance industry. For example, in the car insurance industry, an actual loss can be significantly lower than the annual premium, and therefore the customers may not get a full return of the premium they paid to the insurer. We think some of the customers in this situation may believe that the insurer makes too much money at their expense and think that it is fair to obtain some money back on the premiums they paid. In short, we believe the perception of fairness regarding the loss-premium comparison may affect customer acceptance of insurance claim frauds. To test the argument, a hypothesis is proposed below:

H1. The customers are more likely to pad insurance claims when they perceive that the actual loss amount is smaller than the premium they paid.

Non-covered loss and customer claim frauds

Insurance policies provide different types of coverage for damage or losses. For example, automobile liability insurance covers the customers for damage caused to a third party while driving. Fire insurance policies are offered for covering fire and lightning damage to the customers' property. Property insurance policies are generally offered by non-life insurance companies for coverage of a building and its contents in the event of damage or loss. In reality, the exact cost of the insurance coverage would depend on the level of coverage that the customers would like to buy. However, the customers will be reimbursed only when the actual loss is covered by the listed insurance coverage. The customers with no protection of insurance coverage should obtain nothing from the insurer, no matter how much premium they paid for the insurance policies.

Stiglitz (2009) pointed out that possible moral hazard could occur within this situation, that is, some customers may apply for the claims even if they know the losses are not covered by the policy (e.g., customers could make a claim by misreporting the loss event). Brinkmann and Lentz (2006) also pointed out that customers may try to obtain insurance money for a loss that is not covered by the policy. We think there are two possible reasons for customers claiming for non-covered losses. They are information asymmetry and opportunism (Dionne and Gagne, 2001). We think some customers may dare to make a false claim because they believe there is information asymmetry or a low probability of being caught. Previous research has also suggested that people make judgments of actions based on how risky the behaviors are (Lurie and Albin, 2007). Therefore, we think information asymmetry and opportunism could be the reasons for customers making claims for non-covered losses.

In sum, some customers may try to get some insurance money back from the insurer even for the non-covered losses. We hypothesize that:

- H2. The customers are more likely to make a false claim when they know they would obtain nothing from the insurer.

Customers' attitudes toward insurance frauds

Ethical attitude focuses on how an action is defined as right or wrong. The early research of ethical attitude was proposed by Jean Piaget (1896-1980). Piaget found that children at a certain age may hold a similar development process of ethical attitudes. For example, some children at a certain age would believe rules to be fixed and absolute (Killen, 2007). Apart from Piaget's study, sociologists Mead and Morris (1934) also provided their thoughts on ethical attitude. Mead and Morris argued that the development of ethical attitude is a process that an individual learns from social interactions. In the business studies, Dubinsky and Loken (1989) further deemed that the concern of outcomes would form the attitude to the ethical issue in question.

Previous studies have also shown that customer attitudes toward insurance frauds would positively relate to the customer's intention to do the frauds (Brinkmann and Lentz, 2006). Similar findings were found by Dean (2004) and Miyazaki (2009) in their studies. In summary, we think loss-premium comparisons could affect customers' attitudes toward insurance fraud. A hypothesis is proposed:

H3. The customers are more likely to accept the fraudulent behavior (or believe it is fair to cheat) when they perceive that the actual loss amount is smaller than the premium they paid.

Methodology

Questionnaires have been used as an instrument in customer fraud studies (Tennyson, 1997; Dean, 2004; Brinkmann and Lentz, 2006; Miyazaki, 2009). The use of questionnaires is considered a positive solution in improving the quality of data because it could promise the anonymity of the respondents when investigating sensitive issues (such as respondents' acceptance of insurance frauds). Using questionnaires with scenarios also helps to standardize the questions and measurements that are received by the respondents. Moreover, using questionnaires allows for greater control over the variables of interest. Finally, to gather the data about customer attitudes toward insurance claim frauds, using a questionnaire could be appropriate.

Scenarios

Our research hypotheses were tested with a 3 loss-premium comparisons (the actual loss is significantly smaller than the annual premium; the actual loss is equal to the annual premium; and the actual loss is significantly higher than the annual premium) \times 2 insurance coverage (the loss is covered or not covered by the insurance policy) experimental design. Hence, we have six versions of questionnaires (versions A, B, C, D, E and F). Participants were asked to read the written scenario describing an insurance claim fraud and then answer the questions. In the questionnaire versions A, B and C, a customer had a car accident, and because the loss was covered by the insurance policy, the customer can make a full claim for the loss. The annual premium is always 50,000 NT dollars (30 NT dollars was about 1 US dollar in 2012), and the customer also noticed that the actual loss amount (L) was lower than, or equal to, or higher than the annual premium (P) he paid for the insurance policy ($L < P$; $L = P$; $L > P$). To obtain more insurance money, the customer exaggerated the loss event.

In the situations of questionnaire versions D, E and F (Table I), we told the respondents that the losses were NOT covered by the insurance policy, indicating that the customer X should not apply for the claims. The questionnaires D, E and F examined respondents' views of claim application to a non-covered loss. The research design helps us to compare whether insurance coverage affects respondents' decision making in the insurance claim frauds.

Measurement

The scenario explained above has manipulated loss-premium comparisons and insurance coverage. In the questionnaire, customer attitudes (we asked: I think customer X's behavior is acceptable), perceived fairness of the claim padding behavior, customer intention and final claim amounts were captured using questions. Apart from the claim amounts (item 7), each construct has two items, and they are measured on a 7-point scale (i.e. totally disagree = 1, totally agree = 7). The measurement scales were designed to fit the context of our research purposes. Only item 7 is measured numerically. The customer acceptance of insurance frauds (item 1 and 2) has a Cronbach's reliability of 0.876, the perceived fairness of the claim padding behavior (item 3 and 4) has a Cronbach's reliability of 0.843 and customer intention (item 5 and 6) has a Cronbach's reliability of 0.757 (Table II).

Questionnaire

Scenario (the loss is covered)

Version A: the loss amount was smaller than the premium ($L < P$)

Customer X had a car accident. This made customer X suffer a loss of 10,000 NT dollars for the car repair. According to his insurance contract, the loss is covered and therefore he can make a full claim (10,000 NT dollars) from the insurer. However, customer X also noticed that the annual premium he paid for the insurance policy was 50,000 NT dollars. To obtain more insurance money, customer X exaggerated the loss amount. The claim department was not aware of this and paid the claim immediately

Version B: the loss amount was equal to the premium ($L = P$)

*The contents of the scenario are the same as version A except for [. .]**. This made customer X suffer a loss of 50,000 NT dollars. According to his insurance contract, the loss is covered and therefore he can make a full claim (50,000 NT dollars) from the insurer

Version C: the loss amount was higher than the premium ($L > P$)

*The contents of the scenario are the same as version A except for [. .]**. This made customer X suffer a loss of 100,000 NT dollars. According to his insurance contract, the loss is covered and therefore he can make a full claim (100,000 NT dollars) from the insurer

Scenario (the loss is not covered)

Version D: the loss amount was smaller than the premium ($L < P$)

Customer X had a car accident. This made customer X suffer a loss of 10,000 NT dollars for the car repair. According to his insurance contract, the loss is NOT covered and therefore he cannot make a claim from the insurer. However, customer X also noticed that the annual premium he paid for the insurance policy was 50,000 NT dollars. To obtain more insurance money, customer X reported that the loss was caused by an insured event, and he exaggerated the loss amount. The claim department was not aware of this and paid the claim immediately

Version E: the loss amount was equal to the premium ($L = P$)

The contents of the scenario are the same as version D except for [. .]*. This made customer X suffer a loss of 50,000 NT dollars

Version F: the loss amount was higher than the premium ($L > P$)

The contents of the scenario are the same as version D except for [. .]*. This made customer X suffer a loss of 100,000 NT dollars

Table I.
Scenario

Pilot test

A pilot test was used to make sure the questionnaires and investigation procedures worked as intended. The procedures included checking the scenario wording and how easy the questions were for the respondents to make decisions. Twenty members of the

Chinese Medicine Association (in Taiwan, Taoyuan County) were recruited as participants, and the participants found the scenario and wording were simple and easy to understand. After correcting scenario wording, we then made the final version of the questionnaires.

Sample

This study examined the impacts of loss-premium comparisons and insurance coverage on customer acceptance of insurance claim frauds. School teachers are recruited as the research sample. The reason for our interest in school teachers is that they can be car insurance customers, and insurance fraud is a kind of white-collar crime and the teachers are white-collar workers. In this research, purposive sample selection was used. Four elementary schools (in Taiwan, Taichung city and Hsinchu county) and one Teachers' Association in Taiwan (in Taiwan, Taoyuan county) took part in this research (the members of the association include junior high school and elementary school teachers). We contacted the members of the schools and association in advance, and then submitted the questionnaires. All respondents were told in the cover letters that this research was interested in understanding what customers think about customer claim frauds. To alleviate social desirability responses, we reminded the respondents that the questionnaire is anonymous and confidential. Each respondent was given one version of the questionnaire randomly. At the end of the investigation, respondents were asked to complete some demographic information.

The investigations were conducted during April 2012 to June 2012. Of the total 350 questionnaires issued 208 questionnaires were returned. The valid return rate was about 59.4 per cent. In terms of gender, the sample represented 121 females (58.2 per cent) and 87 males (41.8 per cent). Age-wise, it is noted that 41.5 per cent of the respondents were between the ages of 30 and 39 years, with 32.4 per cent in the age group 40-49 years. In terms of claim experience, 53.6 per cent of the respondents have experiences of insurance claim applications. The majority of respondents had a bachelor's or post-graduate degree (Table III).

Results

The influences of loss-premium comparisons and insurance coverage

To examine the proposed hypotheses, two-step statistical analyses were applied to the data. First, mean values for the items (across questionnaire versions) were shown in Table IV. Second, given that the items are measured in an ordinal scale, Mann-Whitney-Wilcoxon and Kruskal-Wallis tests were used to compare the mean

Independent and dependent variables

1. I think customer X's behavior is acceptable
 2. I think the way that customer X treated the insurer is acceptable
 3. I think customer X's behavior is fair to the insurer
 4. I think customer X treated the insurer in a just manner
 5. If I were customer X, I would inflate the loss as well
 6. If I were customer X, I would try to exaggerate the loss amount
 7. If I were customer X, how much money would I claim? (Write in a dollar amount)
-

Table II.
Items

Variables	Frequency	Percentage
<i>Groups</i>		
A	34	16.3
B	35	16.8
C	37	17.8
D	31	14.9
E	36	17.3
F	35	16.8
<i>Gender</i>		
Females	121	58.2
Males	87	41.8
<i>Age</i>		
< 29	38	18.4
30-39	86	41.5
40-49	67	32.4
50-65	16	7.7
<i>Education</i>		
Post graduate degree	87	42.0
Bachelor's degree	111	53.6
Five years college	9	4.4
<i>Claim experience (claim application)</i>		
No	96	46.4
Yes	111	53.6

(Note: missing value is not included)

Table III.
Basic profile of responders

Coverage	Loss/premium	1	2	3	4	5	6	7
Covered	Loss < Premium (A)	4.117	4.206	4.088	4.294	3.323	3.364	26,015
	Loss = Premium (B)	3.685	4.028	3.428	3.543	3.514	3.428	66,764
	Loss > Premium (C)	3.405	3.472	3.892	3.297	3.324	3.676	106,756
Not covered	Loss < Premium (D)	3.838	3.645	3.935	3.806	3.258	2.967	9,821
	Loss = Premium (E)	3.250	3.638	3.722	3.444	3.805	3.257	30,441
	Loss > Premium (F)	2.942	2.914	3.057	2.848	3.051	3.233	63,428

Table IV.
Mean values for the items

values of the items across versions (see Table V). Although the results in Table V did not provide strong evidence for the impacts of loss-premium comparisons (and insurance coverage) on customer attitude toward insurance frauds, some discussions were proposed. According to Table IV, the mean values for the respondents' acceptance of insurance frauds in version A were 4.117 and 4.206 (item 1 and 2), and the mean values for perceived fairness in version A were 4.088 and 4.294 (items 3 and 4). It seemed that the respondents in version A scored these items higher than those in version F (the respondents' acceptance of insurance frauds in version F was 2.942 and 2.914), indicating that the respondents in version A did exhibit higher scores in the overall acceptance and perception of fairness concerning the customer frauds. According to Table V, the responses in the item 1 to item 4 were significantly different between versions A and F (please see A/F; p value = 0.016 for item 1; p value = 0.013 for item 2).

	Version	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7
Mann–Whitney–Wilcoxon	A/B	0.419	0.706	0.200	0.150	0.638	0.818	0.000*
	A/C	0.152	0.135	0.692	0.034*	0.884	0.379	0.000*
	A/D	0.632	0.267	0.769	0.305	0.979	0.525	0.000*
	A/E	0.073	0.264	0.405	0.068	0.263	0.857	0.063
	A/F	0.016*	0.013*	0.030*	0.003*	0.526	0.879	0.172
	B/C	0.506	0.024	0.358	0.544	0.621	0.518	0.000*
	B/D	0.804	0.277	0.342	0.672	0.470	0.313	0.000*
	B/E	0.391	0.394	0.522	0.825	0.520	0.667	0.000*
	B/F	0.156	0.018*	0.418	0.127	0.325	0.679	0.925
	C/D	0.389	0.808	0.940	0.307	0.830	0.069	0.000*
	C/E	0.666	0.723	0.692	0.858	0.313	0.285	0.000*
	C/F	0.305	0.189	0.082	0.252	0.466	0.276	0.000*
	D/E	0.226	0.985	0.610	0.390	0.253	0.601	0.161
	D/F	0.069	0.075	0.061	0.037*	0.556	0.561	0.001*
	E/F	0.433	0.105	0.139	0.251	0.086	0.996	0.014*
Kruskal–Wallis	A/B/C/D/E/F	0.185	0.099	0.266	0.062	0.637	0.681	0.000*

Table V.
Mann–Whitney–Wilcoxon
and Kruskal–Wallis tests

Notes: p -value is used; * refers to $p < 0.05$

This implies that loss-premium comparison and insurance coverage could be the factors that affect the customers' attitudes in the claim padding problems. In summary, the Mann–Whitney–Wilcoxon results provided some supports for the third hypothesis.

Only a few significant results were found in Table V. However, the difference in the means for item 7 was quite significant among questionnaire versions (for example, p value = 0.000 for A/B, A/C, A/D and so on). The findings confirmed that loss-premium comparison and insurance coverage may be associated with the final claim amounts in the insurance frauds, and hence the results provided some support for the second hypothesis. Table IV further revealed that the respondents would be more willing to apply for more claims when the actual loss was not covered by the insurance policy (see version F). It seemed that questionnaire version F may produce the most serious claim frauds (see Table IV, the average claim amount was about 63,428 NT dollars). Remember that the respondents who received questionnaire versions D, E and F should not apply for the claims because the loss was not covered by the insurance policy.

The potential influences of personal characteristics

Researchers have conducted empirical studies to examine the relationship between individual factors (such as gender and age) and ethical decision making. For example, it was found that gender and age may affect likelihood of engaging in unethical behavior (Ameen *et al.*, 1996; Borkowski and Ugras, 1998). Previous studies predicted that age may be related to unethical behavior and that older respondents would consider committing unethical behavior less frequently than would younger respondents, and education may also impact people's ethical decision making (Loe *et al.*, 2000). In other studies, some researchers found that individual experience impacts on ethical decision. Loe *et al.* (2000) proposed a review of individual experiences that affect ethical judgments and decisions. In the research, cognitive moral development and work experiences are the factors that contribute to individual recognition of ethical issues. Sims and Felton (2006) indicated that personal experience could be an important factor in forming the unethical choice. Based on these findings, we think claim experience (e.g.,

the experience of claims application) may affect customers' decision making in the claim frauds.

We think that it is worthwhile to examine individual characteristics to better understand how these individual factors may relate to the instances of customer insurance frauds. Hence, to see how personal characteristics may relate to the respondents' attitudes toward the insurance frauds, Mann–Whitney–Wilcoxon and Kruskal–Wallis tests were used for testing the response differences among the respondents. Tables VI and VII showed that the young respondents are more likely to have a higher acceptance of the claim padding behavior in the scenario (p values = 0.002 and 0.034 for items 1 and 2). The results further showed that the young respondents are more likely to believe it is fair to cheat the insurer (p values = 0.010 and 0.004 for items 3 and 4) and have a higher intention to commit the frauds (p value = 0.000 for item 6).

Compared with the respondents who have a bachelor's degree, it seemed that the higher education group (with a post graduate degree) were more likely to consider the customer claim fraud to be unacceptable (p values = 0.033 for item 2). Notice that there were only nine respondents belonging to the "five years college" group. Although we did not find significant results for gender and claim experience, Table VI showed that the female respondents may have a lower tolerance of the customer frauds than males (e.g., see items 1 and 2, the mean values for females = 3.446 and 3.550, while the mean values for males were 3.643 and 3.781). The results further showed that the respondents with no experience of claim applications may have a higher tolerance of the customer claim frauds. However, the average claim amount (see Table VI: it was about 49,673 NT

Person	Classification	1	2	3	4	5	6	7
Gender	Females	3.446	3.550	3.603	3.441	3.281	3.260	50,434
	Males	3.643	3.781	3.793	3.662	3.528	3.430	56,264
Age	< 29	4.421	4.210	4.552	4.289	3.868	4.052	71,666
	30-39	3.453	3.674	3.569	3.552	3.360	3.211	47,886
	40-49	3.447	3.590	3.552	3.378	3.373	3.439	54,531
	50-65	2.312	2.562	2.937	2.437	2.562	1.866	32,000
Education	Post graduate degree	3.367	3.356	3.413	3.372	3.206	3.104	42,911
	Bachelor's degree	3.756	3.981	3.936	3.781	3.639	3.596	60,142
	Five years college	2.625	2.875	3.625	2.375	2.250	2.750	63,750
Claim Exp	No	3.770	3.802	3.760	3.723	3.291	3.425	49,673
	Yes	3.531	3.647	3.686	3.536	3.391	3.343	52,927

Table VI.
Mean values for the items
(based on personal
characteristics)

Note: "Claim Exp" refers to claim experience

Personal differences	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7
Gender	0.598	0.386	0.626	0.519	0.340	0.481	0.572
Age	0.002*	0.034*	0.010*	0.004*	0.092	0.000*	0.017*
Education	0.151	0.033*	0.168	0.162	0.034*	0.090	0.015*
Claim exp.	0.110	0.272	0.592	0.186	0.517	0.452	0.637

Table VII.
The influences of personal
variables

Notes: p -value is used; *refers to $p < 0.05$

dollars) they applied for was lower than the respondents who have experience of insurance claim applications.

Conclusions

This research tries to extend the existing knowledge of the study of “perception of fairness and customer frauds” by focusing on what customers may do in the customer claim frauds when different loss-premium comparisons and insurance coverage are given. Some of the findings supported the idea that the loss-premium comparisons and insurance coverage are potential factors in customer acceptance of insurance claim frauds. This further suggests that customers’ decision making in the frauds was not only influenced by the perception of fairness but also affected by the perception of comparative fairness (customers may compare the difference between the premium and actual loss). The study findings also showed that the insurance coverage had an effect on the claim padding behavior. One conclusion of this research is that studying loss-premium comparisons and insurance coverage could provide some insights into the insurance fraud research, and the findings of this study could provide implications for those involved in the practice of insurance management and regulation.

Implications for service researchers and practitioners

Customer perceptions of insurance frauds have been surveyed in recent years. Researchers have pointed out that:

- customer-perceived fairness in relation to the insurance services could affect the customers’ attitude toward insurance claim frauds;
- some customers are looking to get a fair return on the insurance premiums in insurance claim frauds; and
- some customers try to obtain insurance money for a loss that is not covered by the insurance policy.

This study also investigated customers’ acceptance of customer claim frauds. In particular, this study investigated the extent to which customers rely on loss-premium comparisons and insurance coverage in forming their perception of fairness, acceptance and intentions in the situations involving insurance frauds. Conceptually, the results of this study showed that the equity theory is a worthy contribution to the customer fraud literature. We suggest researchers could also study customer frauds based on the dimensions of organizational justice (distributive, procedural and interactional justice) and the attribution theory. For example, we believe that other dimensions of the attribution theory, such as controllability (e.g., are the insurance premium increases or claim decreases under the control of the insurer?), stability (are the insurance premium increases or claim decreases temporary or permanent?) and globality (are the insurance premium increases or claim decreases widespread in the insurance industry?) may also affect customer perception of fairness, and in turn relate to customer acceptance of the insurance frauds. Apart from this, this study also showed that contract factors (such as, premium and loss amount) and their different combinations (such as, loss-premium comparisons) could have various impacts on customer acceptance of insurance claim frauds. The findings of this study can serve as a suggestion to undertake research of other contract factors (e.g., no claims discounts, insurance deductible or the expiry date

of insurance contract) and how important these factors might be in influencing customer decision making in the customer claim frauds.

For a potential managerial implication of this study, we think that training programs for claim adjusters or claim investigators should emphasize the relationship between contract factors and potential customer claim frauds. We believe this may improve fraud detection work. Given the fact that insurance salespeople usually help their customers settle the insurance claims, we think insurance companies should also provide adequate training and managerial controls to enable these salespeople to behave ethically.

Limitations and suggestions

Overall, the results of this study gave some initial observations of the relationships among loss-premium comparisons, insurance coverage and customer claim frauds. Yet, there are several limitations which need to be addressed. First, our sample is specific. Although examining customers' fraudulent behavior in a specific group of people may allow for some control over extraneous factors, such as culture and occupation, the disadvantages of the purposive sampling include a less representative sample of the whole customer population, and therefore the generalization of the study results will be limited. Future research could try to increase the external validity by collecting data from different groups of people. We also suggest future research could consider taking the issue of social norms, such as the insurance regulation or law of the country, into account.

Second, although it was argued that the social desirability may not bias the results when random assignment is applied in the experiment (Churchill, 1991), a weakness in the research is the lack of consideration of the respondents' social desirability tendency. In the future, researchers may consider assessing the social desirability responses.

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