Relationships among Components of Insurance Companies and Services’ Quality

Urban Šebjan, Polona Tominc

University of Maribor, Faculty of Economics and Business, Razlagova 14, 2000 Maribor, Slovenia
urban.sebjan@uni-mb.si (corresponding author); polona.tominc@uni-mb.si

Background and Purpose: An increasing number of insurance companies and the intensity of competition in this field require research on customer perceptions of the components of insurance services and insurance company. The objective of this study was to examine the conceptual model and to study the relationships between customer perceptions of the innovation, reputation, adequacy of premium, and adequacy of information about the coverage of insurance services.

Design/Methodology/Approach: The research model was tested with structural equation modelling (SEM) with a sample of 200 Slovenian users of insurance services.

Results: The results indicated that higher perceived innovation of insurance company was associated with higher perceived reputation of insurance company. In addition, higher perceived reputation of insurance company was associated with higher perceived adequacy of information about the coverage and the premium for insurance services. The study also found that higher perceived adequacy of premium was associated with higher perceived adequacy of information about the coverage of insurance services.

Conclusion: The original contribution of this article is also the highlighting of relationship between perceived reputation of insurance company, perceived adequacy of information about the insurance premium and perceived adequacy of information about the coverage of insurance services.

Keywords: Insurance services, Innovation, Reputation, Premium, Insurance coverage

1 Introduction

In the insurance services market the quality of service is treated comprehensively due to high level of competition, both in terms of organization and of insurance service itself. The motivation for the matter in question therefore arises from the organization and quality of insurance services. Quality of service analysis is an extremely broad scientific field and has been discussed by a great number of researchers (Lorin Purcărea et al., 2013). They associate the concept of quality of service with the various business components such as price, reputation, innovation, etc. (Alhabeeb, 2002; Rahman et al., 2012; Yaşıhoğlu et al., 2013). Researchers often include these organizational components, as well as their users’ perception of product quality, in their research concepts (Chang, 2012; Bontis et al., 2007). Researchers associate the reputation of the organization with the perceived quality of products and purchase intention (Gatti et al., 2012), and less with the perceived adequacy of the information about the core product, such as insurance coverage in insurance services. Researchers include the perceived adequacy of information as a component of quality of service in terms of informational control, either in terms of the organization’s activities (Ladhar and Morales, 2008), or of the provision of information about the service (Sureshchandar et al., 2002).

The present research deals with the basic research question of how innovation through the organization’s reputation reflects on the perception of quality of service components, by which we mean the adequacy of insurance coverage and the premium for services provided. At the same time, we explore the relationship between the components of organization and those of services, in particular how users perceive the components of insurance services (adequacy of insurance
services premiums and adequacy of information about the coverage of insurance services), if the insurance company is investing in reputation through innovation. Such a treatment is important because many organizations show lack of response to an increasingly demanding market, as well as to stakeholders, due to globalization, technological advances, and innovative approaches. To be competitive the quality has to be systematic, which is impossible without innovation (Mulej, 2013).

Incorporating all these components, the objectives of the present research are (1) to evaluate the conceptual research model, which is based on analysis: (2) to examine the impact of perceived innovation on the perceived reputation of the insurance company; (3) to analyze the impact of the company’s perceived reputation on the perception of the adequacy of insurance services premiums; (4) to ascertain the impact of the insurance company’s perceived reputation on the perceived adequacy of information about insurance coverage; and (5) to assess the impact of perceived adequacy of premiums on the perceived adequacy of information about coverage.

2. Literature review and hypothesis

2.1 Perceived innovation

The resource-based view within the strategy literature has argued that sustainable competitive advantage is created primarily from notable innovation and reputation (Kay, 1995). Innovation is an important corporate strategy, one of the options a corporation has in confronting market competition and achieving sustainable management through the process of materializing a brand new idea, different from past ones, by way of production or by making it become tangible (Wu and Lin, 2011). Damanpour and Gopalakrishnan (1998), on the other hand, take a further step and define innovation as, “The process of coming up with new concepts, methods, equipment or products”. The positive effect of innovation on performance has been proven true in a large number of empirical studies (Khan and Manopichetwattana, 1989). Every organization, whether it is for-profit, not-for-profit, government-sponsored, or nongovernment-sponsored, constantly tries to demonstrate to stakeholders and the public what makes it different and better than other, perhaps competing organizations. In this way innovation comprises a rhetorical situation (i.e. an attempt to shape the environment, not just respond to it) and a response to an exigence (i.e. something is provided for the market to meet what is lacking in it). In other words, innovation is both communicated and perceived (Courtright and Smulde, 2009).

2.2 Perceived reputation

Several conceptualizations of corporate reputation and various terms describe the relative standing of organizations. Prestige, image, reputation, and good will are terms that can all be found in the literature (Henard and Dacin, 2010). Corporate reputation is one of the principal intangible assets a firm possesses (Vicente, 2009). Walsh and Beatty (2007) designate the organizational reputation in the new framework with two kinds of understandings, “first, reputation as a collective phenomenon, and second, as the idea of organizational reputation which has not been conceptualized as a result of consumer reaction perceived from direct and indirect experiential interaction”. Corporate reputation is the end result of consumers’ accumulation of perceptions regarding how well an organization has met their demands and expectations (Abratt and Kley, 2012).

To many organizations, a reputation as an innovative company is something that is both prized and actively sought after. Yet research investigations of the less tangible facets of innovation, including reputation, remain relatively investigated despite their promise as a source of sustainable competitive advantage (Henard and Dacin, 2010). There are several ways of assessing corporate reputation, and innovativeness appears as one of the key criteria for assessing it (Chun, 2006). Fombrun et al. (2000) define reputation as a collective construct that describes the aggregate perception of multiple stakeholders about a company’s performance. Correspondingly, they assume that corporate reputation can be explained by products and services: perceptions as to their quality, innovation, value, and reliability. The innovative nature of the firm has been recognized as one of the antecedents of corporate reputation (Vicente, 2009).

The elements of a superior reputation have been explained using words such as “trustworthy and innovative” (Winkleman, 1999). Companies develop winning, positive reputations by both creating and projecting a set of skills that their constituents recognize as unique through innovation, operational excellence, or closeness to the customer (Fombrun, 1996). Keller and Aaker (1998) focus on the offline marketplace, and discover that perceived innovativeness is considered a key competitive weapon and a priority for firms when forging corporate reputations. Laforet (2011) also finds that consumers see the long-term benefits of innovation as satisfying, improving company image and reputation, which confirms the findings of Simpson et al. (2006). Hillestad et al. (2010) have explored “green innovation”. Companies may benefit by finding their own innovative approach to environmental awareness that can be useful both for branding and for differentiation purposes, as well as for the development of unique and valuable business models, skills, and operations. Such innovative approaches to environmental awareness can contribute to trustworthiness and a green reputation, and may furthermore stimulate technology development. Ottenbacher and Gnoth (2005) agree that one approach to improving reputation is through innovation, or the ability to develop and launch new and successful services. A positive reputation may be a normal and necessary condition for organizational innovations for survival on the market. Based on the theoretical principles, the following hypothesis is offered:
H1: The higher the perceived innovation of the insurance company, the higher on average the consumer’s perceived reputation of the insurance company.

2.3 Perceived price/insurance premium

Price is the amount of money or goods needed to acquire some combination of other goods and their accompanying services (Hanif et al., 2010). On the other hand, perceived price is defined as customer perception as to what is given up in order to obtain a product or service (Zeithaml, 1988; Lien and Yu, 2001). Researchers often link price with perceived value. The perceived value can be defined as the difference between the benefits perceived by the client and the sacrifices he has to make in order to obtain the product. The price can also have an informational aspect that can lead to favorable perception concerning, e.g., product quality (Costinel et al., 2011). In insurance, the price of coverage is expressed as a premium.

The premium is the consideration paid by the insured to the insurer for the insurance granted under a policy (Gulati, 2007). These premiums create a pool of money that the insurer invests to earn a return, the revenues from which are then used to compensate the insured for losses (Crews, 2010). But the premium must not be equated with the price of insurance, because the former includes expected losses, which are distributed back to the insured (Zweifel and Eisen, 2012). There are two differences between insurance pricing and the pricing function in other industries. The first is that the price for insurance is based on a prediction, and the second that insurance rates are subject to government regulation (Vaughan and Vaughan, 2008).

Researchers have found that the premium is an important determinant of demand for private health insurance (Costa and Garcia, 2003; Šebjan and Bastič 2013). Research has also indicated that when consumers are already inclined to purchase insurance services, the impact of price and that of service quality on their final decision is unequal: consumers give a relatively higher importance to product price (Ulbinaitė and Kučinskiene, 2013).

A reputation is composed of a corporation’s unique set of skills in delivering both economic and non-economic benefits (e.g. Fombrun, 1996). In addition, reputation works as a substantial element of value (Hansen et al., 2008) because it helps to create value (Zabala et al., 2005). Organizational ability in terms of functional value is fundamental to corporate reputation (Pomerling and Johnson, 2009). The benefit of good corporate reputation can be demonstrated in such a way that the organization is freer to put higher prices on its products and services as customers will be willing to pay such prices. As a consequence, customers will prefer to patronize the products and services of the reputable company even when another company’s products are available at comparable quality and price (Chibuike, 2011). Ou and Abratt (2006) indicate that correct pricing helps influence the organization’s reputation (e.g. store) favourably. Graham and Bansal (2007) examine the determinants of consumers’ reputational perceptions of airlines and the prices they were willing to pay for air tickets.

They found that individuals’ perceptions of reputation were highly related to their willingness to pay for tickets. In effect, researchers have found compelling evidence affirming the theory that reputation positively affects both the sale and the price of products/services. In other words, there is a higher likelihood that highly reputable organizations will not only sell their products faster than the less reputable ones, but will be able to do so at a higher price than their less reputable counterparts (Chibuike, 2011). Babić-Hodović et al. (2011) furthermore conclude that the influence of a bank’s corporate reputation on consumer perception of value is positive and significant. This means that banks should necessarily keep in mind not only perceived value as such, but also corporate reputation, its management, and also permanent improvements.

The role and importance of reputation increases significantly in service companies whose intangible services (Bromley, 2001; Lovelock, 1999; Parasuraman et al., 1985) affect the higher uncertainty and decision-making risk in the pre-purchase phase (Walsh et al., 2009), and the higher insecurity of potential customers as well. The quality of insurance services includes sensing adequate insurance coverage for risks or dangers to which users are exposed on a daily basis, and detection of relevant information about insurance services (Šebjan et al., 2013). Perception of the quality of products and/or services has a significant impact on the perception of the reputation of the organization (Gatti et al., 2012).

2.4 Perceived coverage of insurance services

Individuals who pay premiums to the insurer are protected against the risk of financial loss by transferring the risk to a large group of individuals who then share in the loss. Each insurance policy is designed to cover losses resulting from a specific future event such as theft, accident, fire, flood, illness, or death. Insurance coverage is complex, and consumers need information about risks, insurance products, and contract designs, as well as about claims settlement and the investment behavior and financial stability of insurance companies (Eckardt and Rätheke-Döppner, 2010). It is very important that users properly perceive information about insurance coverage for the corresponding perceived insurance premiums offered by insurance companies on the market. Consumers are daily exposed to various risks, so they must ensure proper and adequate insurance coverage. The risk represents a situation in which there is a possibility of loss (Kutty, 2008).
“Risk is a condition in which there is possibility of an adverse deviation from a desired outcome that is expected or hoped for” (Vaughan and Vaughan, 2008). Therefore, customers should be first informed as to perceived risk and then as to appropriate insurance coverage. The reputation of the insurance company has a significant impact on the likelihood that holders of health insurance policies will decide to change providers (Šebjan et al., 2013). Šebjan (2013) finds that the more important the reputation of health insurance is for the users, the higher perceived importance of the additional coverage will be. The perceived reputation of the insurance company therefore has a positive impact on users’ perception of premiums and the adequacy of information provided about coverage, leading us to the following two hypotheses:

**H2:** The more positively the reputation of the insurance company is perceived, the greater the perceived adequacy of premiums for insurance services will be.

**H3:** The more positively the reputation of the insurance company is perceived, the greater the perceived adequacy of information about the coverage of insurance services will be.

In the context of economic sciences in various business areas, researchers associate price with quality of products/services (Chapman and Wahlers, 1999; Rahman et al., 2012) and quality with price of products/services (Alhabeeb, 2002). In the area of insurance services, Bazenić (2006) discusses the relationship between the insurance premium and quality of life insurance, but from the perspective of the user’s willingness to pay a higher premium for higher-quality life insurance.

---

**Remarks:**

PI1 – PI3: indicators of perceived innovation of insurance company; PR1 – PR5: indicators of perceived reputation of insurance company; PP1 – PP2: indicators of perceived adequacy of premium of insurance services; PC1 – PC3: indicators of perceived adequacy of information about the coverage of insurance services; ζ – exogenous variable; η – endogenous variables; δ – errors for indicators of exogenous variables; ε – errors for indicators of endogenous variables; ζ – errors in equations; λ – factors loading; γ – relationship between exogenous variable and endogenous variable; β – relationship between endogenous latent variables and corresponding subscripts; H1-H4: hypotheses.
Researchers in the field of health insurance have delineated key factors in user’s decision-making process for supplementary voluntary insurance.

The importance of quality insurance coverage and supplementary voluntary insurance have been discussed separately (e.g., coverage of neurology, cardiology, orthopedics etc.). The findings have been that coverage is the most important factor in the decision to purchase supplementary voluntary insurance, in addition to the adequacy of premiums, company reputation, etc. (Šebjan and Bastič, 2013; Šebjan et al., 2013).

Šebjan (2013) explores the relationship between the premium and the quality of the supplementary voluntary insurance on the basis of the user’s perception of relevance. Šebjan finds that the more important the premiums for voluntary health insurance (VHI) services are for users, the higher the perceived importance of additional VHI insurance coverage is. Based on the theoretical foundation presented here, we offer the fourth and final hypothesis:

\[ H4: \text{The greater the adequacy of the premium for insurance service is in the perception of the consumer, the greater the perceived adequacy of information about the coverage of insurance services will be.} \]

Research hypotheses H1-H4 are shown below in Figure 1. Our conceptual model consists of four constructs and the connections among them. Each construct is explained in terms of certain indicators. The construct of perceived innovation (PI) is explained by means of three indicators, the construct of perceived reputation (PR) by five indicators, the construct of perceived adequacy of premium (PP) by two indicators, and the construct of perceived adequacy of information about coverage by three indicators. The model contains one exogenous variable (PI), while the other constructs represent endogenous variables.

3 Methodology

3.1 Survey instrument

The survey measurement instrument was developed in three phases. In the first step, the questionnaire used in this study was designed according to related literatures and users’ and experts’ opinions. In the second step, the questionnaire was pre-tested and revised to ensure content validity. The questionnaire was reviewed by ten employees in the management of one of the Slovenian insurance companies. In this way, the questionnaire was redefined and improved. In the third step, the questionnaire was tested on a sample of 5 users. The questionnaire was composed of two sections. The first section was intended to gain the insight of each respondent’s basic personal data and usage of insurance services. The second section measured the respondent’s perception of each construct in the research model.

The questionnaire examined perceived innovation of insurance companies (3 items), perceived reputation of insurance companies (5 items), perceived adequacy of premium of insurance services (2 items) and perceived adequacy of information about the coverage of insurance services (3 items). Perceived innovation and reputation of insurance companies was measured using the modified questionnaire items of Wang and Ahmed (2004), Keh and Xie (2009), Helm (2011). To measure the perceived adequacy of premium of insurance services the Walsh et al. (2014), Chi and Kilduff (2011) scales were used. Since there are no scales developed for measuring perceived adequacy of information about the coverage of insurance services, the measurement scales were developed by the authors. The final questionnaire included 13 items. All items were assessed using a five-point Likert scales from 1 = “strongly disagree” to 5 = “strongly agree”.

3.2 Data collection

Data was collected with an online questionnaire from 3 May 2010 to 31 May 2010. The target population represented random users who were legally able to buy insurance services in Slovenia, aged 18 years and older. All returned online questionnaires were correctly completed. For hypotheses testing data was collected based on a convenience non-random sample of 200 users of insurance services from Slovenia. In terms of demographics, 46 % were male (n = 92) and 54 % female (n = 108).

The largest group of respondents were from 36 and 45 years old (40%), followed by those who were from 26 to 35 years old (24%) and respondents who were from 46 to 55 years old (18%). The smallest group of respondents were from 66 years and older (2%). The respondents evaluated the insurance company with which they had most insurance contracts. The sample respondents were covered by Triglav Insurance Community Ltd. (34%), Adriatic Slovenica Insurance Company (22%), Generali Insurance Company (10%), Merkur Insurance Company (8%), Maribor Insurance (8%), Grawe Insurance (4%), Triglav Health Insurance (4%), Tilia Insurance (4%), Vzajemna Insurance (3%), KD Insurance (2%) and other insurance companies (1%).

3.3 Methods of analysis

Statistical Package for the Social Sciences (SPSS) and Analysis of Moment Structures (AMOS) software were used to analyze the reliability and validity of the data and to conduct structural equation modeling (SEM). The analysis of the data set was based on exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). Results within EFA were assessed based on the following rules: factor loadings of each item must exceed 0.5; and item-total correlation coefficients (CITC) for each item must exceed 0.5 to guarantee the reliability and validity of the questionnaire scale (Nunnally, 1978). EFA was also used to establish a scale
dimensionality by checking the factorial structure of items (indicators). The Bartlett’s Test of Sphericity (BTS) and the Kaiser-Meyer-Olkin statistics (KMO) were calculated. The independence of the factors and simpler factor structure were obtained with the analysis of principal component analysis and the varimax method.

CFA was used to ascertain the efficiency of the measurement models, and SEM was used to test the conceptual framework and assumptions. To test the model, the following rules were applied. First, the goodness of fit index (GFI), normed fit index (NFI), comparative fit index (CFI) and Tucker-Lewis index (TLI) should exceed 0.9 (Jöreskog and Sörbom, 2002; Bentler, 1990; Schumacker and Lomax, 2004). Second, the root mean residual (RMR) and the root mean square error of approximation (RMSEA) should be less than 0.05 (Jöreskog and Sörbom, 2002; Bentler, 1990) or the limit value should be less than 0.08 (Byrne, 2001). Finally, the ratio of chi-square values to freedom degrees (2/df) should be less than 3.0 (Hoxmeier et al., 2000).

The scale reliability was assessed by item reliability measured by individual reliability coefficient (R2). Values of R2 above 0.5 provide evidence of acceptable reliability (Bollen, 1989). Measure reliabilities were assessed by calculating Cronbach’s alpha (Cronbach, 1951) and item total correlation analysis. The majority of measures employed in this study exhibited reliability scores over 0.7, which is above the acceptable level (Nunnally, 1978; de Vaus, 1995).

Scale validity was analyzed by focusing on convergent validity, discriminant validity and nomological validity. Convergent validity is the extent to which the individual items of a construct share variance between them and was assessed in two ways (Hair et al., 2010). It was tested by checking the values of composite reliability coefficients (CR) and average variance extracted (AVE). CR should be greater than 0.7, and AVE should be greater than 0.5 (Hair et al., 2010). Discriminant validity, which examines whether the constructs are uni-dimensional, was assessed by comparing the maximum shared variance (MSV) and average shared variance (ASV). Both should be less than the average variance extracted (AVE) to establish the discriminant validity (Hair et al., 2010). Nomological validity is established when the correlations between the construct in question and theoretically related constructs are significantly greater than zero (Campbell, 1960).

Table 1: Factors and items, factors loading, variance explained, item reliability, mean and standard deviation

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Items</th>
<th>Factors loading</th>
<th>Variance explained</th>
<th>R2 (item reliability)</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived reputation of insurance company</td>
<td>PR1 - It’s a trustworthy insurance company.</td>
<td>0.741</td>
<td>57.497</td>
<td>0.550</td>
<td>3.84</td>
<td>0.930</td>
</tr>
<tr>
<td></td>
<td>PR2 - I am familiar with the vision of insurance company.</td>
<td>0.748</td>
<td></td>
<td>0.559</td>
<td>3.46</td>
<td>1.053</td>
</tr>
<tr>
<td></td>
<td>PR3 – Insurance company is an example to other insurers.</td>
<td>0.839</td>
<td></td>
<td>0.705</td>
<td>3.68</td>
<td>0.974</td>
</tr>
<tr>
<td></td>
<td>PR4 – Management can be set as an example to other insurance companies.</td>
<td>0.870</td>
<td></td>
<td>0.756</td>
<td>3.56</td>
<td>1.034</td>
</tr>
<tr>
<td></td>
<td>PR5 – Successful management of the insurance company.</td>
<td>0.820</td>
<td></td>
<td>0.673</td>
<td>3.72</td>
<td>0.905</td>
</tr>
<tr>
<td>Perceived innovation of insurance company</td>
<td>PI1 – Insurance company is represented with original ads.</td>
<td>0.835</td>
<td>11.704</td>
<td>0.696</td>
<td>3.74</td>
<td>0.914</td>
</tr>
<tr>
<td></td>
<td>PI2 - The insurance company surprises me repeatedly with the innovations.</td>
<td>0.926</td>
<td></td>
<td>0.926</td>
<td>3.62</td>
<td>0.970</td>
</tr>
<tr>
<td></td>
<td>PI3 – Insurance company is presented to the public through innovative PR campaigns.</td>
<td>0.901</td>
<td></td>
<td>0.812</td>
<td>3.56</td>
<td>0.943</td>
</tr>
<tr>
<td>Perceived adequacy of premium of insurance service</td>
<td>PP1 – The insurance coverage is clearly evident from the premium paid.</td>
<td>0.752</td>
<td>5.735</td>
<td>0.565</td>
<td>3.64</td>
<td>0.817</td>
</tr>
<tr>
<td></td>
<td>PP2 – Premium of insurance service is justified by the service provided.</td>
<td>0.846</td>
<td></td>
<td>0.715</td>
<td>3.62</td>
<td>0.996</td>
</tr>
<tr>
<td>Perceived adequacy of information about the coverage</td>
<td>PC1 – The insurance coverage is clearly and exactly evident from the insurance policy.</td>
<td>0.774</td>
<td>4.561</td>
<td>0.599</td>
<td>3.75</td>
<td>0.933</td>
</tr>
<tr>
<td></td>
<td>PC2 – The insurance company provides me with detailed information about the insurance coverage.</td>
<td>0.843</td>
<td></td>
<td>0.711</td>
<td>3.69</td>
<td>0.965</td>
</tr>
<tr>
<td></td>
<td>PC3 – Insurance company has made available adequate coverage that meet my needs.</td>
<td>0.842</td>
<td></td>
<td>0.709</td>
<td>3.64</td>
<td>0.914</td>
</tr>
</tbody>
</table>

Remarks: (a) All factors loadings are significant at 0.001 level, (b) Measured on a five-point scale, ranging from 1 = strongly disagree to 5 = strongly agree.
4 Results

4.1 Validity and reliability analysis

In the first step, exploratory factor analysis (EFA) was employed. The CITC analyses were performed for the scale of 13 items. All cut-off values of 13 items were higher than 0.5. EFA showed that all four constructs were one-dimensional. The principle axing factoring extraction method was applied with varimax rotation (Anderson and Gebing, 1988). Following the recommendation of Hair et al. (2010), all items had standardized factor loadings higher than 0.5. The Kaiser-Meyer-Olkin (KMO) value was 0.908, which was more than the recommended value of 0.5 for sample adequacy. Bartlett’s test of sphericity (BTS = 1546.299) was also significant (p < 0.001). Factor loading greater than 0.5 were retained for further analysis. A four-factor solution (perceived innovation and perceived reputation of insurance company, perceived adequacy of premium and perceived adequacy of information about the coverage of insurance services) with 13 items was chosen.

In the next step, the scale’s psychometric properties were evaluated using CFA. Four factors were created and used as latent variables. Convergent validity was assessed by examining the loadings and their statistical significance through t-values (Dunn et al., 1994). Item factor loadings were high, ranging from 0.579 to 0.790; all were significant at the 0.001 level. The R2 values were used to estimate the reliability of particular observed items.

An examination of their values reveals that all items did meet the 0.5 criterion. The items of the final scales with their loadings, item-total correlations, percentage of explained variance, item reliability, means, and standard deviations are presented in Table 1.

The "perceived reputation of insurance company" factor explained 57.5 % of total variance; “perceived innovation of insurance company” explained 11.7 %; “perceived adequacy of premium of insurance service” explained 5.7 %; and “perceived adequacy of information about the coverage of insurance service” explained 4.6 %. These four factors accounted for 79.5 % of the total variance.

Construct reliability means that a set of construct items is consistent in its measurement. For the constructs, the composite

Table 2: Convergent and discriminant validity of measurement models

<table>
<thead>
<tr>
<th>Construct</th>
<th>Cronbach’s α</th>
<th>CR⁰</th>
<th>AVEb</th>
<th>MSVc</th>
<th>ASVd</th>
<th>Results of convergent validity</th>
<th>Results of discriminant validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived innovation of insurance company</td>
<td>0.926</td>
<td>0.928</td>
<td>0.811</td>
<td>0.669</td>
<td>0.428</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Perceived reputation of insurance company</td>
<td>0.900</td>
<td>0.902</td>
<td>0.649</td>
<td>0.669</td>
<td>0.584</td>
<td>yes</td>
<td>partially</td>
</tr>
<tr>
<td>Perceived adequacy of premium of insurance service</td>
<td>0.768</td>
<td>0.780</td>
<td>0.640</td>
<td>0.753</td>
<td>0.521</td>
<td>yes</td>
<td>partially</td>
</tr>
<tr>
<td>Perceived adequacy of information about the coverage of insurance service</td>
<td>0.861</td>
<td>0.860</td>
<td>0.673</td>
<td>0.753</td>
<td>0.664</td>
<td>yes</td>
<td>partially</td>
</tr>
</tbody>
</table>

Remarks: (a) CR refers to the composite reliability (ρc=(Σλi)2var(ξ)/(Σλi2var(ξ)+Σθii); (Bagozzi and Yi, 1988)), (b) AVE refers to the average variance extracted (ρc=(Σλi2var(ξ))/[Σλi2var(ξ)+Σθii]; (Fornell and Larcker, 1981)), (c) MSV refers to the maximum shared variance, (d) ASV refers to the average shared variance.
reliability (CR) and the average variance extracted (AVE) were computed. Table 2 shows the construct reliability for all four constructs: perceived innovation of insurance company (pcCR = 0.928, pcAVE = 0.811); perceived reputation of insurance company (pcCR = 0.902, pcAVE = 0.649); perceived adequacy of premium of insurance service (pcCR = 0.780, pcAVE = 0.640); and perceived adequacy of information about the coverage of insurance service (pcCR = 0.860, pcAVE = 0.673).

The CR and AVE for all four constructs surpassed the threshold values of 0.7 and 0.5, respectively (Hair et al., 1998). The internal consistency of the items in relation to the single trait within the instrumental was tested using Cronbach’s α, ranging from 0.768 to 0.926. All values were above the generally agreed-upon lower limit of 0.7, indicating high internal consistency among the variables within each factor (Nunnally, 1978). The convergent validity of the measurement model was completely confirmed.

Following Fornell and Locker’s (1981) approach for evaluating discriminant validity, the average variance extracted (AVE) and squared correlation for every possible pair of factors were compared. The discriminant validity of the measurement model was partially confirmed. One value of maximum shared variance (MSV) are less than AVE (perceived innovation of insurance company). All values of average shared variance (ASV) are less than AVE (see Table 2). The results indicate that the model partially supported discriminant validity (AVE > ASV and AVE > MSV). The research shows that with the increase of MSV values AVE values decrease, which shows the tendency

<table>
<thead>
<tr>
<th>One-factor model</th>
<th>Multi-factor model</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 factor</td>
<td>4 factors*</td>
</tr>
<tr>
<td>$\chi^2$ (65) = 413.168</td>
<td>$\chi^2$ (59) = 104.459</td>
</tr>
<tr>
<td>$p$ = 0.000</td>
<td>$p$ = 0.000</td>
</tr>
<tr>
<td>RMSEA = 0.185</td>
<td>RMSEA = 0.070</td>
</tr>
<tr>
<td>RMR = 0.081</td>
<td>RMR = 0.032</td>
</tr>
<tr>
<td>GFI = 0.658</td>
<td>GFI = 0.913</td>
</tr>
<tr>
<td>TLI = 0.725</td>
<td>TLI = 0.960</td>
</tr>
<tr>
<td>CFI = 0.771</td>
<td>CFI = 0.970</td>
</tr>
<tr>
<td>NFI = 0.742</td>
<td>NFI = 0.935</td>
</tr>
<tr>
<td>RFI = 0.690</td>
<td>RFI = 0.914</td>
</tr>
<tr>
<td>IFI = 0.773</td>
<td>IFI = 0.970</td>
</tr>
</tbody>
</table>

Remarks: *Multifactorial model: perceived innovation of insurance company, perceived reputation of insurance company, perceived adequacy of premium and perceived adequacy of information about the coverage of insurance services.

of positive contribution to discriminative validity of the measuring model. The analysis has shown the connection between the values of MSV and the values of correlation as well as the relationship between the values of ASV and the values of total correlations and number of variables in construct. The interconstruct correlations are all positive and significant. The values are – as expected – relative to direction and size, and they make sense from a theoretical point of view. The results indicate that the model has complete nomological validity.

### 4.2 Competing model analysis

This study utilized three types of overall model fit measures: absolute, incremental and parsimonious. In a first step, the index of fit was evaluated for the one-factor model and the four-factor model. The results of the index of fit indicated, that the four-factor model was much more valid than the one-factor model (see Table 3). The $\chi^2$ (59) = 104.459, $p$ = 0.000 of the measurement models was significant ($p < 0.001$). The goodness-of-fit index (GFI) and the Normed Fit Index (NFI), which were equal to 0.913 and 0.935, were above the threshold value of 0.9. The Relative Fit Index (RFI) and the Incremental Fit Index (IFI) were assessed, with values of 0.914 and 0.970. Both indices were above the threshold value of 0.9.

The Comparative Fit Index (CFI) and the Tucker-Lewis Index (TLI) were also assessed, with values of 0.970 and 0.960, respectively, both the recommended level of 0.9, indicating support for the proposed model. The Root Mean Square Error of Approximation (RMSEA), the Root Mean Square Residual (RMR) and the normed $\chi^2$ were calculated to test parsimonious fit. The RMSEA and RMR values were 0.070 and 0.032, indicating a good model fit. Moreover, the normed $\chi^2$ ($\chi^2$/df = 1.770) fell between 1 and 2, further indicating a parsimonious fit. Hence, the suggested factorial structure fits properly.

### 4.3 Hypothesis testing

The conceptual model was examined with structural equation modeling. The overall fit measures of the full model in the SEM indicated that the fit of the model was acceptable. The indices of fit for the first development conceptual model were: $\chi^2$(61) = 105.978 ($p = 0.000$), GFI = 0.911, CFI = 0.970, TLI = 0.962, RFI = 0.915, IFI = 0.971, NFI = 0.934, RMR = 0.034, RMSEA = 0.069, $\chi^2$/df = 1.737. Then an improved final conceptual model was developed that allowed statistically significant correlation between errors for indicators of one construct: perceived adequacy of information about the coverage of insurance services (between PR4- Management can be set as an example to other insurance companies and PR5- Successful management of the insurance company; between PC1- The insurance coverage is clearly and exactly evident from the insurance policy and PC2- The insurance company provides me with detailed information about the insurance coverage.). The indices of fit for the improved final conceptual model were: $\chi^2$(59) = 84.033 ($p = 0.018$), GFI = 0.929, CFI = 0.984, TLI = 0.978,
As predicted by H1, perceived innovation of insurance company was a significant and positive predictor of reputation of insurance company ($\gamma_1 = 0.813; t = 9.700; p < 0.001$). Perceived innovation of insurance company had positive and strong influence on perceived reputation of insurance company. Hypothesis H2 predicted that perceived reputation of insurance company was positively related to perceived adequacy of premium of insurance services. The results show that the perceived reputation of insurance company was indeed significantly positive, and strongly related to perceived adequacy of premium of insurance services ($\beta_1 = 0.718; t = 7.234; p < 0.001$). The findings supported hypothesis H2. As hypothesis H3 predicted, perceived reputation of insurance company is significantly related to perceived adequacy of information about the coverage of insurance services. Perceived reputation of insurance company had positive and significant influence on perceived adequacy of information about the coverage of insurance services ($\beta_2 = 0.273; t = 2.511; p < 0.010$).

The findings therefore supported hypothesis H3. The findings of the model testing also support H4 ($\beta_3 = 0.696; t = 5.493; p < 0.001$) and therefore confirm that perceived adequacy of premium of insurance services have positive and significant influence on perceived adequacy of information about the coverage of insurance services. The highest standardized path coefficient was observed between the perceived innovation and the perceived reputation of insurance company, between the perceived reputation of insurance company and the perceived insurance premium of insurance services, and finally, between the perceived insurance premium and the perceived insurance coverage of insurance services. Therefore, H1, H2, H3 and H4 are all supported in this study. Table 4 shows the results of the structural model in this study.

## 5 Discussion

The purpose of the study is to consider the quality of insurance services. We tested the effect of perceived innovation by the insurance company on its perceived reputation of, the impact of this perceived reputation on the perceived adequacy of information about the coverage of insurance services, and the impact of the perceived adequacy of the insurance premium on the perceived adequacy of information about the coverage of insurance service.

The aforementioned relations were then combined into a conceptual research model. In the course of our research, we have found that the relations between components of statistical significance suggest that components of the organization have a significant impact on the components of services provided by the market and users’ perception of them. The results of the survey suggest that there is a strong positive
Table 4: Estimated effects within the causal model

<table>
<thead>
<tr>
<th>Structural relationship</th>
<th>Standardized regression coefficient</th>
<th>Standard error</th>
<th>t-value</th>
<th>Significance</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H_1$: Perceived innovation of insurance company → perceived reputation of insurance company</td>
<td>$\gamma_1 = 0.813$</td>
<td>0.070</td>
<td>9.700</td>
<td>$p &lt; 0.001$</td>
<td>$H_1$ is supported</td>
</tr>
<tr>
<td>$H_2$: Perceived reputation of insurance company → perceived adequacy of premium of insurance service</td>
<td>$\beta_1 = 0.718$</td>
<td>0.087</td>
<td>7.234</td>
<td>$p &lt; 0.001$</td>
<td>$H_2$ is supported</td>
</tr>
<tr>
<td>$H_3$: Perceived reputation of insurance company → perceived adequacy of information about the coverage of insurance service</td>
<td>$\beta_2 = 0.273$</td>
<td>0.122</td>
<td>2.511</td>
<td>$p &lt; 0.010$</td>
<td>$H_3$ is supported</td>
</tr>
<tr>
<td>$H_4$: Perceived adequacy of premium of insurance service → perceived adequacy of information about the coverage of insurance service</td>
<td>$\beta_3 = 0.696$</td>
<td>0.163</td>
<td>5.493</td>
<td>$p &lt; 0.001$</td>
<td>$H_4$ is supported</td>
</tr>
</tbody>
</table>

correlation between perceived innovations and the perceived reputation of the insurance company, which means that the more perceived innovation there is, the more likely it is that the insurance company will have a positive reputation. This finding is in line with the theoretical assumptions of researchers who deal with the relationship between innovation and organizational reputation (Vincente, 2009; Lefort, 2011; Simpson et al., 2006).

In the study we conclude that the components of the organization are reflected in the perception of service quality. The relationship between organizational components and services are significantly associated. With regard to the link between perceived reputation, adequacy of premium, and adequacy of information about coverage, the research shows a positive correlation. When the consumer’s perception of retailer reputation turns more favorable, his perception of merchandise value and quality will be enhanced as well, and as a result, shoppers will exhibit higher intentions to increased demand to purchase merchandise in question.

A survey by Ou and Abratt (2006) indicates that the previous statement is not true, however. Other researchers have found that perceived quality has a significant impact on perceived reputation (Gatti et al., 2012). Despite these differing points of view, our study shows that there is a positive correlation between perceived reputation and perceived adequacy of information. We find that the better reputation an insurance company has, the higher the perceived adequacy of premiums will be. We also find that the better the reputation of the insurance company, the more favorable the perception of information about coverage is likely to be. However, the link between perceived reputation and perceived adequacy of premiums is stronger, compared with perceived adequacy of information about the coverage of insurance services.

Despite the abundance of research with regard to the impact of prices on quality (Sweeney et al., 1999; Oh, 2003), we have found that if the insurance premium is detected as positive, this has significant impact on the perceived coverage. This attitude is reflected in the importance of both components for users, since Šebjan (2013) finds a significant impact on insurance premiums and additional insurance coverage.

Based on the results of our study, we conclude that the higher the perceived adequacy of premiums is, the higher the perceived adequacy of information about coverage will be. This indicates that within organizations that invest in innovation, the investments are reflected in the reputation of the organization, which in turn has an effect on the perception of service and service quality, as well as the adequacy of information about service components.

Based on our survey, insurance company managers will be able to better understand quality of service. Managers should have a comprehensive and systemic approach to their presence on the insurance market through the creation and promulgation of high-quality insurance services. It is not enough to focus on the service components exclusively; the components of the organization must also be addressed. By using an innovative approach in the form of new benefits for users, insurance companies can create a long-term positive reputation on the market, which may in turn be the basis for improved user perception of insurance premiums and insurance coverage.

6 Limitations and future research opportunities

The present study is limited to the insurance sector and insurance services offered by insurance companies on the Slovenian market. In developing and designing a conceptual
model we limited ourselves to four constructs, namely: perceived innovation, perceived reputation, adequacy of premiums, and perceived adequacy of information about service coverage. In the context of the conceptual model, we have analyzed the links among these constructs. The sample was limited to 200 users of insurance services. On the basis of these limitations, sample size could be increased to include users in other countries. In this way, conceptual models could be compared in order to explain any variations in the relationship among the constructs in question.

The conceptual model could be verified for the banking sector also, which increasingly includes insurance services in its assortment. The conceptual model could also be expanded to include demographic variables (age, gender, status etc.) or other variables, such as level of user loyalty to the organization. As the method of obtaining data plays an important role in research, two methods of inquiry might be employed: the personal questionnaire and the online questionnaire. Based on these two samples conceptual models could be compared according to the method of data collection. Other constructs might also be included in the conceptual model, such as perceived social responsibility.

7 Conclusion

Since users are highly responsive to economic changes in the insurance market, there is good reason to study the behavior of users of insurance services. In this paper we therefore present a conceptual model of some aspects of customer-perceived components of insurance service quality. The model consists of four components, namely perception of innovation, reputation, adequacy of premiums, and adequacy of information about coverage.

In this study we have tried to contribute to the clarification of the relationship between the components of the organization and the services in the insurance sector. The reputation of the insurance company has a significant impact on the user’s perception of insurance premiums and insurance coverage, and both are important factors in choosing particular insurance services (Šebjan and Bastič, 2013). In this study we have also developed a measurement scale for perceived adequacy of coverage with three indicators, and we have dealt with the perceived adequacy of the premium for insurance services.

Another original contribution of this article is its highlighting of the relationship among perceived organizational reputation, perceived adequacy of premiums, and perceived adequacy of coverage. We have shown that insurers must constantly strive to build their reputation on the market because the reputation of the insurance company has a significant impact on the customer’s perception of the adequacy of coverage and of the adequacy of the premium of insurance services. Quality is gained through innovation, which is the basis for competitiveness that is built on the company’s strategies (Mulej, 2000).

Acknowledgement

The authors would hereby like to thank the reviewers for their valuable comments.

Literature


Urban Šebjan, PhD student, is a Teaching Assistant in the Department of Quantitative Economic Analysis at the Faculty of Economics and Business, University of Maribor. He has long worked in the Marketing Department of Triglav Insurance Company. He is currently a PhD student at the University of Maribor - Faculty of Economics and Business, Department of Organization and Informatics. His research focuses primarily on statistical methods in economics and business sciences, insurance services, concept of CRM, and modern information technology.

Polona Tominc, PhD, is a Full-time Professor in the Department of Quantitative Economic Analysis at the Faculty of Economics and Business, University of Maribor. Her research is focused on statistical methods in economics and business sciences. She teaches statistics and quantitative methods. She participated at more than 30 scientific and professional conferences, is author of chapters in books and articles in scientific and professional journals, published in Slovenia and abroad. She is participating in the DIANA network analysing female entrepreneurship and is a team member of GEM Slovenia and Slovenian entrepreneurship observatory research team. At the moment she is a vice-dean for education at the Faculty of Economics and Business.

Odnos med komponentami zavarovalniških družb in kakovostjo njihovih storitev

Namen – Povečevanje števila zavarovalnic in intenzivnost konkurencij na trgu zahteva raziskovanje uporabnikovega zaznavanja komponent zavarovalnih storitev in zavarovalnic. Cilj študije je bil proučiti konceptualni model in odnose med uporabnikovim zaznavanjem inovativnosti zavarovalnice, ugleda zavarovalnice, ustreznosti informacij o zavarovalni premiji in ustreznosti zavarovalnega kritja zavarovalnih storitev.

Metodologija - Raziskovalni model je bil testiran s pomočjo modeliranja s strukturnimi enačbami, na osnovi vzorca 200 slovenskih uporabnikov zavarovalnih storitev.

Rezultati – Rezultati raziskave so pokazali, da višja kot je zaznana inovativnost zavarovalnice, višji je zaznani ugled zavarovalnice. Ugotovili smo tudi, da se višji zaznani ugled zavarovalnice odraža v višji zaznani ustreznosti informacij o zavarovalnem kritju in zavarovalni premiji zavarovalnih storitev. Študija je še pokazala, da višji ugled zavarovalnice odraža v višji zaznani ustreznosti informacij o zavarovalnem kritju zavarovalnih storitev.

Sklepne ugotovitve – Izvirnost znanstvenega prispevka se kaže v obravnavanju odnosa med zaznavanim ugledom zavarovalnice, zaznano ustreznostjo informacij o zavarovalni premiji in zaznano ustreznostjo informacij o zavarovalnem kritju zavarovalnih storitev.

Kljucne besede: zavarovalne storitve, inovativnost, ugled, zavarovalna premija, zavarovalno kritje