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## Determinants of Insurance Purchase Decision Making in Lithuania

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*This paper deals with the examination of insurance consumer behaviour in Lithuania. The purpose of the work is to determine the factors that explain the insurance service purchase decision of the Lithuanian citizens. To this end, a structured 5-point Likert scale questionnaire-based survey is employed to collect data. A research model composed of two main stages (purchase inclination and decision) is proposed. Factor analysis and multiple regression analysis are used to determine how the factors are formed and what their relative weights are. Five factors are identified: the acceptability of insurance conditions (F1), insurance service provider's competence (F2), consumers' monetary attitude towards insurance (F3), the positivity of consumers' insurance experience (F4), and the possibility to reduce the amount of premiums payable for insurance (F5). Subsequently, path analysis is applied to further refine the research model by eliminating the less significant relationships between the variables (the relationships between F5 and inclination, between F3 and decision, and between F4 and decision were eliminated). The refined model provides the revised impact weights of the variables on the consumers' decision to purchase insurance services:  $Decision = 0,192 F1 + 0,379 F2 + 0,156 F5 + 0,222 Inclination + e2$ , where  $e2$  represents the possible impact of other variables.*

*The results show that in Lithuania, insurance consumption decision making is still mostly influenced by monetary considerations such as consumers' evaluation of an insurance service in monetary terms and the search for the possibility to reduce the amount of premiums payable for insurance. The results also indicate that the demographical and socio-economical characteristics of the consumers influence their behaviour. Among the main findings here are the most distinctive ones: men base their insurance decisions mostly on the acceptability of insurance conditions, whereas women do on the insurance service providers' competence; when purchasing insurance services, mature adults only care about the possibility to reduce the amount of premiums payable for insurance, while the youth and young adults mostly rely on the insurance service provider's competence; generally, for the Lithuanians a monthly amount of 800 LTL per person is the income level which enables them not only to form the inclination to purchase insurance services, but also to decide to purchase them actually; the higher degree or education acquired by the individuals, the fewer factors impact their insurance purchase decision: masters and doctors of science evaluate only the insurance service provider's competence, while bachelors, besides the insurer's competence, are also concerned with insurance service conditions and all the monetary issues; Vilnius' citizens evaluate a rather wider range of factors as compared to the individuals living in other places; individuals who are either married or living in a couple are more than singles inclined to purchase insurance services if an opportunity to reduce the amount of premiums payable for insurance exists; individuals who live alone are mostly concerned with the acceptability of insurance conditions, whereas families composed of two and more members highly focus on the insurer's competence; the decision of families with at least one child is determined by the insurer's competence, whereas families without children take a wider range of factors into account when making the insurance service purchase decision.*

**Keywords:** *insurance consumer behaviour, purchase decision making, purchase inclination, determinants, Lithuania, factor analysis, multiple regression analysis, path analysis.*

### Introduction

Lithuania is a prime example of a country where the insurance market is still maturing. The total amount of insurance premiums has steadily increased from 0,74 in 2002 to 1,95 billion LTL in 2007. Following the worldwide crisis it has decreased to 1,60 billion LTL in 2012. Nevertheless, the insurance consumption per inhabitant is increasing again, e.g., Swiss Re (2012)

indicates that life insurance has grown by 17 % during 2011. It is forecasted that the Lithuanian insurance market will grow to 2,37 billion LTL in 2017, which corresponds to 735,37 LTL per capita (BMI, 2012).

When speaking about insurance service consumption, Lithuania is usually seen as a market that has shared behavioural patterns within the group of Central and Eastern European countries. It is a relatively small market for both life and non-life insurance. However, its current

state and development trends indicate the resistant strength and potential of the market. Most of the insurance business, especially in the life insurance sector, is overtaken by large multi-national companies that together with foreign capital bring well-regulated experience. The nurtured corporate links with commercial banks provide the insurance companies shared networks of clients and service distribution channels. The specialty niches such as hail insurance and surety ship gain the valued focus of insurers. Moreover, it is expected that the number of customers will increase thanks to a rather favourable economic environment. In particular first-time customers should receive the full attention of the insurers.

In order to make the most of this expected growth, it is highly desirable for the insurance industry in Lithuania to gain in-depth knowledge about the behavioural characteristics of the citizens when it comes to evaluate insurance alternatives and to purchase insurance products. To the best of our knowledge, no such study has been published in the scientific literature.

The *novel contribution* presented in this paper is an attempt to identify the determinants of insurance service consumption in Lithuania. More specifically, the *object of this work* is consumer behaviour during two stages of the insurance consumption process, i.e., purchase inclination and purchase decision with a focus on the Lithuanian insurance market. This research examines individual decisions to purchase insurance services.

Thus the *research problem* investigated in this work is that of identifying and systematically organising the various sociological, economical and demographical characteristics of the Lithuanians that form and impact their decision making, including inclination and actual purchase decision.

The *goal of the work* is to create a model which reflects the interplay between the previously mentioned characteristics and their impact weights on different stages of the insurance purchase decision making.

The *research method* used to reach this goal is composed of questionnaire-based survey and statistical analysis, namely factor analysis, multiple regression analysis and path analysis. For statistical data processing and analysis of the results „IBM SPSS Statistics 19“ and „IBM SPSS AMOS 19“ programs are employed.

## Related work

Despite the fact that consumer behaviour in a broad sense has been widely analysed for more than 50 years and that consumer behaviour in the financial service sector is increasingly getting the focus of researchers (Beckett *et al.*, 2000; Harrison, 2003; Willis, 2008; Capuano & Ramsay, 2011), the attention on the analysis of the particularities of insurance consumer behaviour as a specific object is rather limited. Most often, insurance consumer behaviour researchers concentrate their research on recognising the insurer needs by analysing the insurance consumer behaviour in separate insurance branches, groups or types. In the research of these studies one can find, in some sense, a common unifying pattern – the concentration of the conducted research on insurance service consumer demand. A rather new attitude in explaining the

particularities of insurance consumer behaviour has been unfolded by Kunreuther and Pauly (2005) and Schwarcz (2010a, 2010b); in particular, these authors have studied the anomalies of consumer demand for insurance.

In most research papers, the aggregated insurance consumer behaviour as a particular object, on which one would specifically concentrate, is not analysed. The research literature (i.e., theoretical studies and empirical research) shows that there exist some aspects which explain insurance service consumer behaviour fragmentarily. These fragmented aspects can be systematically grouped into following six groups

1. The understanding of consumer risk, uncertainty and probabilities when there is no direct relationship of these factors with insurance, however, taking into account how consumers react and evaluate the mathematical expression of risk, uncertainty and probabilities (Greene, 1963), as well as with the psychology of consumers when they take more or less risky decisions (Kunreuther, 1979; Slovic *et al.*, 1982; Kahneman & Tversky, 1984; Schwartz & Griffin, 1986; Shanteau, 1992; Tversky & Shafir, 1992).

2. The identification and revelation of the aspects of insurance service specificities and complexity when consumers perceive, evaluate, choose, compare, purchase and use these services as well as take decisions concerning their continuous usage (Meidan, 1996; Gidhagen, 1998; Kindurys, 2008, 2011).

3. Insurance service consumer behaviour that depends on consumers' attitude to risk and their inclination to bear it, among others the questions of negative selection and moral risk in insurance (Cutler & Zeckhauser, 1998; Chandler, 1999; De Meza & Webb, 2001; Finkelstein & Poterba, 2004; Chiaporri *et al.*, 2006; Finkelstein & McGarry, 2006).

4. The analysis and research of insurance service demand and of its formative elements when directing the attention to territorial discrepancies of insurance service demand and evaluating insurance service market of a separate country or region in a worldwide context (Outreville, 1990, 1996; Zietz, 2003; Hwang & Greenford, 2005; Chui & Kwok, 2008, 2009).

5. The questions of activation of consumers' interest in insurance services and stimulation of consumption of these services, i.e., the creation of the proper environment and conditions for stimulating insurance service consumption, including the questions of implementation of microinsurance that is designed for the most vulnerable groups of individuals (Hussels *et al.*, 2005; Roth *et al.*, 2007; Crawford-Ash & Purcal, 2010; Hamid *et al.*, 2011).

6. Consumers' cheating in insurance and its control, i.e., identification and stopping (prevention) of existing or potentially possible consumer cheating cases (Derrig, 2002; Tennyson, 2002; Brinkmann & Lentz, 2006).

When it comes to Lithuania, the theoretical problem-based research aspects of insurance consumer behaviour, apart from the research contribution of Kindurys (2008, 2011) to this domain, has not been extensively studied yet. Cerniauskaite (2009) states that the cognition of the problems related to insurance service consumer market do not get much attention in Lithuania. She emphasises the need for special publications in this domain as well as research relevance for insurance business representatives,

who aspire to motivate insurance service consumers and forecast the development of their business. Kinduryrs (2008, 2011), highlights the necessity of the creation of strong foundations of theoretical-methodological insurance consumer behaviour research that are needed to conduct the empirical research of insurance consumer behaviour in the insurance market.

In general most research on insurance decisions focuses on purely monetary decisions. It is usually assumed that both insurance purchase and claim decisions depend on well-specified quantitative factors such as premium, probability of loss and size of compensation (Hsee & Kunreuther, 2000). When making a decision to purchase insurance services as a monetary transaction, consumers tend to guide their decisions on cost-benefit analysis. The goal of such decisions is usually to get fairly regular financial returns rather than the overall goal of protection. Krantz and Kunreuther (2007) state that the ability to be reimbursed, irregularly but frequently, may be perceived as a dividend stream (this is namely the case for small losses when insurance contracts with low deductibles are made). If the insurance consumers do not collect coverage on their policies (e.g., flood insurance) for a certain number of years, they feel that their premiums have been wasted. Cancelling their insurance policies, the consumers exhibit both their avoidance of financial anxiety and justification of their actions to themselves and others: the absence of occurrence of insured risks may make them think that the probability of event is now lower than before (Kunreuther & Pauly, 2005). When the investments to purely-risk based insurance are related to the consumers' expectations of getting some kind of financial return, this possibly also points to the fact that such consumers lack a proper understanding of the insurance concept where "the best return on an insurance policy is no return at all" (Krantz & Kunreuther, 2007).

The literature on insurance decision also suggests other views, than monetary, on the determinants of insurance purchase. We identify several groups of insurance decision-making factors.

**Social factors.** One reason for purchasing insurance is that other people are doing so: either they know others who have purchased a policy (without knowing detailed information about it) and this creates their fear to see themselves among the few imprudent uninsured disaster victims, either they copy their friends and neighbours who, they believe, have similar preferences and have already gone through the information gathering trouble, so in that sense their information search costs can be reduced, or they become embarrassed that they do not have protection when they learn that others do (Kunreuther & Pauly, 2005).

**Psychological factors.** Consumers agree to purchase a service which is expressed in words as insurance rather than protection, as the first one has a positive ring, implying an investment that offers protection, while the latter one suggests a cost which has a negative connotation (Kunreuther & Pauly, 2005).

Similarly, insurance against "named events" (e.g., flight insurance) for consumers is also more attractive than general insurance (e.g., life term insurance) (Kunreuther & Pauly, 2005).

**Emotional factors.** Consumers are likely to consult their feelings in making insurance decisions. They are inclined to purchase coverage for an object that is treasured (e.g., a painting) rather than for an identical object that is not special, as they expect to deal with their peace of mind and relief of anxiety (i.e., they feel that with the insurance they can sleep much more securely or that they would regret not having the coverage if something bad happened) (Kunreuther & Pauly, 2005). Hsee and Kunreuther (2000) call it "the affection effect in insurance decisions". This may also explain why a recent accident or disaster would increase people's willingness to insure against a similar event in the future, since after experiencing a disaster people know what it feels to lose things they love and want to avoid some of the pain by being protected in the future.

As we have seen, several orthogonal patterns related to insurance purchase decision have been described in the literature; as we will see throughout the remainder of this paper, it seems as though the monetary dimension is the most significant one and the other ones play a less critical role in the formation of the insurance consumer decision.

## **Methodology**

### **Survey**

The conducted survey is based on a five point Likert scale statement questionnaire. It is composed of 59 statements which reflect the different stages of the insurance purchase decision making process. Since the extreme values of the responses are symmetrically opposed to each other (agree/disagree), it is assumed that the distances between available response options are equal.

The survey has been completed by 336 respondents, including both existing and potential insurance service consumers. The social, economical and demographical characteristics of the respondents can be seen in *Table 13*.

### **Overview of the applied statistical procedure**

The overall data processing is composed of two parts: a) creation of a model by means of three main steps, i.e., factor analysis, multiple regression analysis, and path analysis; and b) exploration of the generated model under demographical and socio-economical characteristics.

In the first part, factor analysis is used to identify the factors that form the insurance purchase decision making. Then, multiple regression is used to identify the impact load of the individual factors on the purchase decision. In this work we distinguish two main stages: the impact of factors on inclination as a dependent variable and the impact of factors on final decision as a dependent variable. Finally, path analysis is used to refine the research model, i.e. to confirm the order of the elements of the decision chain and to eliminate insignificant relationships between dependent and independent variables.

In the second part, 22 sub-variations of the model are evaluated in order to identify the potential influence of socio-economical and demographical characteristics of the population on consumers' inclination towards insurance services and their actual insurance service purchase decision.

### Factor analysis

**Data-fit for factorial analysis.** In the *anti-image* correlation matrix, the KMO measure (*Kaiser-Meyer-Olkin Measures of Sampling Adequacy*) values of all questionnaire statements are checked; since the KMO values of all statements enter into the interval 0,5-1, none of the statements is eliminated from the analysis. The general KMO measure of sampling adequacy, counted as the mean of KMO of all statements, in this case is equal to 0,803; this shows a rather high data dispersion which can be explained by the factors (the KMO measure can take values from 0,5 to 1; the closer this measure is to 1, the higher the sampling adequacy is). The value of *Bartlett's test of Sphericity Sig.* is 0,000, which also indicates that the data, most likely, fit to the factor analysis ( $p < 0,05$ ). Non-existing weak *Communalities* values between the statements of the questionnaire also confirms that all statements are well-fit for conducting the factor analysis (high dispersion percentage is explained by the identified factors).

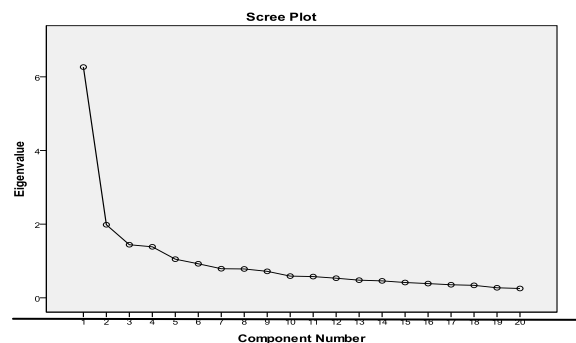
**Factor analysis methods.** In this work, we apply the *Principal Component Analysis* factor extraction method together with a factor axis rotation based on *Varimax with Kaiser Normalization*, and the *Bartlett Factor Scores* method for calculating the factors.

**Factor extraction.** Conducting the factor analysis 19 factors, the *Eigenvalues* of which are higher than 1, have been extracted. These factors explain 65,379 per cent of the total data dispersion. The obtained results (mostly the relatively large number of extracted factors) indicate that obtaining a more precise understanding of the insurance service purchase behaviour, including consumer considerations when deciding its purchase, requires a more thoughtful selection of the statements used in the questionnaire.

**Reduction of the number of factors.** The *Component Matrix* analysis of correlations between the factors and the statements allows reducing the number of statements in the questionnaire. The reduction of the number of statements in the questionnaire is conducted following these criteria: the statements of which the *factor loadings* are not higher than 0,4 in any of the factor are eliminated; the statements which have identically high (higher than 0,4) factor loadings in several factors are eliminated; in the absence of the previously mentioned statements, the statements which alone compose single factors are eliminated, starting from those that explain the smallest part of the dispersion. The statements are eliminated one by one and the factor analysis is repeated each time a single statement is removed. While removing the statements, the change (reduction) of the number of factors is noted and the factor analysis data-fit measures are checked. During the process of the questionnaire statement reduction, 39 statements have been eliminated, while the factor analysis has been repeatedly conducted 39 times.

**Factor extraction after factor number reduction.** From the remaining 20 questionnaire statements, 5 factors of which the *Eigenvalues* are higher than 1 have been formed. The extraction of namely 5 factors is shown by the scree plot as well: the line which distinguishes the steep part of the curve from the flatter one indicates the recommended number of factors (see *Figure 1*).

The extracted 5 factors explain 60,623 per cent of the total data dispersion. The kept relatively high measure of data dispersion (previously it was 65,379 per cent) indicates that during the factor analysis the least related statements have been removed. The KMO measure is 0,862 (previously it was 0,803); the relatively high measure shows that the remaining statements of the questionnaire explain the internal data dispersion more accurately. *Bartlett's test of Sphericity Sig.* ( $p < 0,05$ ) indicates data fit for the factor analysis.



**Figure 1.** Identification of the number of factors by means of a scree plot (number of factors = 5)

The identified measures of *Chronbach alpha* of which the values have to be  $\approx 0,7-1$  allow stating that the inter-correlation between the statements inside each of the two first factors is relatively high (0,859 and 0,787), while it is average for the third and fourth ones (0,696 and 0,685), and the statements of the fifth one could be refined (0,584) (see *Table 1*).

### Identified factors

**Discussion: factor interpretation.** The research data show that the largest part of the dispersion is explained by the two first factors: the first one (7 statements) – 18,9 per cent, the second one (4 statements) – 12,8 per cent. The remaining three factors (each of them is made of 3 statements) explain respectively 10,4, 9,6 and 8,9 per cent of the dispersion. The first identified factor reflects *the acceptability (suitability) of insurance conditions, i.e., the acceptability of insurance services and of its providing conditions*. In this factor, the largest factor loading belongs to the three statements that express the wish of consumers to shorten the time-period between the insurance accident and the reception of insurance coverage (the largest attention of consumers is focused on the flow of claim regulation and administration, timely paid insurance coverage and financial reliability of an insurance service provider). Another important insurance condition for consumers is the extent of insurance, i.e., the number of insurable risks. In the same first factor, a relatively smaller loading comes from the evaluation of the insurance condition when consumers have the possibility to regulate the size of insurance premiums and coverage by choosing their preferred level of franchise. A similarly small factor loading comes from the employees' behaviour that is related to how the services are provided to the consumers in general (most likely, it is treated as a set of supporting services) and from the ratio between insurance premiums and insurance coverage which indicates that the consumers

Table 1

## The identified factors, their statements and measures

Nr.	Statements	Factors and their measures					Chronbach alpha
		1	2	3	4	5	
1.	The flow of claim regulation and administration is a criterion worth of one's attention.	0,777					0,859
2.	When evaluating an insurance service, I pay attention to the timely paid insurance coverage.	0,767					
3.	When evaluating an insurance service, I pay attention to the financial reliability of an insurance service provider.	0,765					
4.	When evaluating an insurance service, I pay attention to the number of insurable risks.	0,703					
5.	When evaluating an insurance service, I pay attention to the amount of the insurance franchise (the amount of money with which the insurees participate in paying their own loss).	0,615					
6.	When evaluating an insurance service, I pay attention to the insurance service provider employees' behaviour with the clients, i.e., their complaisance and response.	0,555					
7.	When evaluating an insurance service, I pay attention to the ratio of insurance premiums and possible insurance coverage.	0,553					
8.	I have a need for a trustful insurer (or its representative).		0,762				0,787
9.	I need the best deal.		0,727				
10.	Competent help is needed for satisfying my personal needs.		0,713				
11.	I am in need for a qualitative insurance product.		0,709				
12.	Insurance is a type of savings.			0,848			0,696
13.	Insurance is an investment.			0,843			
14.	If my monthly income would be 500 LTL higher, I would use this money for insurance services.			0,595			
15.	I (am inclined to) spread my negative opinion about an insurance service to others.				0,833		0,685
16.	I (am inclined to) spread my positive opinion about an insurance service to others.				0,748		
17.	My acquired purchase and usage experience of a certain insurance service product determines my decision to continue using it.				0,603		
18.	When evaluating an insurance service, I pay attention to the consented discounts.					0,734	0,584
19.	When evaluating an insurance service, I pay attention to the possibility to get back a part of the premiums paid for insurance by declaring my income.					0,724	
20.	The expected investment return on the premiums paid for insurance would encourage me to purchase an insurance service.					0,456	

are inclined to "calculate" (although to a smaller extent than expected) insurance benefit by comparing the size of insurance premiums with the amount of maximally probable coverage.

The statements attributed to the second factor are related to the *consumer need for an insurance service provider which knows well its work*, i.e., it is competent, cares of and satisfies consumer needs and provides consumers a service of quality. In this work, this factor is named *insurance service provider's competence*. In this second factor, the largest factor loading indicates that the consumers are largely in need for reliance on the insurer. The other three statements that compose this factor allow understanding that the consumers would like the insurers to help them make the best insurance deal, attentively taking into account their needs. This is the way consumers perceive insurance service quality.

The statements associated to the third factor reflect *consumers' monetary attitude towards insurance*. All the statements composing this factor expose the consumers' perceptive attitude towards insurance as a beneficial investment. The factor loadings of the statements indicate that, for consumers, insurance is associated with the definitions of investment and safety, i.e., if their finances would allow them, they would use insurance services.

The fourth factor reflects *the positivity of consumers' insurance experience (both one's and of others)* where the aggregated insurance-related opinion is involved. This factor expresses the consumers' wish to share and use different insurance-related information and, before making

the final decision to purchase insurance services, to take into account their own experience and the experience of others. It is especially sensitive to the negative responses about insurance services.

The interrelationships of the fifth factor's statements allow formulating the general title of this factor: *the possibility to reduce the amount of premiums payable for insurance*. The largest factor loadings indicate that the purchase of insurance services is encouraged by the consented discounts or by the possibility to get back a part of the paid insurance premium amount when declaring one's income. The interest of consumers in insurance services increases if they can either beforehand or after the service has been provided reduce the total amount of insurance premiums.

The mean values of the single factors (scales) indicate that within the researched group the most significant factors are the following ones: *insurance service provider's competence* (4,108 points), *the positivity of consumers' insurance experience* (4,073 points) and *the acceptability of insurance conditions* (3,986 points); among the least significant factors is *consumers' monetary attitude towards insurance* (2,571 points). The means and dispersions of the single factors are provided in Table 2.

#### Multiple linear regression analysis

Regression analysis is conducted in order to identify the impact of the single factors (as of set of variables) on the consumers' decision to purchase insurance services.

Table 2

**Descriptive statistics measures (mean and dispersion) of the single factors**

Factor	Mean	Dispersion
1	3,986	0,996
2	4,108	1,005
3	2,571	1,453
4	4,073	1,265
5	3,562	1,246

In this work, two dependent variables are distinguished: consumer inclination to purchase insurance services and consumer decision to purchase insurance services. Thus the analysis is two-folded. First stage: the conduction of multiple regression analysis when the inclination to purchase insurance services is a dependent variable, while the identified factors are independent ones. Second stage: the conduction of multiple regression analysis when the decision to purchase insurance services is a dependent variable, while the identified factors and the inclination to purchase insurance services are independent ones. Performance of these two analysis stages is a constituent part of path analysis which aims at identifying a) which impact-making variables should be included in the research model, b) in which order to place the variables in the chain of the decision-process and c) which relationships (or so called “paths”) between the variables are not significant for the model.

**Research hypotheses**

H1: *The acceptability of insurance conditions* impacts positively the consumers’ *inclination* to purchase insurance services.

H2: *Insurance service provider’s competence* impacts positively the consumers’ *inclination* to purchase insurance services.

H3: *Consumers’ monetary attitude towards insurance* impacts positively the consumers’ *inclination* to purchase insurance services.

H4: *The positivity of consumers’ insurance experience* impacts positively the consumers’ *inclination* to purchase insurance services.

H5: *The possibility to reduce the amount of premiums payable for insurance* impacts positively the consumers’ *inclination* to purchase insurance services.

H6: *The acceptability of insurance conditions* impacts positively the consumers’ *decision* to purchase insurance services.

H7: *Insurance service provider’s competence* impacts positively the consumers’ *decision* to purchase insurance services.

H8: *Consumers’ monetary attitude towards insurance* impacts positively the consumers’ *decision* to purchase insurance services.

H9: *The positivity of consumers’ insurance experience* impacts positively the consumers’ *decision* to purchase insurance services.

H10: *The possibility to reduce the amount of premiums payable for insurance* impacts positively the consumers’ *decision* to purchase insurance services.

H11: The consumers’ *inclination* to purchase insurance services impacts positively the consumers’ *decision* to purchase insurance services.

**Hypothetical research model**

The whole of the research hypotheses compose the hypothetical model of the research (see Figure 2).

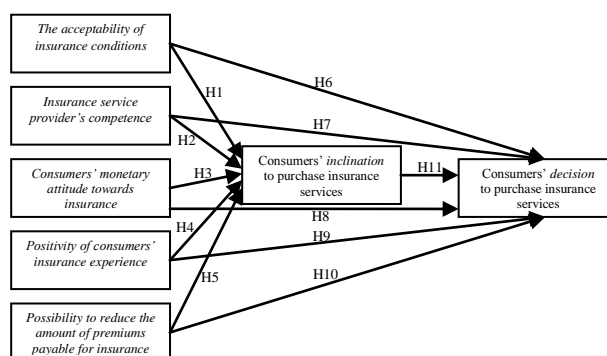


Figure 2. Hypothetical research model

**Measurement of the dependent variables.** Both dependent variables are reflected by their attributed statements (see Table 3) which the respondents evaluated using a 5-point Likert scale.

Table 3

**Questionnaire statements used for conducting the regression analysis**

Nr.	Statements
<i>Inclination to purchase insurance services</i>	
1.	Insurance provides a feeling of financial safety.
2.	Insurance provides a feeling of psychological safety.
3.	It is worth purchasing an insurance service which is <i>not</i> compulsory according to the law.
4.	I (am inclined to) periodically spend a certain amount of money for insurance premiums as a guarantee for financial stability in the future.
<i>Decision to purchase insurance services</i>	
1.	It takes me time and much consideration when I decide to purchase insurance services.
2.	Before purchasing insurance services I want to have a consultation with an insurer.
3.	I (am inclined to) actively communicate with insurers to clarify the questions I care about.
4.	When purchasing an insurance service I (would) carefully read and analyse the insurance contract and insurance conditions even if the extent of the written documents is 10 or more pages.

These dependent variables are calculated individually as the average value of the responses to the corresponding statements. The Chronbach alpha’s measure of the first dependent variable (consumers’ *inclination* to purchase insurance services) is 0,832 and the one of the second dependent variable (consumers’ *decision* to purchase insurance services) is 0,692. The Chronbach alpha’s reliance measure of the first variable is relatively high, the second one is not that high, however, it is acceptable since it practically enters into the recommended interval ≈0,7–1.

**Correlation of the variables.** Before conducting the regression analysis, the intercorrelations between all research variables are checked. The consumers’ inclination to purchase insurance services correlates significantly with the consumers’ decision to purchase insurance services ( $p < 0,01$ ). Correlations of both dependent and independent variables indicate the existence of statistically significant relationships between most of the variables ( $p < 0,01$ ). An exception is the absence of statistically significant relationship between the fifth factor (*The possibility to*

reduce the amount of premiums payable for insurance) and the consumers' inclination to purchase insurance services as well as between the fourth factor (*The positivity of consumers' insurance experience*) and the consumers' decision to purchase insurance services ( $p>0,05$ ) (Table 4).

Table 4

**Intercorrelations between the research variables**

		Correlations						
		Inclination	Decision	BART factor score 1 for analysis 1	BART factor score 2 for analysis 1	BART factor score 3 for analysis 1	BART factor score 4 for analysis 1	BART factor score 5 for analysis 1
Inclination	Pearson Correlation	1	,333	,255	,152	,529	,147	,032
	Sig. (2-tailed)		,000	,000	,005	,000	,007	,555
	N	336	336	336	336	336	336	336
Decision	Pearson Correlation	,333	1	,249	,412	,164	-,008	,163
	Sig. (2-tailed)	,000		,000	,000	,003	,895	,003
	N	336	336	336	336	336	336	336
BART factor score 1 for analysis 1	Pearson Correlation	,255	,249	1	,000	,000	,000	,000
	Sig. (2-tailed)	,000	,000		1,000	1,000	1,000	1,000
	N	336	336	336	336	336	336	336
BART factor score 2 for analysis 1	Pearson Correlation	,152	,412	,000	1	,000	,000	,000
	Sig. (2-tailed)	,005	,000	1,000		1,000	1,000	1,000
	N	336	336	336	336	336	336	336
BART factor score 3 for analysis 1	Pearson Correlation	,529	,164	,000	,000	1	,000	,000
	Sig. (2-tailed)	,000	,003	1,000	1,000		1,000	1,000
	N	336	336	336	336	336	336	336
BART factor score 4 for analysis 1	Pearson Correlation	,147	-,008	,000	,000	,000	1	,000
	Sig. (2-tailed)	,007	,895	1,000	1,000	1,000		1,000
	N	336	336	336	336	336	336	336
BART factor score 5 for analysis 1	Pearson Correlation	,032	,163	,000	,000	,000	,000	1
	Sig. (2-tailed)	,555	,003	1,000	1,000	1,000	1,000	
	N	336	336	336	336	336	336	336

\*\* Correlation is significant at the 0.01 level (2-tailed).

Note: \*\*Correlation is statistically significant when  $p<0,01$ .

It is worth to note that there is no correlation between the factors ( $p>0,05$ ).

**The first stage of multiple regression analysis.** The values of independent variables are entered into the model at the same time (*Enter* method of variable involvement is used). The measure of *R Square* indicates that the proposed model explains 39 per cent of the dependent variable, namely the variation of the consumers' inclination to purchase insurance services (see Table 5). The measure of *Adjusted R Square*, which evaluates the number of independent variables and the number of observations (participants), indicates that the model explains 38,1 per cent of variation of the dependent variable. They are, generally speaking, satisfactory measures.

Table 5

**Statistical measures of the first stage of the multiple regression analysis**

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,625 <sup>a</sup>	,390	,381	,74813

a. Predictors: (Constant), BART factor score 5 for analysis 1, BART factor score 4 for analysis 1, BART factor score 3 for analysis 1, BART factor score 2 for analysis 1, BART factor score 1 for analysis 1

The *Sig. p<0,01* value of the analysis of the variance (ANOVA) that allows evaluating the significance of the model indicates that the model of the first stage of the analysis is statistically significant (Table 6).

The impact weights (*Beta* coefficients) of the single factors on the dependent variable are shown in Table 7.

The values *Sig. p<0,01* of the factors indicate the large impact of the first four factors on the dependent variable. The impact of the fifth factor is not statistically significant ( $p>0,05$ ). Thus the consumers' inclination to purchase insurance services is reflected by the following formula:

$$Inclination = 0,255 F1* + 0,152 F2* + 0,529 F3* + 0,147 F4* + 0,032 F5, \text{ when } *p<0,01$$

Table 6

**ANOVA measures of the first stage of the multiple regression analysis**

**ANOVA<sup>a</sup>**

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	118,200	5	23,640	42,237	,000 <sup>a</sup>
	Residual	184,701	330	,560		
	Total	302,902	335			

a. Predictors: (Constant), BART factor score 5 for analysis 1, BART factor score 4 for analysis 1, BART factor score 3 for analysis 1, BART factor score 2 for analysis 1, BART factor score 1 for analysis 1

b. Dependent Variable: Inclination

Table 7

**The coefficients of the first stage of the multiple regression analysis**

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3,215	,041		78,773	,000		
	BART factor score 1 for analysis 1	,242	,041	,255	5,921	,000	1,000	1,000
	BART factor score 2 for analysis 1	,145	,041	,152	3,537	,000	1,000	1,000
	BART factor score 3 for analysis 1	,503	,041	,529	12,302	,000	1,000	1,000
	BART factor score 4 for analysis 1	,140	,041	,147	3,424	,001	1,000	1,000
	BART factor score 5 for analysis 1	,031	,041	,032	,753	,452	1,000	1,000

a. Dependent Variable: Inclination

The formula is made of the standardized Beta coefficients. The impact on the dependent variable is measured in standard deviations. So, when the first factor increases by 1 unit (1 standard deviation), the consumers' inclination to purchase insurance services increases by 0,255 (0,255 of standard deviation), while the values of the other factors are considered to be stable. Following the same logic, the impact rates of the other factors are defined. The maximal values of the *Tolerance* measure as a colinearity statistics are 1; this indicates the absence of correlation between the factors. The minimal values of the alternative colinearity measure, *VIF*, are 1; this also indicates the unrelated independence of factors (Table 7).

**The second stage of the multiple regression analysis.** To involve independent variables into the model, the *Enter* method when variables are all entered at the same time is used. The *R Square* measure shows that the proposed model explains 30,7 per cent (*Adjusted R Square* – 29,4 per cent) of dependent variable, namely the variation of the consumers' decision to purchase insurance services (see Table 8). These measures are, generally speaking, satisfactory.

The extracted ANOVA value *Sig. p<0,01* indicates the statistical significance of the model of the second stage (see Table 9).

Table 8

**Statistical measures of the second stage of the multiple regression analysis**

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,554 <sup>a</sup>	,307	,294	,69417

a. Predictors: (Constant), Inclination, BART factor score 5 for analysis 1, BART factor score 4 for analysis 1, BART factor score 2 for analysis 1, BART factor score 1 for analysis 1, BART factor score 3 for analysis 1



Table 9

**ANOVA measures of the second stage of the multiple regression analysis**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	70,249	6	11,708	24,297	.000 <sup>b</sup>
	Residual	158,536	329	.482		
	Total	228,785	335			

a. Predictors: (Constant), Inclination, BART factor score 5 for analysis 1, BART factor score 4 for analysis 1, BART factor score 2 for analysis 1, BART factor score 1 for analysis 1, BART factor score 3 for analysis 1  
 b. Dependent Variable: Decision

The impact weights (*Beta* coefficients) of both the single factors and consumers' inclination to purchase an insurance service on the dependent variable (all those that are involved into the second stage) are given in *Table 10*.

The values of the factors *Sig. p < 0,01* indicate a high impact of the first, second and fifth factors and of the consumers' inclination to purchase insurance services on the dependent variable. The impact of the third and fourth factors is not statistically significant (*p > 0,05*). Thus the consumers' *decision* to purchase insurance services is reflected by the following formula that is composed of the standardized Beta coefficients:

$$Decision = 0,199 F1* + 0,383 F2* + 0,063 F3 - 0,036 F4 + 0,157 F5* + 0,191 Inclination*, \text{ when } *p < 0,01$$

Table 10

**The coefficients of the second stage of the multiple regression analysis**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3,117	,169		18,498	,000		
	BART factor score 1 for analysis 1	,165	,040	,199	4,131	,000	,904	1,106
	BART factor score 2 for analysis 1	,317	,039	,383	8,196	,000	,963	1,038
	BART factor score 3 for analysis 1	,052	,046	,063	1,131	,259	,886	1,459
	BART factor score 4 for analysis 1	-,030	,039	-,036	-,770	,442	,966	1,036
	BART factor score 5 for analysis 1	,130	,038	,157	3,422	,001	,998	1,002
	Inclination	,166	,051	,191	3,245	,001	,610	1,640

a. Dependent Variable: Decision

*Table 10* indicates that the increase of the first factor by 1 unit (1 standard deviation) increases the decision of the consumer to purchase an insurance service by 0,199 (0,199 of standard deviation), while the values of the other factors and the consumers' inclination to purchase insurance services are considered to be stable. Following the same logic, the impact rates of the other factors and the consumers' inclination to purchase insurance services are defined.

**Initial research model (path diagram).** Conducting the two-stage multiple regression analysis allowed forming our initial research model as shown in *Figure 3*. The model reflects the interrelationships between dependent and independent variables with the coefficients and standard errors that reflect the strength of each relationship. In this model, each relationship is tested by the single research hypothesis (see *Figure 2*).

The errors *e1* and *e2*, shown in the model as arrows directed from the outside towards consumers' inclination and consumers' decision to purchase insurance services, indicate the extent of dispersion of each dependent variable that is not explained by the involved independent variables. The errors of the variables are calculated referring to the *R*

Square measure  $e = \sqrt{(1 - R^2)}$ . So, the error of consumers' inclination is:  $e1 = \sqrt{(1 - 0,390^2)} = 0,781$ , and the error of consumers' decision is:  $e2 = \sqrt{(1 - 0,307^2)} = 0,832$ .

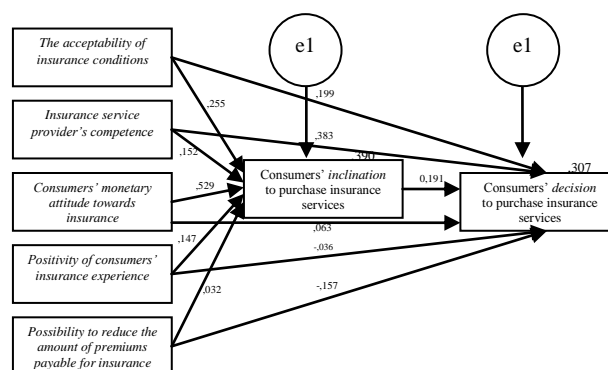


Figure 3. Initial research model

These errors indicate not only the error of measurement, but they also show that there exist other variables that impact both the consumers' inclination and the consumers' decision to purchase insurance services; however, they are not involved in the path diagram.

**Testing the research hypotheses** is performed on the basis of the conducted multiple regression analysis. The hypotheses are tested by evaluating the statistical significance of the relationship of each pair of variables. The test is performed by taking the value of *p* criterion into account: if  $p < 0,05$ , it means that there is a significant relationship between the variables, so the hypothesis that expresses the interrelationship between the variables is confirmed; if  $p \geq 0,05$ , it means that the variables are not significantly related, so the hypothesis about their relationship is rejected. Moreover, if  $p < 0,05$ , before confirming the hypothesis, the nature of relationship between the variables is also taken into account: the hypothesis is confirmed, if the relationship between the variables is positive.

H1: *The acceptability of insurance conditions* impacts positively the consumers' inclination to purchase insurance services. *Inclination* = 0,255 F1 (when the values of the other factors are considered to be stable),  $p = 0,000$ . Since a significant relationship between the variables exists ( $p < 0,05$ , more precisely  $p < 0,01$ ) and it is positive, we state that *Hypothesis H1 is confirmed*.

H2: *Insurance service provider's competence* impacts positively the consumers' inclination to purchase insurance services. *Inclination* = 0,152 F2 (when the values of the other factors are considered to be stable),  $p = 0,000$ . Since a significant relationship between the variables exists ( $p < 0,05$ , more precisely  $p < 0,01$ ) and it is positive, we state that *Hypothesis H2 is confirmed*.

H3: *Consumers' monetary attitude towards insurance* impacts positively the consumers' inclination to purchase insurance services. *Inclination* = 0,529 F3 (when the values of the other factors are considered to be stable),  $p = 0,000$ . Since a significant relationship between the

variables exists ( $p < 0,05$ , more precisely  $p < 0,01$ ) and it is positive, we state that *Hypothesis H3 is confirmed*.

H4: *The positivity of consumers' insurance experience impacts positively the consumers' inclination to purchase insurance services. Inclination = 0,147 F4* (when the values of the other factors are considered to be stable),  $p = 0,001$ . Since a significant relationship between the variables exists ( $p < 0,05$ ) and it is positive, we state that *Hypothesis H4 is confirmed*.

H5: *The possibility to reduce the amount of premiums payable for insurance impacts positively the consumers' inclination to purchase insurance services. Inclination = 0,032 F5* (when the values of the other factors are considered to be stable),  $p = 0,452$ . Since there is no significant relationship between the variables ( $p > 0,05$ ), we state that *Hypothesis H5 is rejected*.

H6: *The acceptability of insurance conditions impacts positively the consumers' decision to purchase insurance services. Decision = 0,199 F1* (when the values of the other factors and the consumers' inclination to purchase insurance services are considered to be stable),  $p = 0,000$ . Since a significant relationship between the variables exists ( $p < 0,05$ , more precisely  $p < 0,01$ ) and it is positive, we state that *Hypothesis H6 is confirmed*.

H7: *Insurance service provider's competence impacts positively the consumers' decision to purchase insurance services. Decision = 0,383 F2* (when the values of the other factors and the consumers' inclination to purchase insurance services are considered to be stable),  $p = 0,000$ . Since a significant relationship between the variables exists ( $p < 0,05$ , more precisely  $p < 0,01$ ) and it is positive, we state that *Hypothesis H7 is confirmed*.

H8: *Consumers' monetary attitude towards insurance impacts positively the consumers' decision to purchase insurance services. Decision = 0,063 F3* (when the values of the other factors and the consumers' inclination to purchase insurance services are considered to be stable),  $p = 0,259$ . Since there is no significant relationship between the variables ( $p > 0,05$ ), we state that *Hypothesis H8 is rejected*.

H9: *The positivity of consumers' insurance experience impacts positively the consumers' decision to purchase insurance services. Decision = -0,036 F4* (when the values of the other factors and the consumers' inclination to purchase insurance services are considered to be stable),  $p = 0,442$ . Since there is no significant relationship between the variables ( $p > 0,05$ ), we state that *Hypothesis H9 is rejected*.

H10: *The possibility to reduce the amount of premiums payable for insurance impacts positively the consumers' decision to purchase insurance services. Decision = 0,157 F5* (when the values of the other factors and the consumers' inclination to purchase insurance services are considered to be stable),  $p = 0,001$ . Since a significant relationship between the variables exists ( $p < 0,05$ ) and it is positive, we state that *Hypothesis H10 is confirmed*.

H11: *The consumers' inclination to purchase insurance services impacts positively the consumers' decision to purchase insurance services. Decision = 0,191 Inclination* (when the values of the other factors are considered to be stable),  $p = 0,001$ . Since a significant

relationship between the variables exists ( $p < 0,05$ ) and it is positive, we state that *Hypothesis H11 is confirmed*.

**Research model (path diagram) after the elimination of the statistically insignificant relationships between variables.** When testing research hypotheses, insignificant relationships between several pairs of variables have been identified (see hypotheses H5, H8 and H9). The elimination of the insignificant relationships from the initial research model provides a more refined research model (see Figure 4). In this model the error of consumers inclination is  $e1 = \sqrt{(1 - 0,389^2)} = 0,781$  and the error of consumers decision is  $e2 = \sqrt{(1 - 0,301^2)} = 0,836$ .

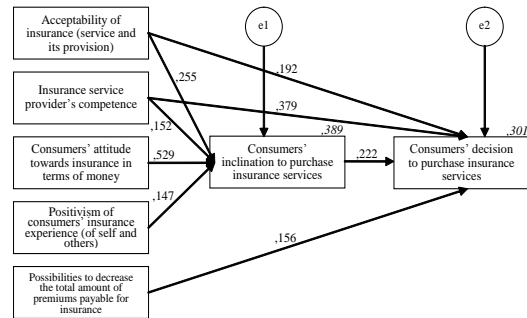


Figure 4. The research model after the elimination of the statistically insignificant relationships between the variables

**Results**

**Discussion about the research model results.** As the goal of the path analysis is to provide the quantitative values of the relationships between the variables, the research model can be expressed by the following formulas:

$$\begin{cases} \text{Inclination} = 0,255 F1 + 0,152 F2 + 0,529 F3 + 0,147 F4 + e1 \\ \text{Decision} = 0,192 F1 + 0,379 F2 + 0,156 F5 + 0,222 \text{Inclination} + e2 \\ \text{Inclination} = 0,255 * \text{The acceptability of insurance conditions} + 0,152 * \text{Insurance service provider's competence} + 0,529 * \text{Consumers' monetary attitude towards insurance} + 0,147 * \text{The positivity of consumers' insurance experience} + e1 \\ \text{Decision} = 0,192 * \text{The acceptability of insurance conditions} + 0,379 * \text{Insurance service provider's competence} + 0,156 * \text{The possibility to reduce the amount of premiums payable for insurance} + 0,222 * \text{Inclination} + e2 \end{cases}$$

The overall fit of the model is based on the fit-measures, the main ones of which are provided in Table 11.

The path analysis reveals endogenous variables that directly and (or) indirectly (through inclination) impact the consumers' decision to purchase insurance services. The proposed research model (see Figure 4) allows defining the nature of the relationships between the variables that are included in the model (see Table 12):

Table 11

**The main fit-measures of the research model before and after the elimination of the statistically insignificant relationships between the variables**

Model fit-measures	Initial research model	Research model after elimination of the statistically insignificant relationships between variables
Chi square / Degrees of freedom, <2 – perfect fit	0/10=0	2,681/13=0,206
Jörskog Sorbom Goodness of Fit Index (GFI), 0,9-1	1	0,998
Jörskog Sorbom Adjusted Goodness of Fit Index (AGFI), 0,9-1	1	0,995
Bentler-Bonett Normed Fit Index (NFI), 0,9-1	1	0,991
Bentler Comparative Fit Index (CFI), 0,9-1	1	1
Tucker-Lewis Index (TLI), 0,9-1	1,078	1,062
Root Mean Square Error of Approximation (RMSEA), <0,05	0	0
Hoelter's n, >200	-	2795(0,05), 3460(0,01)

- *acceptability of insurance conditions* (F1) impacts the consumers' decision to purchase insurance services both directly and indirectly where the direct impact of this factor (0,192) is stronger than the indirect one (0,255\*0,222=0,056);

- *insurance service provider's competence* (F2) impacts the consumers' decision to purchase insurance services both directly and indirectly where the direct impact of this factor (0,379) is stronger than the indirect one (0,152\*0,222=0,034);

- *consumers' monetary attitude towards insurance* (F3) impacts the consumers' decision to purchase insurance services indirectly (0,529\*0,222=0,117);

- *positivity of consumers' insurance experience* (F4) impacts the consumers' decision to purchase insurance services indirectly (0,147\*0,222=0,033);

- *the possibility to reduce the amount of premiums payable for insurance* impacts the consumers' decision to purchase insurance services directly (0,156);

- *consumers' inclination to purchase insurance services* impacts directly the consumers' decision to purchase insurance services (0,222).

One should note the nature of the identified relationships between the variables. In all cases they are

positive, so the endogenous variables vary in direct ratio with the exogenous ones. The model reveals that *insurance service provider's competence* (F2) has the largest total impact (0,413) on the Lithuanian consumers' decision to purchase insurance services, where most of the impact is direct (0,379). The second decisive factor is *acceptability of insurance conditions* (F1) (0,248), the impact of which is mostly direct (0,192). The two previous factors are followed by *possibility to reduce the amount of premiums payable for insurance* (F5) (0,156), the impact of which on consumers' decision is only direct (0,156).

The remaining factors such as *consumers' monetary attitude towards insurance* (F3) and *positivity of consumers' insurance experience* (F4) impact the consumers' decision indirectly, through an intermediary stage by forming the consumers' inclination to purchase insurance services first. The impact of *consumers' monetary attitude towards insurance* (F3) on the consumers' final decision is relatively weak (0,117) and the impact of *the positivity of consumers' insurance experience* (F4) is almost negligible (0,033). The impact weights of these factors on the intermediary stage are 0,529 and 0,147, respectively. This indicates that the latter two factors form the consumers' inclination rather than their final decision to purchase insurance services.

The total consumers' inclination to purchase insurance services is under the strong impact of *consumers' monetary attitude towards insurance* (F3) (0,529) and the *acceptability of insurance conditions* (F1) (0,258) and under the weaker impact of *insurance service provider's competence* (F2) (0,152) and *the positivity of consumers' insurance experience* (F4) (0,147), while the impact of the consumers' inclination on their final decision to purchase insurance services is 0,222.

**Discussion of the research model results through the prism of demographical and socio-economical characteristics.** The analysis of the research results indicates the diversity of the Lithuanian consumer behaviour in what concerns their decisions to purchase insurance services depending on their income, age, education or degree acquired, living place, civil status, the number of family members and the number of children in their families (see Table 13).

**Gender.** The conducted research reveals that the process of purchasing insurance services is much more straightforward for Lithuanian men than women: the path

Table 12

**The dependence of the Lithuanian consumers' decision to purchase insurance services on the identified factors with the calculated values of the factors**

Exogenous variables and their values (regression model)	Initial research model			Research model after elimination of the statistically insignificant relationships between variables		
	Standardised effect					
	Direct	Indirect	Total	Direct	Indirect	Total
F1- <i>Acceptability of insurance conditions</i>	0,199	0,049	0,248	0,192	0,056	0,248
F2- <i>Insurance service provider's competence</i>	0,383	0,029	0,412	0,379	0,034	0,413
F3- <i>Consumers' monetary attitude towards insurance</i>	0,063	0,101	0,164	-	0,117	0,117
F4- <i>Positivity of consumers' insurance experience</i>	-0,036	0,028	-0,008	-	0,033	0,033
F5- <i>The possibility to reduce the amount of premiums payable for insurance</i>	0,157	0,006	0,163	0,156	-	0,156
<i>Consumers' inclination to purchase insurance services</i>	0,191	-	0,191	0,222	-	0,222

of their decision making is shorter as it brings them directly to the decision making. Notably, the relationship between the masculine inclination and decision is not statistically significant ( $p > 0,05$ ). It means that the inclination, taken as a whole of certain factors, does not determine the decision. Men's decision to purchase insurance services is determined by the acceptability of insurance conditions (0,295), the possibility to reduce the amount of premiums payable for insurance (0,230) and the insurance service provider's competence (0,220). Meanwhile, men's inclination is formed by their monetary attitude towards insurance (0,545), the acceptability of insurance conditions (0,337) and the positivity of consumers' insurance experience (0,160).

During both the inclination and decision formation stages, the acceptability of insurance conditions is more significant for men (0,337 and 0,295, respectively) than for women (0,252 and 0,155, respectively). In the feminine decision making, the top role, contrary to the masculine decision making (0,220), is taken by the insurance service provider's competence (0,394). This indicates that women firstly choose an insurance service provider and just afterwards its services, while men directly evaluate insurance service conditions. Even though the insurance service purchase behaviour of Lithuanian women reflects the relationships and the extent of their impact of the general model (see Figure 4), there exist some exclusively women-typical particularities. Firstly, the whole of insurance experience of women that is formed by their own and others' experience has both direct and indirect impacts on their decisions, where the direct impact is stronger and impacts the insurance decision negatively (-0,144): having one's own and others' insurance experience brings women's decision of purchasing insurance services to a standstill. Meanwhile, the research reveals that there is no statistically significant relationship between the direct masculine decision and the obtained insurance experience ( $p > 0,05$ ). Secondly, the feminine decision to purchase insurance services is rather strongly (0,258) formed through the intermediary stage, i.e., inclination, where the main focus of the women is held on the evaluation of insurance in monetary terms (0,541) and later on the discussion of insurance service conditions (0,252).

**Age.** The research reveals that the decision to purchase insurance services in the different consumer age groups depends on different factors. The sharpest contrast of the behaviour of the research participants has shown up when grouping them into three age groups: youths (students), young adults and mature adults.

It has been identified that the direct decision to purchase insurance services of the youths of 18-24 years is determined by two factors: the insurance service provider's competence (0,393) and the acceptability of insurance conditions (0,187). In the 25-40 years age group of the research participants, besides the two previously mentioned factors (0,382 and 0,201, respectively), the attention is also brought to the additional factor, namely the possibility to reduce the amount of premiums payable for insurance (0,237). In the age group above 41, the latter factor (0,428) becomes to the only one that determines one's insurance decision.

The results of the research indicate that the process of the decision to purchase insurance services of the mature adults is rather short and clear: their decision is conditioned not by the acceptability of the general insurance conditions or the insurance service provider's competence, but by the existence of favourable possibilities to reduce the amount of premiums payable for insurance. The inclination of these persons to purchase insurance services is also determined by only factor, namely consumers' attitude towards insurance in monetary terms (0,643), however, the consumers' inclination does not lead to the decision making (there is no statistically significant relationship). The stress on the two latter factors indicates that insurance service purchases of people aged above 41 are exclusively based on their own calculations. It is worth to note that the insurance service evaluation on strictly monetary terms might be typical, not for the mature persons as it is indicated by the research results, but possibly for the generation of those persons (the Lithuanian citizens) who have been living in a certain time period when insurance in some sense has been ignored (or it was not needed at all).

Meanwhile, the intermediary stage, i.e., consumers' inclination to purchase insurance services forms itself in the first two age groups: in the group of 18-24 years' consumers the inclination (0,250) makes a larger impact on the insurance decision making than in the group of 25-40 years old (0,204). Both these age groups pay most of their attention to the evaluation of insurance in monetary terms (0,558 and 0,464, respectively), followed by the acceptability of insurance conditions (0,250 and 0,249, respectively) and the insurance service provider's competence (0,196 and 0,160, respectively). The conducted research allowed identifying that 18-24 years old persons is the only group for which the whole of their own and others' insurance experience is significant: the positivity of their insurance experience impacts their decision to purchase insurance services indirectly, by firstly forming their inclination (0,171).

**Income.** The distinction of the insurance service consumer behaviour can be drawn by grouping the research participants according to their monthly income (i.e., income per person) into three groups of consumers: a group of low income (0-800 LTL), a group of average income (801-2000 LTL) and a group of higher than average income (above 2001 LTL).

The results of the research reveal that for the persons belonging to the average or higher than average income groups, the process of insurance decision making proceeds in two directions: either it directly brings them to the decision making or it makes them form the insurance inclination that does not bring them to the decision making. The decision to purchase insurance services of the persons who receive higher than average income is determined by the insurance service provider's competence (0,283), the acceptability of insurance conditions (0,243) and consumers' attitude towards insurance in monetary terms (0,235). For the persons with average income, the two first above-mentioned factors are significant (0,391 and 0,289, respectively) under the insurance service purchase's decision making.

Table 13

## Dependence of the decision to purchase insurance services by the Lithuanian consumers on the identified factors analysed through the prism of demographical and socio-economical characteristics

Variables that impact the consumers' decision to purchase insurance services and their values (regression models)	General research model	Gender		Years of age			Income per person, LTL per month			Education /acquired degree		
		Men	Women	18-24	25-40	Abo-ve 41	0-800	801-2000	Above 2001	Secon-dary	BSc	MSc or PhD
<i>Percentage of research participants</i>	100	31	69	50	40	10	27	43	25	38	32	23
<b>Inclination</b>												
<b>R Square</b>	<b>0,389</b>	<b>0,413</b>	<b>0,403</b>	<b>0,444</b>	<b>0,314</b>	<b>0,413</b>	<b>0,463</b>	<b>0,324</b>	<b>0,326</b>	<b>0,417</b>	<b>0,464</b>	<b>0,235</b>
F1- <i>Acceptability of insurance conditions</i>	0,255	0,337	0,252	0,250	0,249	-	0,256	0,172	0,296	0,184	0,258	0,263
F2- <i>Insurance service provider's competence</i>	0,152	-	0,194	0,196	0,160	-	0,320	-	-	0,213	-	-
F3- <i>Consumers' monetary attitude towards insurance</i>	0,529	0,545	0,541	0,558	0,464	0,643	0,570	0,522	0,531	0,575	0,618	0,382
F4- <i>Positivity of consumers' insurance experience</i>	0,147	0,160	0,165	0,171	-	-	-	0,151	-	0,141	-	-
F5- <i>The possibility to reduce the amount of premiums payable for insurance</i>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Direct decision (indirect decision)</b>												
<b>R Square</b>	<b>0,301</b>	<b>0,221</b>	<b>0,310</b>	<b>0,325</b>	<b>0,281</b>	<b>0,183</b>	<b>0,390</b>	<b>0,214</b>	<b>0,196</b>	<b>0,409</b>	<b>0,264</b>	<b>0,242</b>
F1- <i>Acceptability of insurance conditions</i>	0,192 (0,056)	0,295 (-)	0,155 (0,065)	0,187 (0,063)	0,201 (0,051)	- (-)	- (0,108)	0,289 (-)	0,243 (-)	0,173 (0,067)	0,212 (-)	- (-)
F2- <i>Insurance service provider's competence</i>	0,379 (0,033)	0,220 (-)	0,394 (0,050)	0,393 (0,049)	0,382 (0,033)	- (-)	0,366 (0,135)	0,391 (-)	0,283 (-)	0,387 (0,078)	0,301 (-)	0,492 (-)
F3- <i>Consumers' monetary attitude towards insurance</i>	- (0,117)	- (-)	- (0,140)	- (0,140)	- (0,095)	- (-)	- (0,240)	- (-)	0,235 (-)	- (0,209)	0,213 (-)	- (-)
F4- <i>Positivity of consumers' insurance experience</i>	- (0,033)	- (-)	-0,144 (0,043)	- (0,043)	- (-)	- (-)	- (-)	- (-)	- (-)	- (0,051)	- (-)	- (-)
F5- <i>The possibility to reduce the amount of premiums payable for insurance</i>	0,156 (-)	0,230 (-)	0,129 (-)	- (-)	0,237 (-)	0,428 (-)	- (-)	- (-)	- (-)	- (-)	0,299 (-)	- (-)
<i>Consumers' inclination to purchase insurance services</i>	0,222	-	0,258	0,250	0,204	-	0,421	-	-	0,364	-	- (-)
Variables that impact the consumers' decision to purchase insurance services and their values (regression models)	General research model	Living place			Civil status		Number of family members				Children in a family	
		Vilnius	Kaunas	other	Single	Married/ living together	1	2	3-4	≥5	No	At least 1
<i>Percentage of research participants</i>	100	79	13	8	47	49	20	24	47	9	69	31
<b>Inclination</b>												
<b>R Square</b>	<b>0,389</b>	<b>0,413</b>	<b>0,230</b>	<b>0,485</b>	<b>0,455</b>	<b>0,294</b>	<b>0,450</b>	<b>0,411</b>	<b>0,372</b>	<b>0,459</b>	<b>0,415</b>	<b>0,400</b>
F1- <i>Acceptability of insurance conditions</i>	0,255	0,254	-	0,528	0,310	0,167	0,419	-	0,232	0,323	0,196	0,434
F2- <i>Insurance service provider's competence</i>	0,152	0,153	-	-	0,186	-	-	-	0,225	-	0,208	-
F3- <i>Consumers' monetary attitude towards insurance</i>	0,529	0,557	0,450	0,461	0,500	0,515	0,553	0,590	0,497	0,637	0,568	0,486
F4- <i>Positivity of consumers' insurance experience</i>	0,147	0,164	-	-	0,170	-	0,207	0,215	-	-	0,166	-
F5- <i>The possibility to reduce the amount of premiums payable for insurance</i>	-	-	-	-	0,178	-	0,292	-	-	-	-	-
<b>Direct decision (indirect decision)</b>												
<b>R Square</b>	<b>0,301</b>	<b>0,290</b>	<b>0,372</b>	<b>0,482</b>	<b>0,391</b>	<b>0,230</b>	<b>0,291</b>	<b>0,496</b>	<b>0,248</b>	<b>0,429</b>	<b>0,368</b>	<b>0,229</b>
F1- <i>Acceptability of insurance conditions</i>	0,192 (0,056)	0,280 (-)	- (-)	- (-)	0,189 (0,094)	0,172 (-)	0,321 (0,144)	0,534 (-)	- (-)	- (0,150)	0,309 (0,040)	- (0,124)
F2- <i>Insurance service provider's competence</i>	0,379 (0,033)	0,439 (-)	- (-)	0,558 (-)	0,418 (0,056)	0,399 (-)	- (-)	0,543 (-)	0,496 (-)	0,553 (-)	0,430 (0,042)	0,335 (-)
F3- <i>Consumers' monetary attitude towards insurance</i>	- (0,117)	0,186 (-)	- (0,286)	- (-)	- (0,152)	- (-)	- (0,170)	- (-)	- (-)	- (0,295)	- (0,115)	- (0,139)
F4- <i>Positivity of consumers' insurance experience</i>	- (0,033)	- (-)	- (-)	- (-)	- (0,052)	- (-)	- (0,071)	- (-)	- (-)	- (-)	- (0,034)	- (-)
F5- <i>The possibility to reduce the amount of premiums payable for insurance</i>	0,156 (-)	0,132 (-)	- (-)	0,370 (-)	- (0,054)	0,288 (-)	- (0,100)	0,350 (-)	0,166 (-)	- (-)	0,143 (-)	- (-)
<i>Consumers' inclination to purchase insurance services</i>	0,222	-	0,634	-	0,303	-	0,343	-	-	0,463	0,203	0,285

It has been identified that the inclination of the persons belonging to 801-2000 LTL or above 2001 LTL income groups (when the inclination is treated as a whole of certain factors) does not determine their final decision (there is no statistically significant relationship), however, the consumers' inclination generally is formed by a number of the same factors: their attitude towards insurance in monetary terms (0,522 and 0,531, respectively) and the acceptability of insurance conditions (0,172 and 0,296, respectively). The inclination of those consumers who have average income at their disposition is also under the impact of the whole of their own and others' insurance experience (0,151). The more distinct difference among the consumer income groups is seen in the one of consumers with less than 800 LTL at their disposition where the decision to purchase insurance services is mostly formed through the intermediary stage of considerations (inclination) (0,421) which itself is formed by the whole of the evaluations of the three first factors (0,256, 0,320 and 0,570, respectively) and strengthened by the direct effect of the insurance service providers' competence (0,366).

**Education or acquired degree.** In order to identify the dependence of the process of insurance service purchase on the consumers' education, we classify the participants of the research into three groups of consumers that have completed secondary education (1<sup>st</sup> stage), have acquired a bachelor degree (either at the university or non-university levels) (2<sup>nd</sup> stage) and those who got their master or doctor degrees (3<sup>rd</sup> stage).

The decision to purchase insurance services of those with an education equivalent to the 2<sup>nd</sup> and 3<sup>rd</sup> stages is directly impacted by one factor only, namely the insurance service provider's competence (0,492), while their inclination is under the impact of the attitude towards insurance in monetary terms (0,382) and the acceptability of insurance conditions (0,262). The absence of a statistically significant relationship between the consumers' inclination and their decision means that for these educated people the intermediary stage of the decision making does not exist, i.e., an insurance service is purchased or not purchased without one's long-lasting considerations.

Several-stage considerations are neither typical for the Lithuanian citizens that have a bachelor degree, however, their decision making is directly impacted by a larger number of factors: the evaluation of an insurance service provider (0,301), the possibility to save (to reduce the amount of premiums) (0,299), the attitude towards insurance as a certain type investment (0,213) and the general evaluation of insurance service conditions (0,212). Among the bachelors there exists a more distinct significance of the attitude towards insurance in monetary terms.

The decision of the consumers with a secondary education to purchase insurance services proceeds through the inclination formation (0,364) which is mostly determined by their attitude to insurance in monetary terms (whether they evaluate insurance as savings and an investment) (0,575). The decision of these persons is directly determined by the insurance service provider's competence (0,387) and the insurance conditions (0,173). The persons who have a secondary education are the only ones who pay attention to the whole of their own and

others' insurance experience (0,141) when taking a decision; the experience is also an additional factor that in general forms their inclination for insurance.

**Living place.** The decision to purchase insurance services of Vilnius' citizens is under the impact of the insurer's competence (0,439), the acceptability of insurance conditions (0,280) and monetary issues (the evaluation of insurance in monetary terms (0,280) and the premium reduction possibility (0,132)). The insurance service consumption decision of Kaunas' citizens is exclusively formed through an intermediary stage which is determined by one factor only, namely the consumers' attitude towards insurance in monetary terms (0,450). In the other geographical areas of Lithuania (i.e. excluding Vilnius' and Kaunas' cities), the decision to purchase insurance services depends on the insurer's competence (0,558) and the possibility to reduce the amount of premiums payable for insurance (0,370).

**Civil status.** Classifying consumers according to their civil status also reveals different behaviour when they are taking decision to purchase insurance. First, singles are more inclined to manifold considerations: their decision to purchase insurance services, which is mostly under the direct impact of the insurer's competence (0,418), is formed extensively through the intermediary stage (inclination) (0,303). This stage is determined by all five factors that are included into the research model: the strongest effects are made by the attitude towards insurance in monetary terms (0,500) and the acceptability of insurance conditions (0,310). Meanwhile, the path of insurance decision making for married couples or couples that live together is shorter and straightforwardly directed towards a combination of the following three factors: the service provider's competence (0,399), the possibility to reduce the amount of money payable for insurance (0,288) and the acceptability of insurance conditions (0,172). The inclination of the persons living in families to purchase insurance services is essentially impacted by the attitude towards insurance in monetary terms (0,515), however, even the positive attitude is not a decisive stimulus to purchase insurance services.

**Number of family members.** The decision of the persons who live alone to purchase insurance services is under the impact of their inclination towards insurance (0,343) and of the insurance service conditions (0,321). Most likely, when considering an insurance decision, these persons may appoint more time than those living in families, and therefore, to form their inclination to purchase insurance services, all factors that are involved into the model, except the insurance service provider's competence, are contributors. This indicates that this group of consumers essentially rely on the insurers that act in the market.

The decision of families with two family members is determined by the insurance service provider's competence (0,303) and the insurance conditions (0,534). For the consumers from 3-4 person families, the most important contributor is also the insurer's competence (0,496). The individuals who live in families with 5 or more persons pay most of their attention to the service provider's competence (0,553) as well, however, the other part of their decision making is formed indirectly, through

inclination (0,463), which is itself formed by the rather strong consumers' monetary attitude towards insurance (0,637) and their satisfaction with the insurance conditions (0,323).

**Number of children in a family.** The decision of the persons who have at least one child to purchase insurance services is simpler than that of those whose families or households are without children. The insurance decision of consumers with children in families is determined by several factors: directly by the service provider's competence (0,335) and indirectly by the consumers' attitude towards insurance in monetary terms and the acceptability of insurance conditions (the total effect is 0,139 and 0,124, respectively). The decision to purchase insurance services of the persons who live without children include both directly and indirectly all the factors involved into the model; it means that when taking insurance service purchase decision, these consumers take all aspects into consideration and might reconsider their decisions.

## Conclusions

The results of the factor analysis suggest that five factors form the insurance service purchase decision making of the Lithuanians citizens. The results of subsequent multiple regression and path analysis indicate that the largest impact on the Lithuanian consumers' decision to purchase insurance services is essentially composed of the competence of the insurance service provider (0,413, of which 0,379 is the direct impact) and the acceptability of an insurance service and its provision conditions (0,248, of which 0,192 is the direct impact). A smaller impact on insurance decision making is related to such factors as the possibility to decrease the total amount of payable insurance premiums (0,156, direct impact only) and the consumers' attitude towards insurance in monetary terms (0,117, indirect impact only, through consumer intentions). The impact of the positivism of insurance experience (of one self and of others) on the consumers' decision making is weak (0,033, indirect impact only, through consumer intentions).

Moreover, the results of the socio-demographic analysis show that insurance service purchase decision making is typically an extended (multifactorial) discussion and evaluation of insurance conditions and possibilities,

composed of several stages. This is especially true for women, persons under 40 years of age, persons who do not receive large income (up to about 800 Lt/month), persons who have secondary education, persons who live in families with five and more members, singles, persons who live alone, and those who do not have children in their families or households. Furthermore, the analysis results show that the decision to purchase an insurance service when evaluating the service exclusively through a monetary point of view, is made by mature (above 41 years of age) persons and Kaunas' citizens. The competence of the insurance service provider is the most significant factor when making insurance decision for 18-40 years of age persons, women, those who are married or living together, those who have at least one child, those whose families are made of two or more persons, those who have acquired a master or a doctoral degree, and finally those who earn more than 800 Lt/month.

## Future research

Certain statements (especially those related to one's attitude to risk) which we originally expected to emerge in certain factors did not. One possible future work would be to refine the formulations of those statements, followed by the evaluation of their potential impacts on the decision making process model (factors and their relations).

Furthermore, the research model could be expanded so as to reflect insurance service repurchase; we envision that this would require a new dependent variable in addition to the existing inclination and decision stages (the latter would then model the initial purchase decision).

The refined research model should be applied over time to identify possible emergence and disappearance of factors, their relationships, and changes in the consumers' behaviour.

Another aspect that could be investigated is that of applying the research model for juridical persons (instead of individuals) as of a consumer group, dependently on their industry type.

Finally, the research methodology for the evaluation of insurance consumer behaviour could be applied to other countries and the results compared to that of the Lithuanian insurance consumer behaviour.

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### **Sprendimo priėmimo vartoti draudimo paslaugas determinantės Lietuvoje**

Santrauka

Šis straipsnis susijęs su draudimo paslaugų vartotojų elgsena Lietuvoje. Šio darbo tikslas – nustatyti veiksnius, lemiančius Lietuvos gyventojų draudimo paslaugų įsigijimo sprendimus. Duomenų rinkimui panaudota struktūrinė 5 balų Likerto skalės klausimyno formos apklausa. Šiame darbe pasiūlytas tyrimo modelis, kurį sudaro du pagrindiniai etapai: įsigijimo polinkis ir sprendimas. Faktorių išskyrimas bei jų santykinių įtakos dydžių nustatymas atliekamas faktorinės analizės ir daugialypės regresinės analizės būdais. Identifikuoti penki faktoriai: draudimo sąlygų (draudimo paslaugos ir jos teikimo) priimtumas /tinkamumas (faktorius F1); draudimo paslaugų teikėjo kompetencija (faktorius F2); vartotojų požiūris į draudimą pinigine prasme (faktorius F3); vartotojų (savo ir kitų) draudimo patirties pozityvumas (faktorius F4) ir draudimui mokamų įmokų sumos sumažinimo galimybė (faktorius F5). Analizė taikoma siekiant patobulinti tyrimo modelį, eliminuojant nereikšmingus ryšius tarp kintamųjų. Tyrimo metu eliminuoti ryšiai tarp faktoriaus F5 ir vartotojų polinkio įsigyti draudimo paslaugas, tarp faktoriaus F3 ir vartotojų galutinio sprendimo įsigyti draudimo paslaugas, tarp faktoriaus F4 ir vartotojų galutinio sprendimo įsigyti draudimo paslaugas. Po nereikšmingų ryšių tarp kintamųjų pašalinimo, modelis įgauna tikslesnes, kintamųjų įtakos vartotojų sprendimui įsigyti draudimo paslaugas reikšmes:  $Sprendimas = 0,192 F1 + 0,379 F2 + 0,156 F5 + 0,222$  Polinkis + e2, kur e2 atspindi galimą kitų (į modelį neįtrauktų) kintamųjų įtaką.

Tyrimo rezultatai rodo, kad Lietuvoje sprendimą draustis vis dar lemia piniginis aspektas. Vartotojai vertina draudimo paslaugas pirmiausia atkreipdami dėmesį į kainą bei ieško galimybių sumažinti draudimo paslaugoms mokėtinų pinigų sumą. Tyrimo rezultatai taip pat atskleidžia, kad vartotojų elgseną veikia vartotojų demografinės ir socio-ekonominės charakteristikos. Išskirtinos šios pagrindinės tyrimo išvados: vyrai pagrindžia savo draudimo sprendimus daugiausia dėl tinkamų draudimo sąlygų, o moterys – draudimo paslaugų teikėjo kompetencija. Įsigydami draudimo paslaugas brandūs asmenys, išimtinai rūpinasi draudimui mokėtinų įmokų sumos sumažinimo galimybe, o jaunuoliams (studentams) bei jauniems suaugusiesiems reikalingiausias pasitikėjimas draudimo paslaugų teikėjo kompetencija. Iš esmės lietuviams, 800 Lt mėnesinė pinigų suma asmeniui – tai pajamų lygis, kuris leidžia jiems ne tik turėti savo nuomonę į draudimo paslaugas, bet ir priimti galutinį sprendimą dėl jų pasinaudojimo. Kuo aukštesnis asmens išsilavinimas ar įgytas mokslo laipsnis, tuo mažiau veiksniai sąlygoja jų sprendimą įsigyti draudimo paslaugas: magistras ir mokslų daktaras vertina vien draudimo paslaugų teikėjo kompetenciją, o bakalauras, be draudimo kompetencijos įvertinimo, taip pat apsvaisto draudimo paslaugos ir jos teikimo sąlygas bei visus galimus piniginius aspektus. Vilniaus gyventojai, palyginti su asmenimis, gyvenančiais kitose vietose, įvertina kur kas platesnį veiksnų spektrą. Susituokę arba poroje gyvenantys asmenys, yra dažniau, nei vienišai asmenys linkę įsigyti draudimo paslaugas, jeigu egzistuoja galimybė sumažinti draudimo paslaugoms mokėtinų įmokų sumos dalį. Asmenys, kurie gyvena vieni, labiausiai apsvaisto draudimo sąlygų tinkamumą, o asmenys dviejų ar daugiau asmenų šeimos, priimdami sprendimą draustis atkreipia dėmesį į draudimo kompetenciją. Šeimų, turinčių bent vieną vaiką, sprendimus sąlygoja draudimo kompetencija, o šeimos, kuriose nėra vaikų, priimdamos draudimo paslaugų įsigijimo sprendimus, atsižvelgia į didesnį faktorių spektrą.

Raktažodžiai: *draudimo paslaugų vartotojų elgsena, sprendimo įsigyti draudimo paslaugas priėmimas, polinkis įsigyti draudimo paslaugas, determinantės, Lietuva, faktorinė analizė, daugialypė regresinė analizė, kelio analizė*

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