AN ASSESSMENT OF PERCEIVED RISK AND DOMINANT RISK RELIEVERS IN CAR PURCHASE

T. Sunitha *
T. Frank Sunil Justus**
A. John William Felix***

Abstract :

Perceived risk refers to the ambiguity that arises in the minds of consumer in the process of buying, using or disposing an offering. The perceived risk has to be reduced below the threshold level to convert a probable buyer to a buyer. A risk reliever is an action commenced by the seller or buyer to bring down the perceived risk to an acceptable level so as to enable the purchaser to buy the product. The objective of the study is to find the impact of risk reliever on dimensions of perceived risk and included nine dimensions of perceived risk and seventeen risk relievers. The study involved 373 respondents and was conducted over a ninety day period from August 2014 in Cuddalore district of Tamil Nadu. Respondents who had bought a car within four months of the study alone were considered and their pre-purchase mind set was studied. Canonical correlation test has been applied to find out the influence of risk relievers on the components of perceived risk and it is inferred that physical risk, psychological risk, functional risk, social risk and financial risk were the influential dimensions of perceived risk in purchase of car while the five risk relievers namely test drive, company authorized service, country of origin, brand preference and word of mouth were found to influence the five dimensions of perceived risk. This study is useful to car companies to identify the specific risk relievers that may needed to act upon the precise dimensions of perceived risk.

Keywords: *Perceived Risk, Consumer Behaviour, Automobile Industry, Purchase Decision.*

Introduction

Consumers have a set of lasting impressions that are predominantly relevant to the study of Consumer Behavior. A major factor affecting personal relevance and motivation is perceived risk, the extent to which the consumer is uncertain about the personal consequences of buying, using or disposing of an offering. If negative outcomes are likely or positive outcomes are unlikely, perceived risk is high. Every purchase carries with it some degree of risk. Bauer (1960) was the first to bring up the idea of perceived risk and observed that

***T. Sunitha,** Assistant Professor, Government Arts College for women, Pudukottai, Tamil Nadu, Email: sunitha.au@gmail.com

****T. Frank Sunil Justus,** Assistant Professor, Department of Business Administration, Annamalai University, Email: tfsuniljustus@yahoo.co.in

*****A. John William Felix,** Reader and Statistician, Department of community medicine, Rajah Muthiah Medical College, Annamalai University, Email: amfelix@rediffmail.com

consumers perceive uncertainty in contemplating a particular purchase intention. The outcome may make consumers unhappy and regretful.

Perceived risk is a function of uncertainty and the consequence of a buying situation. Uncertainty is the consumer's subjective feeling that the consequences of a purchase decision will be unfavorable and consequences mean the amount at stake that would be lost if the act were not successful. Mowen (1995) revealed that the characteristics of the product or service would influence perceived risk and high involvement products were perceived to have a greater degree of risk attached to them. A risk reliever (or risk reducer) is an action commenced by the seller or buyer to bring down the perceived risk to an acceptable level so as to enable the purchaser to buy the product. This paper takes a look at the influence of selected risk relievers on perceived risk concerning carpurchase

Review of literature

The dimensions of risk as detailed by Cunningham (1967), Roselius (1971), Jacoby and Kaplan (1972), Peter and Ryan (1976), are as under. Functional risk is defined as the risk that the product will not perform as expected. Physical risk is the risk perceived that the product will be dangerous or harmful to the consumer. Financial risk is the risk perceived thatthe product will not be worth the money the customer pays. Social risk is the risk perceived that a poor product choice will bruise the consumer's ego. Psychological risk is perceived as the risk that the product will not be consistent with the consumer's self-concept or will not satisfy self – esteem needs. Roselius (1971) identified time risk as the time spent in product search. Decision risk (Lindquist, 2007) refers to the confusion in the judgment process of the consumer and the fear of a continued expenditure once a purchase has been made. Kidiyoor (2013), Lantos (2011) revealed obsolescence risk as the possibility that the product or its technology getting obsolete over time. Facility risk (Sunitha, Justus and Ramesh, 2015) is the risk that the support faculties needed to utilize the product will not be helpful making the ownership either difficult orcostly.

Chu (2008) indicated that when consumers intend to purchase products or services, risks are perceived because of the uncertainty in the shopping environment and when consumers are aware of the seriousness of perceived risks, they look for related risk reduction strategies. Consumers characteristically develop their risk reduction strategies for reducing their perceived risk. These risk reduction strategies enable them to act with increased confidence when making product decisions even though the consequences of such decisions remain somewhat uncertain. Roselius (1971) indicated that a seller should be able to pin point the risk perceived by customer in purchase of product and then proceed to create a set of relievers needed to alleviate the perceived risk. Consumers will engage in risk reduction behavior to increase the certainty of the probable consequences of the purchase decision or reduce the amount at stake (Mitchell and McGoldrick, 1996).

Objective

To find out the impact of risk relievers on factors of perceived risk.

Research Methodology

The perceived risk scale had sixty four questions covering the nine dimensions and developed

on a five point scale with 1 indicating very high, 2 high, 3 moderate, 4 mild and 5 no risk. Respondents who had bought a car within four months of the study alone were considered and their pre-purchase mind set was studied. Simcock et al. (2003) indicated that a recall test with high measures of validity and / or reliability underpin much understanding of consumer behavior. The risk reliever scale was a five point scale with 1 anchored as high influence and 5 as no influence. The alpha value of 0.90 for perceived risk scale and 0.70 for risk reliever scale was considered sufficient. The study involved 373 respondents and was conducted over a ninety day period from August 2014 in Cuddalore district of Tamil Nadu. Hatchbacks and sedans costing less than 25 lakhs alone were considered for thestudy.

Analysis and Interpretation

Table 1: Frequency table of dimensions of perceived risk

	Very high risk	High risk	Moderate risk	Mild risk	No risk	Mean	Standard Deviation
Physical risk	62	53	141	90	27	2.58	1.02
Psychological risk	60	46	102	117	48	2.77	1.13
Functional Risk	68	52	94	125	34	2.65	1.13
Social Risk	64	55	83	126	45	2.75	1.19
Financial Risk	31	63	161	94	24	2.66	0.90
Time Risk	45	35	99	156	38	2.93	1.05
Decision Risk	72	57	89	129	26	2.60	1.12
Obsolescence Risk	28	106	104	102	33	2.65	1.07
Facility Risk	40	135	163	33	2	2.16	0.70

Source: Primary data computed

The above table indicates the distribution of the nine dimensions of perceived risk. The mean value of the dimension of perceived risk varies from 2.16 – 2.93.

Table 2: Distribution of risk relievers

Risk reliever statements	Highly influential	Influential	Moderate influence	Mild influence	No influence	Mean	SD
Consumer satisfaction index	7.5	31.6	1.9	45.6	13.4	3.26	1.24
The sales man assurance	8.0	38.3	2.9	33.2	17.4	3.14	1.31
The test drive offered by the dealer	34.0	38.1	6.2	11.8	9.9	2.25	1.31

Review from Auto magazines	5.9	18.5	9.9	44.8	20.9	3.56	1.18
Looks of the car	12.6	42.1	11.5	13.9	19.8	2.86	1.36
The frequent advertisements	13.7	23.9	10.2	36.2	16.1	3.17	1.33
Opinion leadership	11.5	41.0	1.3	34.0	12.1	2.94	1.30
Company authorized service centre	31.9	34.9	6.7	15.8	10.7	2.39	1.36
country of origin	26.3	31.4	9.9	15.3	17.2	2.66	1.45
extended free service / insurance	4.6	38.1	0.0	41.0	16.4	3.27	1.25
Celebrity emulation	12.6	44.5	1.9	26.3	14.7	2.86	1.34
Brand preference	26.8	36.7	5.1	17.2	14.2	2.55	1.41
Dealer reputation	16.6	36.2	0.3	35.9	11.0	2.88	1.35
Preference to high price edition	9.1	42.1	0.5	34.6	13.7	3.02	1.30
Social observation	12.1	22.3	7.8	44.8	13.1	3.25	1.27
Market tenure	12.3	20.4	2.7	39.4	25.2	3.45	1.38
Word of mouth	25.2	38.9	8.3	12.6	15	2.53	1.38

Source: Primary data compute

The above table indicates the distribution of the seventeen risk relievers taken for the study. The mean value of the statements vary from 2.25 – 3.56 which indicates the role of different risk relievers varies from influential to no influence.

Canonical correlation test has been applied to find out the influence of risk relievers on the components of perceived risk. Generally canonical correlation consists of three layers.

1. Canonical correlation coefficients
2. Canonical correlation loadings and
3. Redundancy

Table 3 - Multivariate test of significance for the canonical correlation

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	2.127	6.461	153.00	3195.00	.001**
Hotellings	10.824	24.423	153.00	3107.00	.001**
Wilks	0.020	11.508	153.00	2795.26	.001**
Roys	0.893				

From the above table it is seen that the overall model is significant. The significant P value of the three tests namely, pillais, Hotellings and Wilks infer that there exists a significant relationship between the risk reliever and components of perceived risk. Further Roys value of 0.893 infer that overall 89 percent of the canonical variate of the risks are explained by the canonical variate of the risk relievers. This value is equal to the first squared canonical correlation

Table 4: Eigen values, canonical correlations and significance level

Characteristic Root No.	Eigen value	Pct.	Cum. Pct.	Canon Cor.	Sq. Cor	P Value
1	8.33577	77.01247	77.01247	.94493	.89289	.001**
2	1.69988	15.70485	92.71732	.79348	.62961	.001**
3	.49529	4.57585	97.29317	.57553	.33123	.001**
4	.11411	1.05427	98.34744	.32004	.10243	.096
5	.06655	.61487	98.96231	.24980	.06240	.562
6	.05874	.54271	99.50502	.23555	.05548	.805
7	.02304	.21283	99.71785	.15006	.02252	.975
8	.02167	.20016	99.91801	.14562	.02121	.950
9	.00887	.08199	100<.001**00	.09379	.00880	.957

The above table showed Eigen values, cumulative percentage, Canonical correlations and squared correlations. From the table it can be observed that out of nine Canonical correlations three are significant at P<0.001 level. Hence the first three Canonical correlations alone were considered for further interpretation. The first Canonical correlation was found to be 0.94 and its square of correlation was found to be 0.89. This indicated that 89% of the dependent Canonical variates were explained by the 'first independent Canonical variate'.

The redundancy index is the equivalent of computing the squared multiple correlation coefficients between the total independent variable set and each variable in the dependent variable set, and then averaging these squared coefficients to arrive at an average R2. The redundancy index of a variate is derived by multiplying the two components (shared variance of the variate multiplied by the squared canonical correlation) to find the amount of shared variance that can be explained by each canonical function. To have a high redundancy index, one must have a high canonical correlation and a high degree of shared variance explained by the dependentvariate.

Table 5: Canonical loadings, redundancy and communality coefficient

Variable	F1			F2			
	Coefficient	Correlation	Sq Loadings	Coefficient	correlation	Sq Loadings	Communality Coefficient
Consumer satisfaction index	0.0227	-0.1940	0.0376	0.0443	0.0594	0.0035	0.0411
Sales man assurance	-0.0114	-.0661	.0044	-.1140	-0.1621	0.0262	0.0306
Test drive	-0.1276	-.6923	0.4793	-.4635	-0.5262	0.2769	0.7562
Auto magazine Reviews	-0.0009	-.1498	0.0224	-.0059	0.0339	.0012	0.0236
Looks of the car	-0.0013	-.3733	0.1394	.1439	0.2908	0.0846	0.224
Frequent advertisements	-0.0073	-.1679	0.0282	.0314	-0.0163	.0003	0.0285
Opinion leadership	-0.0080	-.1279	0.0164	-.0667	-0.1467	0.0215	0.0379
Company authorized service	-0.0900	-.6012	0.3614	-.5140	-0.5994	0.3592	0.7206
Country of origin	-0.7210	-.9623	0.9260	.8821	0.2461	0.0605	0.9865
Extended free service	0.0354	-.1313	0.0172	.0461	0.0375	.0014	0.0186
Celebrity emulation	-0.0147	-.0948	.0089	-.0537	-0.0825	.0069	0.0158
Brand preference	-0.1114	-.6728	0.4527	-.2853	-0.2637	0.0695	0.5222
Dealer reputation	0.0238	-.0423	.0018	-.0289	-0.0959	.0092	0.011
High priced edition	0.0041	-.1206	0.0145	.0101	0.0303	.0009	0.0154
Social observation	-.0232	-.2327	0.0541	.0993	0.1519	0.0231	0.0772
Market tenure	-.0460	-.2235	0.0499	.0901	0.1149	0.0132	0.0631
Word of Mouth	-0.1077	-0.7322	0.5361	-0.1677	-0.2905	0.0844	0.6205
Total			3.1503			1.0425	
Average			0.1853			0.06132	
Redundancy index			0.1654			.038607	
Physical risk	.1512	.5546	0.0376	.8228	.6763	0.4574	0.4950
Psychological risk	.1718	.8368	0.7001	.4638	.2253	0.0508	0.7509
Functional risk	.0454	.7700	0.5929	.2323	.1611	0.0259	0.6188
Social risk	.7469	.9756	0.9518	-1.190	-.2018	0.0407	0.9925
Financial risk	.0280	.5575	0.3108	.1209	.2059	0.0423	0.3531
Time risk	-.0326	.2525	0.0638	-.0113	.2057	0.0423	0.1061
Decision risk	.0458	.1157	0.0134	-.0654	.1145	0.0131	0.0265
Obsolescence risk	.0134	.4119	0.1696	.07489	.2547	0.0649	0.2345
Facility risk	-.0225	.4253	0.1809	.1167	.2322	0.0539	0.2348
Total			3.0209			.7913	
Average			0.3357			0.0879	
Redundancy index			0.29974			0.05534	

Based on first canonical loading it is inferred that physical risk, psychological risk, functional risk, social risk and financial risk have correlation value greater than 0.5. Generally loading above 0.5 is considered significant. The redundancy index has been found as 30%. Hence the five risk relievers namely test drive, company authorized service, country of origin, brand preference and word of mouth has been found to influence the five components of perceived risk by 30%. Test drive, company authorized service, country of origin; brand preference and word of mouth are risk relievers that have a loading above 0.5. Hence these relievers have a high influence on the components of perceivedrisk.

Based on the second canonical loading it is observed that only physical risk is considered as significant. The redundancy index has been influenced to a level of 5 percent by the risk relievers namely test drive and company authorizedservice.

Based on first communality coefficient it is inferred that physical risk, psychological risk, functional risk and social risk are considered significant. The five risk relievers namely test drive, company authorized service, country of origin, brand preference and word of mouth have been found to influence the four components of perceivedrisk.

Table 6: Dependent variable: Physical risk

Covariate	B	Beta	Std. Err.	t-Value	Sig. of t
Sales man assurance	-.3241	-.0697	.15764	-2.05571	.041*
Test drive	-2.0791	-.4456	.22239	-9.34891	.001**
Company authorized service	-1.9795	-.4405	.20403	-9.70223	.001**

The major risk relievers that tend to reduce physical risk are sales man assurance, test drive and company authorized service station. From the above table it can be observed that test drive and sales man assurance have, maximum influence in decreasing physical risk.

Table 7: Dependent variable: psychological risk

Covariate	B	Beta	Std. Err.	t-Value	Sig. of t
Looks of the car	.4634	.0783	.18424	2.51551	.012
Country of origin	-2.0456	-.3278	.25840	-7.91670	.001**
Brand preference	-2.7574	-.4304	.23187	-11.8918	.001**
Word of mouth	-1.4382	-.2203	.25990	-5.53343	.001**

The major risk relievers that tend to reduce psychological risk are looks of the car, country of origin, brand preference and word of mouth. From the above table it can be observed that country of origin and brand preference have, maximum influence in decreasing psychologicalrisk.

Table 8: Dependent variable: Functional Risk

Covariate	B	Beta	Std. Err.	t-Value	Sig. of t
Looks of the car	1.0523	.1293	.31442	3.34666	.001 **
Country of origin	-3.6163	-.4215	.44099	-8.2003	.001**
Brand preference	-2.1262	-.2414	.39572	-5.3730	.001**
Word of mouth	-2.0871	-.2326	.44356	-4.7054	.001**

The major risk relievers that tend to reduce functional risks are looks of the car, country of origin, brand preference and word of mouth. From the above table it can be observed that country of origin has a, maximum influence in decreasing functionalrisk.

Table 9: Dependent variable: social risk

Covariate	B	Beta	Std. Err.	t-Value	Sig. of t
Test drive	-.3937	-.0619	.17465	-2.25403	.025 *
Country of origin	-4.6699	-.8125	.16329	-28.5989	.001**
Social observation	-.2711	-.0415	.12807	-2.11645	.035*
Market tenure	-.3134	-.0520	.12057	-2.59898	.010 **
Word of mouth	-.3651	-.0607	.16424	-2.22303	.027 *

The major risk relievers that tend to reduce social risk are test drive, country of origin, brand preference, social observation, market tenure and word of mouth. From the above table it can be observed that country of origin has maximum influence in decreasing social risk.

Table 10: Dependent variable: financial risk

Covariate	B	Beta	Std. Err.	t-Value	Sig. of t
Frequent advertisements	-.5502	-.1369	.20957	-2.6252	.009
Company authorized service	-.5705	-.1449	.27288	-2.0905	.037

The major risk relievers that tend to reduce financial risk are frequent advertisements and company authorized service. From the above table it can be observed that frequent advertisements and company authorized service has an equal role in influencing financial risk.

Conclusion

The study has ascertained the particular risk reliever that is effective for a certain dimension of perceived risk. This should help the manufacturers to make use of the needed risk reducers to decrease the perceived risk of the customer. A consumer can be made to buy a car only when the perceived risk is reduced below a threshold level that differentiated the probable buyer from an actual buyer. Further studies can be considered across different geographical segments as also across luxury cars and sports utility vehicles which were not considered for this study.

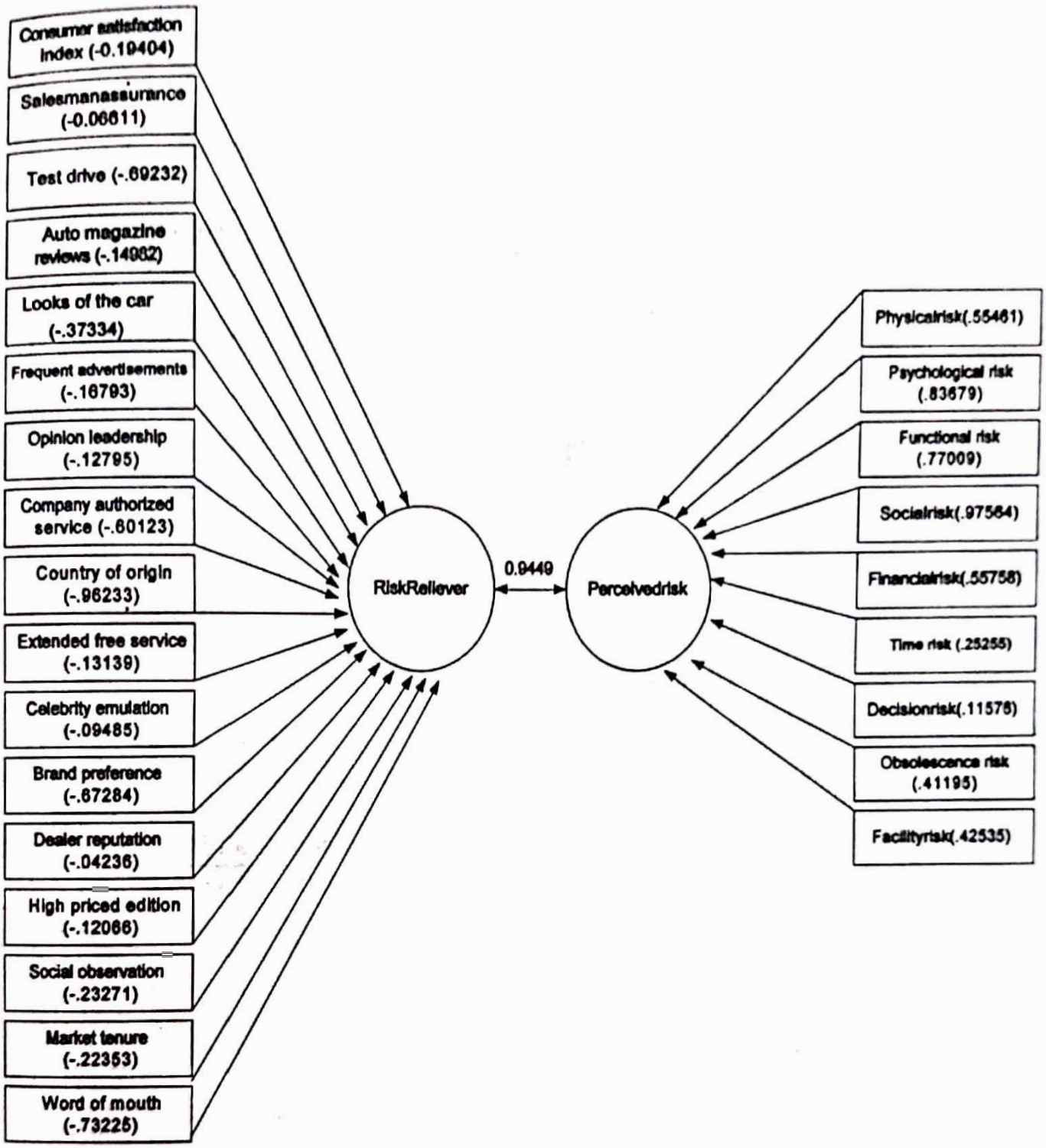


Fig. 4.1: Schematic representation of the first canonical correlation

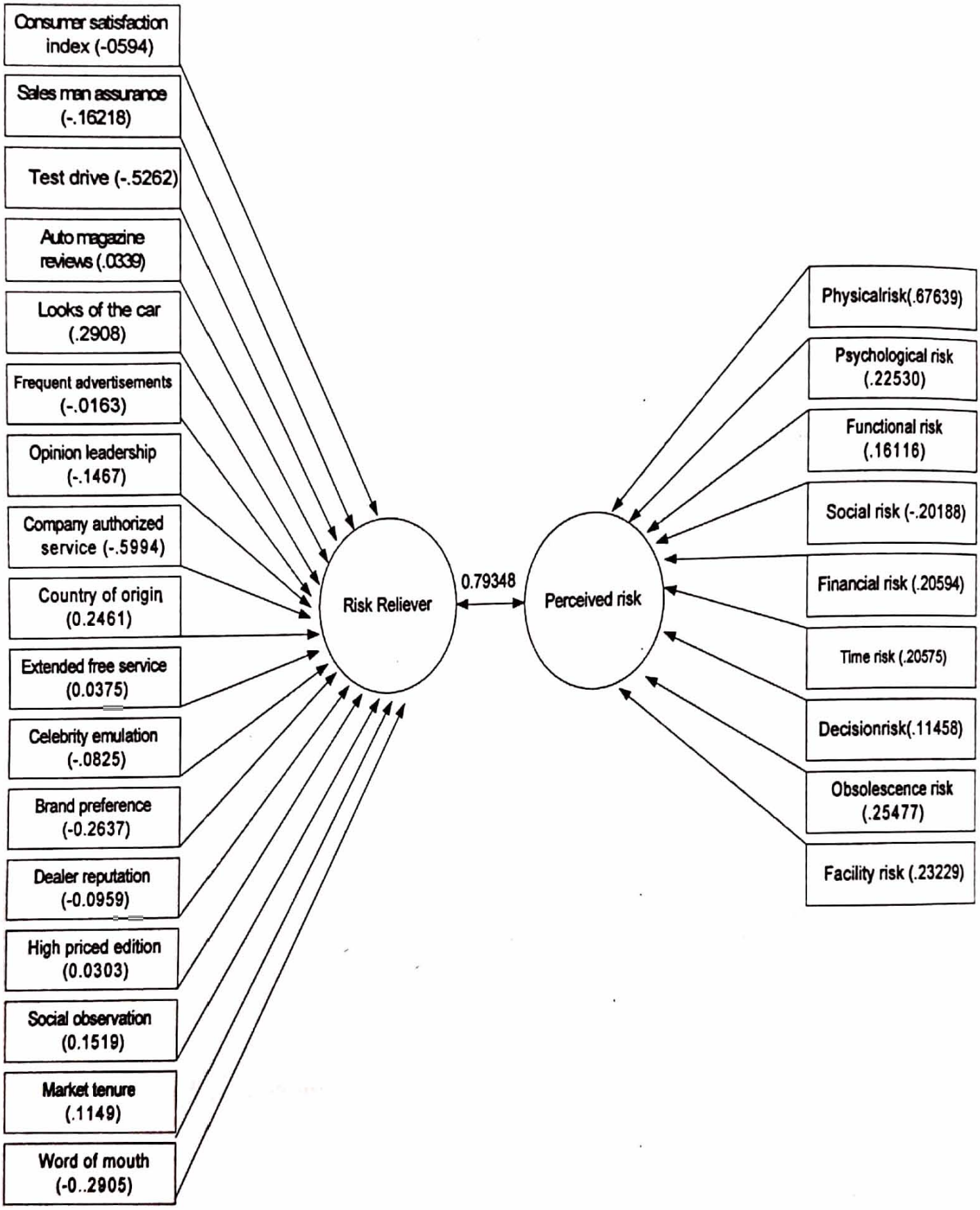


Fig. 4.2: Schematic representation of the second canonical correlation

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