

Determinants of Research Shopping Behaviour in the Insurance Sector: An Empirical Analysis

Summary

Note: Work in progress. A current version of the paper can be obtained from the authors.

Key words: non-life insurance · multichannel behavior · research shopper · empirical analysis

1 Motivation

Establishment of multiple distribution channels in the insurance sector has changed the customer behaviour resulting in different patterns of channel usage over the purchase cycle, frequently involving more than one channel. This approach was found to create opportunities for higher profit since multichannel customers spend more compared to single channel customers. Yet a multichannel environment also imposes certain challenges, one of those being the fact that companies might lose their customers during the channel switch, a phenomenon known as free-riding or research shopping. This trend is visible from the channel usage statistics, e.g. in 2012 57% of the customers worldwide used the insurers own website for product research, but only 20% for purchase purposes. The preferred purchase channel (27%) still remains the agency channel, which enables personal contact to the sales personnel.

While research shopping might lead to higher profit, the change of the insurer during the research phase, favoured by the growing popularity of online aggregators used for product research, is a serious threat for the companies. A first step towards overcoming the problem is understanding the research shopping phenomenon by determining the characteristics of customers who are more likely to engage in such behaviour. Furthermore a customer's online quote can be interpreted as a short-term indicator for a change in personal insurance demand. Insurance companies need to understand the behavior pattern in respect to the time duration between research and purchase, in order to react on such a customer signal in a timely manner. Such an approach might facilitate retaining existing or acquiring new contracts.

Therefore the paper addresses two relevant research questions: (1) Which customer typologies/clusters engage research shopping behavior? and (2) Do customers differ in their research shopping behavior between research and purchase? Prior research focused on evaluating varying forms of research shopping, which are relevant for various product categories, such as retailing and travel, but included only a small set of characteristics to determine the customer behavior. In our study we focus on the product category non-life insurance and the research shopping form *Internet* \Rightarrow *Store*. We will use a data-driven approach and aim to expand existing work with detailed results for this particular product category and research shopping form. Further, we will extend the current understanding of research shopping behaviour with the second question. We hypothesize that the affinity for research shopping behavior varies by customer characteristics and non-life insurance products. Our findings are relevant to academics and practitioners alike and are important for detailed understanding of multichannel customer behavior.

2 Methodology

Our study is based on a recent sample of 180'000 online quotes and 15'000 policies of research shoppers in 2013 and 2014 from the data warehouse of a large Swiss insurer. This company has a total non-life market share of 26% in Switzerland, therefore the results of the analysis are strongly relevant for the Swiss market. The sample includes the non-life insurance products *Household/Liability*, *Motor*, and *Travel*. The policies include new and replaced contracts, where all characteristics are measured at the inception date. The online quotes are stored from the insurers website and involve all pricing relevant characteristics. The research shopping behavior is detected via a matching algorithm of online quotes and policy details. The following table provides a summary of the dataset quantities per product.

Insurance Products	Online Quotes	Research Shopper
Household/Liability	53'228	4'771
Motor	105'695	7'880
Travel	23'358	2'005
Total	182'281	14'656

To test our different hypotheses, we include general customer and policy related characteristics and insurance product specific characteristic as independent variables into our study, an overview is provided in the table below.

General Charateristics	Insuranc Product Specific Charateristics
age, gender, nationality, civil status, urbanicity of residence, local region, income, customer status, new or replaced policy, booking date, timestamp of online quote	<i>Household/Liability</i> sum assured, type of household, level of furnishing, number of rooms, real estate ownership <i>Motor</i> type of vehicle, model, year of manufacture, year of purchase, issue date of license <i>Travel</i> type of household

For the analysis of research question (1) – Which customer typologies/clusters engage channel research shopping behavior? – we use decision trees and logistic regression to determine the customer typologies/clusters with high affinity for channel-free behavior. To address research question (2) – Do customers differ in their research shopping behavior between research and purchase? – we apply survival analysis, a technique often used for duration analysis in biological studies or medical trials, based on a Cox proportional hazard model to statistically evaluate the duration between online quote and the booking date of the policy at the insurance agency. We look for variances in the duration curves between specific customer and policy typologies.

3 Preliminary Results

The results of this study are discussed separately for each product. Our findings indicate a significant impact over all products of customer typologies/clusters on *Internet* \Rightarrow *Store* research shopping behavior.

For *Household/Liability* insurance the findings regarding research question (1) indicate that general customer and policy related characteristics age and urbancity, as well as the policy related characteristics sum assured, type of household and real estate ownership impact research shopping behavior. Here we find younger, urban customers with a lower sum assured as a preferred research shopper segment. Looking at the results for research question (2) we find single households purchasing a new policy having the shortest duration between online quote and agency purchase, whereas families replacing their contract take significantly longer than the average research shopper to complete the purchase.

The typical research shopper for the product *Motor* insurance is more likely to be male, to live in an urban area, to be an experienced driver, and to own a second hand car. For research question (2) the survival model shows the shortest duration between online quote and agency purchase is found for Swiss female customers looking for a new policy. On the other hand we find customers buying a new car to have a significantly longer duration between research and purchase. We assume this finding is a results of the fairly long-term decision-making process when purchasing a new car. Moreover the data indicate that this research shopper segment performs the product and premium research multiple times until the final purchase.

For *Travel* insurance couples and families, where the head of the household is 25-44 years old, seem to have a greater affinity for research shopping. But they also take the longest time for the channel switch compared to all other research shopper segments. The shortest duration we find for customers purchasing a new policy. This is a common observation for all three products. The circumstance of buying a new policy instead of replacing an existing one reduces the period between product research significantly. In our assumption the insurance demand is more urgent in the case of a new policy, due to the fact that the customer is seeking for a non-existing but relevant coverage, whereas in the case of a replaced contract the coverage is already existing, but needs to be adopted.

Another case of interest would be the online research behavior of insurance customers before the lapse of a policy at the agency or call center. For this study the relevant data were not available, but this could be a topic for future research.

This research work is part of the ongoing PhD thesis project of one of the authors. The working paper is expected to be fully finalized soon.