

Service Design in the Insurance Industry – On the Optimal Design of Term Life Insurance for Young People

The insurance industry is facing major pressure due to ongoing effects of the covid19-pandemic, increasing inflation rates, and the Ukraine conflict. The need to grow profitable puts focus on products with high gross profits, especially on term life insurance. Insurance companies reevaluate their offering in this product segment, analyze changing customer preferences and adapt accordingly. Usually, term life insurance is bought when becoming parents or buying a house or apartment. On average, this happens at the age of 30 to 40, an age at which already certain medical conditions may exist that lead to increased insurance premiums or even a rejection of the insurance proposal. To overcome this problem, insurance companies could make term life insurance more attractive to younger people, who do not have yet kids, a house or an apartment to protect. By signing early, they could strongly benefit from better medical condition.

The challenge of designing services that fit to specific customer preferences is not new in the business world. Companies have faced similar challenges for decades. To facilitate service design decisions, conjoint analysis was developed at the end of the last century and has become a widely used method in both worlds, commercial as well as scientific. It is a highly useful method to derive so called part-worth utilities for product or service attributes and their respective attribute levels. For the specific form of choice-based conjoint analysis (CBC), this derivation is done by conducting a choice experiment with potential customers, who are asked to select their most-preferred from a set of offered alternatives, each defined (conjointly) by two or more attributes. Individual values for attributes (and their levels) are then derived using the respondent choices and dedicated empirical techniques.

The objectives of this thesis are to:

- Introduce the field of service design and its latest developments;
- Present the different forms of conjoint analysis and discuss their relevance in today's research and practice;
- Describe the insurance industry and highlight its current challenges in general and with a special focus on term life insurance (contacts to industry experts can be provided by the chair);
- Set up a conjoint analysis about term life insurance for young people in Sawtooth Software by selecting the most suitable form of conjoint analysis and choosing appropriate attributes and attribute levels (a student license for Sawtooth Software will be provided by the Chair).
- Conduct the conjoint study and analyze the results;
- Derive implications for optimally designing a term life insurance including its pricing based on actuarial models.

Basic Literature:

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Jahnert, J. R., Schmeiser, H., & Schreiber, F. (2022). Pricing strategies in the German term life insurance market: An empirical analysis. *Risk Management and Insurance Review*, 25(1), 19-34.

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Orme, B. (2010). Getting started with conjoint analysis: strategies for product design and pricing research second edition. Madison: Research Publishers LLC.