# A Mixed Methods Analysis of the Adoption and Diffusion of Chatbot Technology in the German Insurance Sector

*Completed Research*

**Davinia Rodríguez Cardona**
Leibniz Universität Hannover
rodriguez@iwi.uni-hannover.de
**Svenja Schönborn**
Leibniz Universität Hannover
schoenborn@iwi.uni-hannover.de

**Oliver Werth**
Leibniz Universität Hannover
werth@iwi.uni-hannover.de
**Michael H. Breitner**
Leibniz Universität Hannover
breitner@iwi.uni-hannover.de

## Abstract

In recent years, gradual improvements in information, computing, communication and connectivity technologies have enabled new technical possibilities for the adoption of Chatbots across diverse sectors. In the case of the insurance sector, the implementation of service innovations based on Chatbot technology can contribute, among other benefits, to improve the efficiency across the insurance value chain, reduce costs and generate customer loyalty and trust (Barrett et al., 2015; Ross et al., 2016). However, despite the advantages, the adoption success of Chatbot Technology depends on the understanding of the ambivalent perceptions, attitudes, and beliefs of the main social actors (i.e. practitioners and potential users) towards the customer interface. Using a mixed methods design based on an interpretive paradigm and within the frameworks of acceptance and diffusion research, we identified the "relative advantages" and "IS infrastructure" as the most critical ambivalent socio-technical factors for the adoption and diffusion of Chatbot technology in Germany.

**Keywords**

Acceptance and Diffusion Research, Ambivalent IT, Technology, Organization, Environment (TOE) Model

## Introduction

In the last decade the rapid diffusion of technological innovations enabled by the aggregated disruptive power of clusters of information, computing, communication and connectivity technologies known as Social, Mobile, Analytics, Cloud, and Internet of Things (SMACIT) technologies and advances in the field of artificial intelligence (AI) had fundamentally challenged the way in which traditional insurance service providers generate business and economic value (Schuelke-Leech, 2018).

In a manner comparable with the FinTech companies in the banking sector, diverse Insurtech companies are disrupting the insurance industry. The term Insurtech is a neologism resulting from the words 'insurance' and 'technology', and refers to financial technology start-ups which offer technical, customer-oriented and insurance-related innovations (Stoeckli & Uebernickel, 2018). In order to be able to respond to the progressively competitive environment and meet the needs and expectations of increasingly digitally influenced customers, the traditional insurance service providers are compelled to undertake a profound digital transformation of their value chain processes, which, in turn, implies also a restructuring of their traditional business models and an strategic realignment of the way in which they engage with their customers by means of service innovation (Barrett et al., 2015).

In the specific case of the insurance sector, the implementation of technological innovations in the form of Conversational Systems (i.e. Chatbots) can contribute to unlocking new solutions and business opportunities if the aforementioned systems are properly integrated into the traditional value chain of