SOCIETY OF ACTUARIES

Innovation and Technology

Behavior Science Report Summary

Traditional Chinese (行為科學報告摘要)

October 2020

Behavior Science Report Summary

(行為科學報告摘要)

ORIGINAL AUTHOR RISK & REGULATORY CONSULTING

SPONSOR Actuarial Innovation & Technology Steering Committee

TRANSLATORS

Yihong Lu
Translation Consultant
LEAD Insurance Consulting

Tinny Tsun, FSA, FCIA

Yuan Yuan, FSA, MAAA
Consultant
Ernst & Young

Behavior Science Report Summary (行為科學報告摘要)

The Behavioral Science Report is designed to provide general familiarity in the subject of Behavioral Economics (BE) and motivate readers to consider additional research on the topic. The research report was completed by RRC in June of 2019. RRC is an insurance consulting firm serving the regulatory community and has performed a range of research projects for the SOA.

行為科學報告旨在提供行為經濟學（BE）的總體認識，並鼓勵讀者對該主題進行其他研究。該研究報告是由 RRC 於 2019 年 6 月完成。RRC 是一家為監管機構服務的保險諮詢公司，並已為 SOA 進行了一系列的研究。

BE is a method of economic analysis that applies psychological insights into human behavior to explain and nudge economic decision-making. The field of BE blends insights of psychology and economics, and provides some valuable insights that individuals are not behaving in their own best interests. BE provides a framework to understand when and how people make errors. Systematic errors or biases recur predictably in particular circumstances.

BE 是一種將心理洞察力應用於人類行為，以解釋和推動經濟決策的經濟分析方法。BE 融合了對心理學和經濟學的見解，並對一些不符合個人利益最大化的行為提供了合理的解釋。BE 提供了一個框架以理解人們何時以及如何犯錯，亦可在特定情況下預測系統性錯誤或偏見的再次發生。

The brain is best thought of as an organization of systems that interact with each other. A crucial insight is that the brain is a democracy. That is, there is no leading decision-maker. Although the behavioral goal of an individual can be stated as maximizing happiness, attaining that goal requires contributions from several brain regions. BE attempts to integrate psychologists' understanding of human behavior into economic analysis.

大腦可被視為一種互動系統。一個重要的觀點是大腦是民主的，也就是說，沒有領先的決策者。雖然每個人的行為是以儘可能提高幸福感為目標，但是要達到這個目標則需要大腦不同區域的貢獻。BE 試圖將心理學家對人類行為的理解整合到經濟分析中。

Lessons from BE can be used to create environments that nudge people toward wiser decisions and healthier lives. There are many benefits of BE for insurance, including better educating applicants on the benefits of truthful and correct disclosure, which can improve the underwriting process and result. This, in turn, results in more reliable applications being submitted, which leads to a reduction in the time to obtain underwriting approval. An added benefit is the opportunity to provide more life insurance to more consumers by improving the buying process and making the process more personalized and relevant.

來自 BE 的經驗可促使人們朝著更明智的決策和更健康的生活發展。BE 對保險業有很多好處，包括更好地教育申請人，讓他們了解如實告知的益處，這可以改善承保流程和結果，令提交的申請更為可靠，從而縮短承保的時間。另一個好處便是可以通過改善購買流程為更多的消費者提供更多的人壽保險，並使購買流程更具個性化和相關性。

There are potential drawbacks to BE and some elements to consider include a negative impact on client experience (if done poorly) and the resource-intensive nature of BE. While customer experience is critical, there is the balance of needing to mitigate mortality and morbidity risk with improvements to the client experience.

BE 也有潛在的弊端，BE 需要投入大量的資源，如果做得不好便有可能對客戶的體驗帶來負面影響。儘管客戶體驗很重要，我們需要在降低死亡率和發病率的風險和改善客戶體驗之間取得平衡。

The report reviews several BE techniques that could be applied to guide product design, modeling, and underwriting. The focus of this research is on life insurance underwriting, and much of the research being done is to test how BE can be utilized to improve applicant disclosures. Current insurance applications encourage fast thinking, resulting in people providing less accurate information in applications for insurance.

該報告回顧了幾種可用於指導產品設計，建模和承保的 BE 技術。這項研究的重點是人壽保險的承保，而正在進行的許多研究都是為了測試如何利用 BE 來改善申請人的信息披露。當前的保險申請過程鼓勵快速思考，導致人們在保險申請中提供不太準確的信息。

The research reviewed existing literature regarding industry approaches and primarily summarized industry perspectives from interviews conducted with 13 panelists using a questionnaire developed by RRC. Panelists included members from insurance, reinsurance, and consulting.

該研究回顧了有關行業的現有文獻，並利用 RRC 編制的問卷調查表對 13 位专家小組成員進行了訪談，初步總結了行業觀點。小組成員分別來自保險，再保險和諮詢公司的成員。

BE techniques considered in the report include Framing, Nudges, Cognitive aids, Social Norming, Availability heuristics, Anchoring, Messenger effect, Managing inertia, Fluency, Choice Architecture, Sentinel Effect, Scaling, Hovering Effect, Psychological Manipulation, and Prospect Theory. These BE techniques are evaluated against a series of improvements that can be made to the Underwriting process. Regulatory considerations are also briefly discussed as Regulatory requirements are often a concern around underwriting application changes. The techniques are also evaluated for their ability to improve marketing and distribution of products, to improve advisor behavior, and deliver post-sale customer engagement.

報告中考慮的 BE 技術包括框架，輕推，認知輔助，社會規範，可用性啟發法，錨定，信使效應，管理慣性，流利性，選擇架構，前哨效應，縮放，懸停效應，心理操縱和前景理論。這些 BE 技術是根據一系列可以改善承保過程的方法來進行評估的。報告中還簡要討論了監管方面的考慮。監管部門通常最為關注的，便是任何關於承保申請的變更。該報告還評估了這些技術在改善產品營銷和分銷，改善顧問行為以及提供客戶售後參與互動的能力。

In summary, the report provides an overview of how BE can be applied to introductory changes in the existing paradigm of Insurance customer journeys. Readers are also provided with additional resources to consider to further their understanding of BE.

The full research report can be found here: https://www.soa.org/globalassets/assets/files/resources/research-report/2019/behavioral-sciencereport.pdf.

總之，該報告概述了如何將 BE 應用於現有保險客戶的購買經驗，還為讀者提供了其他資源以進一步了解 BE。

請點開以下網□ □ 閱□ □ □ □ □ 報□ □

https://www.soa.org/globalassets/assets/files/resources/research-report/2019/behavioral-sciencereport.pdf.

Acknowledgments

The SOA's deepest gratitude goes to those without whose efforts this project could not have come to fruition, especially Yun Gwen Weng, FSA, CERA, FCIA, who organized and oversaw all steps of the process.

This paper was translated from English by SOA members Yuan Yuan, FSA, MAAA and Tinny Tsun, FSA, FCIA, along with Yihong Lu, a translation consultant.

Yuan Yuan works in the Financial Services practice at Ernst & Young LLP where she is a manager in the Insurance and Actuarial Advisory Services team. She can be reached at yuan.yuan@ey.com.

Tinny Tsun is an actuary with almost 20 years of diverse work experience in Toronto, Beijing and Hong Kong. She can be reached at Tinny.tsun@gmail.com.

Yihong Lu is a translation consultant at LEAD Insurance Consulting. She can be reached at https://leadinsuranceconsulting.com.

At the Society of Actuaries:

Korrel Crawford, Senior Research Administrator

Mervyn Kopinsky, FSA, EA, MAAA, Experience Studies Actuary

Jingxin (Jessie) Li, FSA, Lead China Representative

About The Society of Actuaries

With roots dating back to 1889, the Society of Actuaries (SOA) is the world's largest actuarial professional organization with more than 31,000 members. Through research and education, the SOA's mission is to advance actuarial knowledge and to enhance the ability of actuaries to provide expert advice and relevant solutions for financial, business and societal challenges. The SOA's vision is for actuaries to be the leading professionals in the measurement and management of risk.

The SOA supports actuaries and advances knowledge through research and education. As part of its work, the SOA seeks to inform public policy development and public understanding through research. The SOA aspires to be a trusted source of objective, data-driven research and analysis with an actuarial perspective for its members, industry, policymakers and the public. This distinct perspective comes from the SOA as an association of actuaries, who have a rigorous formal education and direct experience as practitioners as they perform applied research. The SOA also welcomes the opportunity to partner with other organizations in our work where appropriate.

The SOA has a history of working with public policymakers and regulators in developing historical experience studies and projection techniques as well as individual reports on health care, retirement and other topics. The SOA's research is intended to aid the work of policymakers and regulators and follow certain core principles:

Objectivity: The SOA's research informs and provides analysis that can be relied upon by other individuals or organizations involved in public policy discussions. The SOA does not take advocacy positions or lobby specific policy proposals.

Quality: The SOA aspires to the highest ethical and quality standards in all of its research and analysis. Our research process is overseen by experienced actuaries and nonactuaries from a range of industry sectors and organizations. A rigorous peer-review process ensures the quality and integrity of our work.

Relevance: The SOA provides timely research on public policy issues. Our research advances actuarial knowledge while providing critical insights on key policy issues, and thereby provides value to stakeholders and decision makers.

Quantification: The SOA leverages the diverse skill sets of actuaries to provide research and findings that are driven by the best available data and methods. Actuaries use detailed modeling to analyze financial risk and provide distinct insight and quantification. Further, actuarial standards require transparency and the disclosure of the assumptions and analytic approach underlying the work.

Society of Actuaries
475 N. Martingale Road, Suite 600
Schaumburg, Illinois 60173
www.SOA.org