

論文 / 著書情報
Article / Book Information

題目(和文)	
Title(English)	A Study on Customer Perception and Behavioral Intention in the Context of Smart Technology
著者(和文)	王振磐
Author(English)	Zhenpan Wang
出典(和文)	学位:博士(工学), 学位授与機関:東京工業大学, 報告番号:甲第12713号, 授与年月日:2024年3月26日, 学位の種別:課程博士, 審査員:鍾 淑玲,妹尾 大,永田 京子,顧 秀珠,SEABORN KATIE
Citation(English)	Degree:Doctor (Engineering), Conferring organization: Tokyo Institute of Technology, Report number:甲第12713号, Conferred date:2024/3/26, Degree Type:Course doctor, Examiner:,,,,
学位種別(和文)	博士論文
Category(English)	Doctoral Thesis
種別(和文)	論文要旨
Type(English)	Summary

論文要旨

THESIS SUMMARY

系・コース： Department of, Graduate major in	経営工学 経営工学	系 コース	申請学位 (専攻分野)： Academic Degree Requested	博士 Doctor of	(工学)
学生氏名： Student's Name	王振磐		審査員主査： Chief Examiner	鍾淑玲	

要旨 (英文 800 語程度)

Thesis Summary (approx.800 English Words)

This paper, entitled "A Study on Customer Perception and Behavioral Intention in the Context of Smart Technology," focuses on robots, AR, and IoT to discuss the impact of changes in customer perception on changes in customer behavioral intention (Chapter 3 and Chapter 4). In addition, two models are extended and analyzed to investigate the impact of customer perception on satisfaction (Chapter 5 and Chapter 6).

Chapter 1, Introduction, first introduces the definition of smart technology and outlines the importance of smart technology for business and society in China and Japan, especially the importance and role of digitalization and the significant impact of smart technology on people's lifestyle, especially customer perceptions and behavioral intentions, in the context of digitalization. Based on it, the background of this dissertation, the purpose of this dissertation, and the structure of this dissertation are described. Chapter 1 clarifies the purpose of the dissertation. (1) To examine the effect of customer perception change on customer behavioral intention change. Clarify the relationship between word of mouth change and satisfaction change, and the relationship between word of mouth change and loyalty change. To predict the effect of customer perception changes on customer behavioral intentions change. (2) To investigate the effect of customer perception on satisfaction, the two models are expanded to analyze the effect of customer perception on satisfaction.

Chapter 2, Literature Review, is divided into two main parts. The first part presents previous studies on robotics, AR, and IoT, as well as definitions of the variables addressed in this dissertation and related literature. The second part details the industrial background of this dissertation and describes the current state of digitalization and the applications of robotics, AR, and IoT.

Chapter 3, "The Antecedents of Smart Technology-Induced Word-of-Mouth Change," examined the relationship between value perception change, privacy concern, word-of-mouth change, satisfaction change, and loyalty change induced by the application of smart technology. The data collected are examined for relationships among variables using path analysis. The results showed that value perception change has a positive and significant effect on satisfaction change and loyalty change. Satisfaction change and loyalty change has a positive and significant effect on word of mouth change. The results reveal that satisfaction change has a positive and significant effect on loyalty change.

Chapter 4, "Customer Changes Induced by the Adoption of the Internet of Things," used multiple regression analysis to investigate the predictive relationship between value perception change, satisfaction change, and privacy concern on word of mouth change and loyalty change. Data are collected from the same sample as in Chapter 3. The analysis reveals that in the context of IoT technology adoption, value perception change and satisfaction change have significant positive predictive power on word-of-mouth change and loyalty change, while privacy concern has a negative effect on loyalty change. Additional analyses in Chapter 4 also examine the effects of satisfaction change, value perception change, and privacy concern on word-of-mouth change and loyalty change in the context of robotics and AR technology.

Chapter 5, "The Development of Augmented Reality in Online Shopping: The Viewpoint of the Customer," is a modification of the Seddon model, analyzing the impact of innovativeness, enjoyment, and personalization on usefulness and satisfaction. The data collected are used to test the hypotheses using structural equation modeling. The results show that enjoyment and personalization have a positive and significant impact on usefulness in online shopping with AR technology. Personalization and usefulness have a positive and significant impact on satisfaction.

Chapter 6, "Analysis of the Antecedents and Consequences of Customer Value Co-Creation of Online Shopping Equipped with AR Technology" analyzes the effects of performance expectancy, effort expectancy, social influence, hedonic motivation, and personalization on value co-creation and satisfaction. The results showed that social influence, hedonic motivation, and personalization have positive effects on value co-creation. Performance expectation, social influence, personalization, and value co-creation have a positive effect on satisfaction. This chapter also confirms that there are no significant differences by gender or by age group. In

addition, Chapters 5 and 6 examine the effect of customer perception on satisfaction using different models.

Chapter 7, "Conclusion and Implication," is the final chapter of the dissertation. Firstly, the dissertation is summarized by outlining the research conducted in Chapter 3 through Chapter 6, and then research implications are developed based on each chapter. Finally, it presents the limitations of the dissertation and future research topics.

In summary, this dissertation analyzes the effect of customer perception change caused by technologies such as robotics, AR, and IoT on customer behavioral intention change, provides new research perspectives and ideas for exploring customer perception and customer behavioral intention in the context of smart technology, contributes to the understanding of customer perception and customer behavioral intention toward technology by companies, and provides suggestions to help companies choose the best smart technology for their development.

備考：論文要旨は、和文 2000 字と英文 300 語を 1 部ずつ提出するか、もしくは英文 800 語を 1 部提出してください。

Note：Thesis Summary should be submitted in either a copy of 2000 Japanese Characters and 300 Words (English) or 1copy of 800 Words (English).

注意：論文要旨は、東工大リサーチリポジトリ(T2R2)にてインターネット公表されますので、公表可能な範囲の内容で作成してください。

Attention: Thesis Summary will be published on Tokyo Tech Research Repository Website (T2R2).