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著者(和文)	鷲尾拓哉
Author(English)	Takuya Washio
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論文要約

THESIS OUTLINE

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学生氏名：	鷲尾拓哉	
Student's Name		

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指導教員 (主)：	西條 美紀	
Academic Supervisor(main)		
指導教員 (副)：	大橋 匠	
Academic Supervisor(sub)		

要約

Thesis Outline

Improving animal welfare is essential for sustainable livestock production, and the five freedoms are widely accepted as the central concept for animal welfare. In Japan, previous research focused on conceptualization of farm animal welfare to development of production practices, and marketization of animal-welfare-friendly beef. However, there is a significant void in academic exploration remains: a comprehensive effort to transform the supply chain, including the development of consumer markets for welfare-friendly products by addressing both production and consumption sides. Disentangling the deadlock calls for simultaneous interventions targeting both sides, a challenging yet vital task for transforming the livestock production and consumption landscape towards improved animal welfare. The focal point of this research lies in probing the opportunities that may ameliorate the current deadlock faced in the production and consumption sectors of animal-welfare-friendly beef in Japan.

This dissertation is systematically segmented into five integral chapters, each serving a distinct purpose in the broader research spectrum.

Chapter 1 sets the stage for the study by elucidating the research background, thereby creating a comprehensive understanding of the research landscape. Furthermore, it articulates the vision, goals, objectives, and the anticipated contributions of the study. This chapter also outlines the overall structure of the dissertation, providing a roadmap for navigating the research terrain.

Chapter 2 of this dissertation is dedicated to exploring current consumption of animal-welfare-friendly beef. This was accomplished through a robust methodology incorporating a choice experiment, deployed via an online questionnaire, and subsequent analysis using a multinomial logit model and a latent class model. Five distinct consumer segments, namely, novelty accepters, generous customers, attribute-economy balancers, price-conscious, and conservatives were extracted among Japanese beef consumers. These segments pertain to acceptance towards different production methods of beef. This chapter also illustrates the consumption process of animal-welfare-friendly beef. In-depth interviews were carried out and analyzed using the Grounded Theory Approach, offering valuable qualitative insights into the acceptance process. Two major obstacles during this process were identified: the accessibility and higher price of animal-welfare-friendly beef, and the information presentation of credence cues.

Chapter 3 of the dissertation shifts focus to a prescriptive design-oriented approach, specifically targeting the obstacle of higher price and limited accessibility of animal-welfare-friendly beef. The emphasis is laid upon a scenario where on-farm practices for animal welfare, such as grazing, are necessitated to improve work efficiency. This necessitates a design research approach which incorporates problem identification, prototyping, and subsequent evaluation through user testing. The outcome of this process was a smartphone application prototype designed to assist ranchers in managing reproduction effectively. User testing served to evaluate the design artifact, with the results affirming its effectiveness and efficiency. It is suggested to stimulate more efficient production of animal-welfare-friendly beef, thereby potentially mitigating the issue of accessibility and higher prices. Moreover, this development could contribute to the broader adoption of precision livestock farming technologies. Thus, the third chapter provides a tangible solution to one of the identified challenges, underscoring the potential of innovative technology in promoting animal welfare.

Chapter 4 delves into addressing the latter identified obstacle, the information presentation of credence cues pertaining to animal-welfare-friendly beef. A design research approach was deployed to tackle this challenge. A design for information presentation was proposed and implemented in a real-world setting—a operating restaurant where meals were prepared using animal-welfare-friendly beef. This beef was sourced from the same rancher involved in the previous chapter and was priced realistically, ensuring feasibility for both the rancher and the restaurant. To assess the impact of the new information presentation on customers' meal choices, product value recognition, and overall restaurant evaluation, binary regression analysis was applied to the sales data of the meals. Concurrently, a t-test was conducted on customer questionnaires, with the results further corroborated by customer interview findings. The outcomes of this hands-on application indicated that the designed information presentation swayed customers towards selecting meals prepared with animal-welfare-friendly beef. This intervention positively influenced customers' value recognition of the meals served and their overall evaluation of the restaurant. Furthermore, from the reflection interview, it was found that the restaurant responded positively to these customer reactions, viewing the introduction of animal-welfare-friendly beef as a promising business opportunity. Simultaneously, it was found from the reflection interview to the rancher, that the rancher supplied the animal-welfare-friendly beef was inspired by these positive outcomes. Motivated by the restaurant's acceptance and the favorable customer reactions, the rancher envisaged broadening such production activities as a potential income source and a catalyst for regional promotion. Therefore, it provides practical insights into how effective information presentation can shape consumer choice and highlights the ensuing benefits to both the service provider and the supplier.

In conclusion, this dissertation successfully elucidates potential opportunities that bring mutual satisfaction to all stakeholders involved, from producers to retailers and consumers. It highlights the feasibility of breakthrough solutions in scenarios that might appear as a deadlock, providing evidence that even small-scale interventions can effect significant changes. By systematically addressing identified challenges, and exploring practical solutions, the research effectively contributes to the larger discourse on promoting animal-welfare-friendly beef, demonstrating the possibilities for sustainable and mutually beneficial outcomes across the supply chain.