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Order Fulfilment and Consumer Behaviour in Online Retailing

Nguyen, D.H.

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Summary

It is well known that order fulfilment plays an important role in online retailing and helps retailers optimize logistics activities. It is also straightforward that an understanding of online consumer behaviour would help retailers improve consumer satisfaction, hence increase sales. In modern retailing, making the right order fulfilment decision and at the same time satisfying consumer expectations in fulfilling an online offer are particularly vital to the success of an online business. Still, little is known about the relationship between order fulfilment and online consumer behaviour in the current literature. This dissertation aims to fill this research gap as well as to help retailers and logistics service providers better understand consumer behaviour in order to effectively implement or adapt order fulfilment strategies. This topic is addressed in four chapters using different research methodologies, ranging from an extensive literature review to empirical studies with a different research context and a different methodological approach.

In Chapter 2 we systematically review the existing literature on relationship between online order fulfilment and consumer behaviour. The results indicate significant impacts of order fulfilment (including inventory management, last-mile delivery, and returns management) on three dimensions of online consumer behaviour (purchase, repurchase and product return). We find that very little research has been conducted on how to use strategies and incentives to steer consumer behaviour to manage order fulfilment activities better. We also propose an integrative framework on the relationships between order fulfilment and online consumer behaviour to support further research.

Last-mile delivery is an important factor of order fulfilment integrated in the proposed framework. In Chapter 3 and Chapter 4 we examine consumer preferences for delivery services in the modern retailing. In Chapter 3 we investigate how consumers evaluate delivery attributes (e.g., delivery speed, time slot, daytime/evening delivery, delivery date, and delivery fee) when selecting a delivery option for their online purchases. The evaluation includes three different product categories: convenience goods, shopping goods, and specialty goods. Conjoint analysis is used to assess the structure for consumer preferences. The results show that the most important attribute from a consumers' perspective is the delivery fee, followed by non-price delivery attributes (i.e. delivery speed, time slot, daytime/evening delivery, and delivery date) and that consumer preference structure is similar across product

categories. In this study we also use a cluster analysis, based on the consumer-level importance values, to identify homogeneous consumer segments. We indicate that there is a group of consumers who care about the non-price attributes. In Chapter 4 we investigate how online consumers value delivery methods, shipping fee structures, order value, and travel time, in terms of online purchase intention in different scenarios. A laboratory experiment with Dutch students is used in this study. We find a significant interaction effect between shipping fee structures and order value on the purchase intention, such that a higher order value has a different impact for threshold-based free shipping than for unconditional free shipping and flat-rate shipping. The results in these studies help online retailers design and adjust their delivery strategies in order to meet consumer expectations.

Based on the integrative framework proposed in Chapter 2, in Chapter 5 we investigate the impacts of order fulfilment aspects on consumer repurchase intention across three product categories (convenience goods, shopping goods, and specialty goods) using trust in an online retailer as mediator. The research model in this study is tested through the structural equation modeling technique. The results show that good inventory management is positively related with repurchase intention. However, at the same time we find that last-mile delivery and returns management are not positively related with repurchase intention. The results also show that trust in an online retailer partially mediates the relationship between inventory management and repurchase intention and fully mediates the relationship between returns management and repurchase intention.

Overall, through this research, we offer insights into the relationship between order fulfilment and consumer behaviour in online retailing. The findings of the dissertation have practical importance for online retailers and logistics service providers in allocating logistics resources appropriately based on consumer perceptions. Our studies also open up additional avenues for future research in both marketing and operations fields.