



# Competitive Retailer Strategies for New Market Research, Entry and Positioning Decisions

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## Abstract

This paper investigates strategies for new market research and positioning of stores or products by competing retailers in a duopoly setting. We examine the scenario where the two retailers are considering entry into an uncertain new market that is an extension of their existing markets. The retailers must make decisions on whether or not to first conduct research about the new market's location relative to their existing markets and its size before deciding on their own positioning in it. We first study a sequential-move leader–follower setup to highlight the choice of an “innovate-or-imitate” strategy. We find when the potential new market is small, neither retailer is adequately incentivized to do research to acquire information about the new market. As the size of the new market increases, the follower is induced to do such research. When the new market is very sizable, the leader conducts research and knows the new market's location while the follower free-rides. We then examine a simultaneous-move setup, in which one retailer might decide against acquiring new market information even when the cost of doing so is low. We further observe that differentiation (e.g., in terms of products or store locations) is greater in the simultaneous-move setup than in the sequential setup.

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## Introduction

It can be a rewarding retailing practice for competing retailers to enter new markets. However, the emergence of a new market is typically uncertain, because retailers often know little a priori about the nature or extent of the new demand. To optimally position their products or decide on store locations, retailers may rely on market research to explore the new market. But, due to a variety of reasons, such as new market uncertainty and market research cost, some retailers oftentimes neglect the new market, giving a leeway for their rivals to encroach on the new market. For example, despite the prevalence of big-box retail chains, such as Wal-Mart, over the last several decades, Whole

Foods Market has enjoyed wild success selling organic groceries over much of the past 30 years (Patton and Giammona 2015).

Similar new market exploration can be observed in the game video retailing industry. When Nintendo created the Wii, it decided to target a broader demographic, besides the existing market dominated by Sony (PlayStation) and Microsoft (Xbox), to include people who showed no interest in video games (for example, mothers, young women, and the elderly). With its market research and corresponding retailing efforts, in the first half of 2007, Nintendo sold more units of Wii in the United States than the Xbox 360 and PlayStation 3 combined (Kuchera 2007).

The above examples reveal the first-mover advantage when competing retailers act sequentially on market research upon the uncertain new market. In practice, a rival retailer may have two options. First, it can wait and imitate the move of the leading retailer. As an example, although Whole Foods Market benefited from the first-mover advantage, as the organic foods

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market grows substantially large, the recent imitation of big-box retail chains, such as Costco, Walmart and Target, has significantly intensified the retailing competition on organic offerings (Randall 2015). Second, the rival retailer may act simultaneously together with the other firm by “moving up” its own market research decision. This scenario occurs when the competing retailers recognize the existence of a new market at about the same time. For instance, XM and Sirius compete simultaneously in the satellite radio industry in the late 1990s (Godes and Ofek 2003) and hardware giants battle concurrently in today’s Virtual Reality market (Roettgers 2016).

The above examples demonstrate that retailers may pursue different strategies on market research and product positioning. Whereas some retailers may choose to conduct market research about the new market to savor the first-mover advantage, others may instead focus on existing markets, opting for a wait-and-imitate strategy. Given that no literature has discussed the impact of new market exploration and decision timing on competing retailers’ product positioning and pricing decisions, this paper attempts to fill this gap and address the following research questions.

1. In either sequential or simultaneous setup, is it always beneficial for one retailer or both to conduct market research on the uncertain new market?
2. How does retailers’ market research, together with the order of market entry, affect their product positioning decisions?
3. If retailers could endogenize the timing of their entry into a market, how would new market uncertainty affect their choices of timing?

To answer the above questions, we construct a stylized model in which two retailers face an existing market and a new but uncertain market. Consumers have heterogeneous preferences and reside on a Hotelling line segment. The new market is an uncertain extension that can emerge on either the left-hand or the right-hand side of the existing market. Retailers may do market research about the new market’s location and its size before deciding the product positioning. In general, our position-then-price framework applies to both retailers’ geographical location and new product introduction problems. For simplicity, they are collectively called the positioning problem.

In a sequential setup, the leader decides whether or not to conduct market research to acquire new market information and chooses its position before the follower’s reaction. This sequential-move setup allows us to uncover both players’ rationales and highlight the choice of an “innovate-or-imitate” strategy. Our analysis reveals that retailers might decide against acquiring new market information even when it is inexpensive to do so. We identify three economic forces that drive the market equilibrium, in addition to the first-mover effect. Acquiring new market information certainly leads to an improved *positioning* strategy. However, this information is inevitably leaked to the competitor, as the information can be inferred from simply observing the retailer’s position. This *free-riding* incentive undermines the benefit of new market research. Moreover, if the location of the new market is known, the retailers can price their

products more aggressively to extract the consumers’ surplus. This new market information reduces the differentiation (e.g., in terms of products and store locations) between the two retailers and therefore *intensifies price competition*.

When a new market is small, both retailers refrain from acquiring information about it to avoid intense competition. As a result, retailers choose not to acquire new market information and the unresolved uncertainty acts as a differentiating force to soften competition. Once a new market has grown to a moderate size, the follower may be incentivized to acquire information about it. Lastly, when a new market is very sizable, the leader acquires information about it and positions itself at its optimal location, while the follower free-rides.

We further observe that an increase in the size of a new market can lead to either an upward or a downward jump in differentiation. When a new market is relatively small, both retailers determine their positions without acquiring information about the new market. An increase in the size of the new market may first induce the follower to acquire information about it, at which point the follower voluntarily deviates from the leader to avoid intense competition. This result leads to a substantial and abrupt increase in differentiation. When the new market becomes very sizable, the increased market incentivizes the leader to acquire information about it, and the follower’s imitation of the leader leads to a sharp reduction in differentiation. The two retailers’ pricing strategies strongly reflect their positioning, as higher differentiation leads to higher retail prices.

In a simultaneous-move setup, there is no first-mover or free-ride effect and retailers are mostly concerned about softening competition. Given that an information advantage would only generate negligible benefits, neither retailer acquires new market information in this state of equilibrium. By comparing sequential and simultaneous-move games in positioning, we find that when the new market is sufficiently large, the leader is incentivized to acquire information about it. The follower observes this information and imitates the leader by positioning itself closer to the new market. This imitation reduces both differentiation and profit, which encourages the leader to delay its positioning (from sequentially leading to simultaneous) to prevent the situation from arising in the first place. In addition, when a new market is relatively small, the first-mover advantage dominates the other three effects. Since the leader is entitled to choose its position first, it will occupy the center of the market and capitalize on its first-mover advantage.

The positioning problem studied in this paper follows Hotelling’s approach of location-then-price competition among firms/retailers (Cai and Chen 2011; d’Aspremont, Gabszewicz, and Thisse 1979; Hotelling 1929). This approach typically only considers cases in which firms are completely informed about demand conditions. Several papers introduce some form of demand uncertainty into this framework. For example, Balvers and Szerb (1996) study the effects of random shocks on product desirability under fixed prices. Casado-Izaga (2000) and Harter (1996) examine the uncertainty in the form of a uniformly distributed random shift of the (uniform) consumer distribution, and they differ in whether the firms decide their positions simultaneously or sequentially. Meagher and Zauner (2004) and Boneina

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