# Impact of Weather Conditions on Non-Food Retailers and Implications for Marketing Activities

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**Abstract :** This paper discusses purchasing behavior in retail stores, with a particular focus on the impact of weather changes on customers' purchasing behavior. Weather conditions are one of the factors that greatly affect the management and operation of retail stores. However, there is very little research on the relationship between weather conditions and marketing from an academic perspective, although there is some importance from a practical standpoint and knowledge based on experience. For example, customers are more hesitant to go out when it rains than when it is sunny, and they may postpone purchases or buy only the minimum necessary items even if they do go out. It is not difficult to imagine that weather has a significant impact on consumer behavior. To the best of the authors' knowledge, there have been only a few studies that have delved into the purchasing behavior of individual customers. According to Hirata (2018), the economic impact of weather in the United States is estimated to be 3.4% of GDP, or "$485 billion ± $240 billion per year. However, weather data is not yet fully utilized. Representative industries include transportation-related industries (e.g., airlines, shipping, roads, railroads), leisure-related industries (e.g., leisure facilities, event organizers), energy and infrastructure-related industries (e.g., construction, factories, electricity and gas), agriculture-related industries (e.g., agricultural organizations, producers), and retail-related industries (e.g., retail, food service, convenience stores, etc.). This paper focuses on the retail industry and advances research on weather. The first reason is that, as far as the author has investigated the retail industry, only grocery retailers use temperature, rainfall, wind, weather, and humidity as parameters for their products, and there are very few examples of academic use in other retail industries. Second, according to NBL's "Toward Data Utilization Starting from Consumer Contact Points in the Retail Industry," labor productivity in the retail industry is very low compared to other industries. According to Hirata (2018) mentioned above, improving labor productivity in the retail industry is recognized as a major challenge. On the other hand, according to the "Survey and Research on Measurement Methods for Information Distribution and Accumulation (2013)" by the Ministry of Internal Affairs and Communications, the amount of data accumulated by each industry is extremely large in the retail industry, so new applications are expected by analyzing these data together with weather data. Third, there is currently a wealth of weather-related information available. There are, for example, companies such as WeatherNews, Inc. that make weather information their business and not only disseminate weather information but also disseminate information that supports businesses in various industries. Despite the wide range of influences that weather has on business, the impact of weather has not been a subject of research in the retail industry, where business models need to be imagined, especially from a micro perspective. In this paper, the author discuss the important aspects of the impact of weather on marketing strategies in the non-food retail industry.

**Keywords :** consumer behavior, weather marketing, marketing science, big data, retail marketing
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