

ABSTRACT

This paper analyzes the location competition of spatial duopoly on two-dimensional space, where one dimension represents product quality level and another dimension represents players' location using both linear and quadratic transportation cost, and the cost of production depends on the product quality level. This location competition will be mainly considered the second stage of the competition or the expansion competition, which is the competition between two players trying to locate the new branches into the market that already has their own existing branches. In order to analyze the second competition, the first competition must have been analyzed. Therefore, in this study, both first and second location competition will be considered with the assumption that the result from first competition will be use as the existing branches in the second competition. The analysis shows that, in the first competition, players try to maximize their location differentiation while choose only the median product quality level. Players have only one choice in order to achieve the Nash Equilibrium in the first competition. However, in the second competition, players have many choices to choose. There are five sets of Nash Equilibria in this competition. By considering players' action in these Nash Equilibria, their actions can be categorized into three main strategies, offensive strategy, defensive strategy, and cost cutting strategy. In offensive strategy, player will try to beat his competitor by locate his new branch at his competitor location and employ the highest product quality level. For defensive strategy, player will locate at his original location and increase the product quality level to maximum. For the last strategy, cost cutting strategy, player only concern to lower the product quality of the new branch down in order to reduce the marginal cost while the location is not in player's consideration since it does not affect the market share competition.