ABSTRACT

Service providers, in the presence of congestion and heterogeneity of customer waiting costs, often introduce a fee-based premier option using which the customers self-segment themselves. Examples of this practice are found in health care (concierge medicine), amusement parks, government (consular services), and transportation. Using a single-server queuing system with customer waiting costs modeled as a Burr Distribution, we perform a detailed analysis to (i) determine the conditions (fees, cost structure, etc.) under which this strategy is profitable for the service provider, (ii) quantify benefits accrued by the premier customers; and (iii) evaluate the resulting impact on the other customers. We show that such self-selecting priority systems can be pareto-improving in the sense that they are beneficial to everyone. These benefits are larger when the variance in the customer waiting costs is high and the system utilization is high. We complement these results with data on the adoption of MDVIP (the most popular concierge medical service in the US) and show that the areas where it was adopted have higher median incomes and older population and thus are amenable to higher revenues for the service provider. Numerical results indicate that planning for a 30% enrollment in the high-priority option is robust in ensuring that all the stakeholders benefit from the proposed strategy.

BIO

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