Personalized pricing and product experimentation

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We consider a duopoly in which products are both horizontally and vertically differentiated. Firms and consumers do not know the quality values of the products on sale, but firms can allow prospective customers to test (experiment) their products before purchase. Product experimentations resolve the valuation uncertainty and allow firms to identify the consumers who tested their products and to charge them personalized prices, while the rest of consumers pay a uniform price. We show that firms always allow product experimentation in equilibrium to the detriment of their profits but, if consumers choose to test a product only if it increases their expected surplus, there exists another equilibrium in which both firms deny any test before purchase. The use of product experimentation leads firms to poach rival’s customers and the consumers’ decision to test both products before purchase is non-monotonic in the consumers’ preferences Finally, we show that the share of consumers testing both products is inverse U-shaped in the degree of vertical differentiation.