

# DISSERTATION PROPOSAL

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## “Essays on Consumer Information in Online Markets”

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My dissertation concerns how information flow between consumer and firms affect competition and welfare. Specifically, I study 1) the welfare implications of consent-based privacy protection; 2) selling a new experience good to a crowd; and 3) the provision of pre-search information by an online platform.

In the first chapter, I study the question whether everyone benefit from having full control over their privacy, in the setting of an online marketplace where consumers have to search costly to make a purchase. The platform acts as an information intermediary, which personalizes consumers' search environment at the consent of consumers. I identify a trade-off of consumers behind the decision of whether to enable cookies: enabling cookies helps them find a better match, while sellers may infer something from their privacy choice which opens the door for price discrimination. I show that if the platform makes privacy choice on behalf of consumers, no privacy for all consumers maximizes match efficiency and market demand, thereby improving social welfare. However, when leaving the choice to consumers, a separating equilibrium may arise in which consumers with low search costs remain anonymous to separate themselves from high search cost consumers. Compared to the consumer-optimal outcome, almost all consumers are worse off under such an equilibrium, suggesting that the prevalent consent-based approach to privacy regulation may lead to unintended welfare loss.

In the second chapter, coauthored with Ali Shourideh, we study optimal selling mechanism of a new experience good to a group of buyers. The monopolist seller sets price and chooses how much information about the product to disclose to each buyer, where the information must be elicited from each individual buyer. We show that in a restrictive environment where buyers cannot trade among themselves, the revenue maximizing mechanism is to release full information to all buyers. However, the same equilibrium outcome is not implementable if buyers have resale opportunities. A sophisticated seller that considers resale possibilities should not commit to release full information to the buyers.

In the third chapter, I study the provision of pre-search information by an online platform to a representative consumer, whose search behavior is affected by the information provided by the platform. Search is costly but allows consumers to perfectly learn the value of the products. To maximize consumer surplus, the platform's design of pre-search information needs to balance the following trade-off: providing pre-search information helps reduce wasteful search by optimizing the consumer's search path, but too much pre-search information may eliminate the consumer's search motive, thereby granting sellers more market power. I aim to characterize the optimal information provision policy that maximizes expected consumer surplus, and see how equilibrium outcome changes with respect to the consumer's search cost.