

# DISSERTATION DEFENSE

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## **Essays on Technology-Enabled Platforms**

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This dissertation consists of four studies that examine dynamics on Business-to-Business (B2B) exchanges and crowd-based design contest platforms. In the first study, we examine trust formation and development in global buyer-supplier relationships. Trust affects all business relationships, especially global B2B transactions due to the distances between buyers and suppliers. We use information signaling theory to examine how information indices and signals affect buyers' trust in suppliers in global B2B commerce. Specifically, we look at how buyers' trust is affected by (1) their perceptions of the national integrity and legal structure of suppliers' country, and (2) third-party verifications of suppliers on B2B exchanges. Because buyer-supplier relationships usually evolve over time, we study how the effects of indices and signals change as the number of transactions between the partners increases. A survey of global organizational buyers finds that perceptions of national integrity, legal structure, and supplier verifications are all positively related to buyers' trust. However, the number of prior transactions between buyers and suppliers moderates the impact of perceived legal structure on buyers' trust.

In the second study, we examine how selling and buying activity levels on B2B exchanges drive multi-homing buyers' preferences for exchanges. With the proliferation of B2B exchanges, many firms are multi-homing or using various competing platforms concurrently. Using a unique dataset of 118 buyers' participations in two B2B exchanges over seven months, we find that buyers' preferences are positively associated with selling

levels on the platforms. However, buyers' preferences are non-monotonically related to buying levels on the platform. At low levels, an increase in buying level has a positive effect on buyers' preferences. This effect may derive from the principle of social proof, where individual buyers observe and imitate other similar buyers' behaviors. As buying level increases, there is greater competition among buyers on the platform, causing buyers to participate more on the other exchange. We also find that the impacts of buying levels on buyers' preferences attenuate over time. Our results highlight the need to correctly model buyers' homing behavior, and show how market factors and social information conveyed by users on the platforms affects individual buyers' participation and the competition between B2B exchanges.

In the last two studies, we look at how advertisers can acquire impactful ad designs through crowd-based design contest platforms. Design contests allow advertisers to acquire a large number of designs that they can consider for use in advertising campaigns. However, the large number of entries brings along a challenge in measuring design distinctiveness: The number of pairwise comparisons that is needed to determine distinctiveness increases at a quadratic rate with the number of designs and may be non-trivial. To tackle this problem, we develop a novel model-based approach to efficiently measure design distinctive in design contests. We also find that ads with more distinctive design achieve more click-through than those with less distinctive designs.

Given that design distinctiveness matters in online advertising campaign, we investigate how advertisers can influence designers to produce more distinctive work in design contests. Advertisers-clients often provide examples of ad designs that they like in design projects. Using a randomized design contest experiment that involved experienced graphic designers, we look at how clients-provided examples influence creative processes and design outcomes in design contests. Specifically, we examine how the number, quality, and design variability of these examples affect designers' exploration for design concepts and their design submissions in the contests. We also look at how the characteristics of designers' exploration and work relate to design distinctiveness.