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The information value of online social networks: Lessons from peer-to-peer lending[☆]

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ABSTRACT

We examine whether social networks facilitate online markets using data from a leading peer-to-peer lending website. We find that borrowers with social ties are consistently more likely to have their loans funded and receive lower interest rates; however, most borrowers with social ties are more likely to pay late or default. We provide evidence that these findings are driven by lenders not fully understanding the relationship between social ties and unobserved borrower quality. Overall, our findings suggest caution for using online social networks as a signal of quality in anonymous transactions.

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1. Introduction

Many online markets provide an infrastructure for anonymous individuals to conduct transactions with each other. To overcome the information asymmetries exaggerated by the anonymity, these markets often allow users to demonstrate social ties with other users on the same or related platforms. However, it is not well understood how effective anonymous social ties can be in helping to solve the information problems. Using transaction level data from Prosper.com – the first and by far the largest peer-to-peer consumer lending platform in the US[1] – this paper examines whether or not informal online social networks can facilitate e-commerce when there are significant information asymmetries.

On Prosper.com individual borrowers and lenders are matched anonymously via real-time auctions. Although part of a borrower's credit history is disclosed to all lenders, online anonymity could exacerbate the classical information problems of consumer lending (Stiglitz and Weiss, 1981). In an attempt to overcome some of these information problems, Prosper instituted social networking features. Prosper members can identify each other as friends and can join member created groups. Groups are intended to screen group-member borrowers before they post a listing and provide social pressure for their members to repay their loans. Friends and group leaders can also endorse a borrower by posting a message on the listing page, and bids from friends and group members are highlighted for other potential lenders to see. However, unlike typical microfinance arrangements (Armendariz and Morduch, 2010), endorsement or group membership does *not* entail any co-signing responsibility or require any social interactions after funding. Lenders also cannot verify whether stated social ties exist outside of the platform.

Given borrower self-selection into non-verifiable social networks without explicit financial responsibility, borrower social networking attributes may convey positive or negative information about the borrower's true repayment probability or may simply reflect cheap talk with no additional information beyond other observable characteristics. We use loan application and repayment data from Prosper.com to understand what information these social networks convey about a borrower and how lenders tend to interpret these social networking attributes. We find that lenders are more likely to fund social network affiliated loans and give them lower interest rates. However, not all social ties imply a higher financial return to lenders. In particular, only endorsements from friends who also contribute money to the loan themselves produce consistently better *ex post* repayment.

We explore a variety of potential explanations for this contrast between lender behavior and borrower repayment, all of which suggest that lenders misinterpret the information value of most social networking attributes. First, we find that different types of Prosper groups that seem more likely to provide better screening and monitoring do correlate with improved borrower quality, but lenders do not differentiate between many of these

[1] Zopa.com (of the UK) was the first peer-to-peer lending website world wide.