## Discussion of

Observing Unobservables: Identifying Informational Asymmetries with a Consumer Credit Field Experiment by Karlan and Zinman

A Reexamination of the Role of "Relationships" in the Loan Granting Process by Chakravarty and Yilmazer

Over the past few decades economists have identified, at least *in theory*, some informational asymmetries that may exist in the market for loans. One kind of informational asymmetry, sometimes referred to as adverse selection, implies that the quality of the investment project that underlies the loan is unknown or unobservable to the lender. Another kind of informational asymmetry, sometimes called moral hazard, refers to the situation where the lender does not know or cannot see how hard the borrower is willing to work in order to pay off his loan. Are these kinds of informational asymmetries something that should concern a banker? The short answer to this question is yes, if these informational asymmetries exist *in reality*.

To see how informational asymmetries can create real problems for a banker, suppose that the banker can't observe the quality of the investment projects that underlie the loans he makes. What interest rate should the banker charge for loans? It might seem reasonable for the banker to charge an interest rate that reflects the average quality of the projects he holds in his loan portfolio. But if the banker charges this rate, then potential borrowers with high-quality/low-risk projects will not borrow, since the interest rate, which reflects average risk, will be too high for them. A bank that charges the average interest rate will, on average, lose money on loans because it fails to attract low-risk borrowers. This example underscores the fact that bankers should be concerned with informational asymmetries in the market for loans—if informational asymmetries do exist and are quantitatively important.

A couple of natural questions arise: 1. Do informational asymmetries exist in the loans market? 2. If they do exist, how should bankers deal with them? Let's address each question in turn.

Do informational asymmetries exist? This is basically the question the paper by Karlan and Zinman addresses. In fact, the paper does much more than answer this question. More specifically, if informational asymmetries do exist, the paper asks if the informational asymmetry is of the adverse selection variety or of the moral hazard variety. This is an important distinction because a bank would deal with a lender that has an informational advantage that is best described by, say, moral hazard in quite a different manner than if the informational advantage was better described by adverse selection. Using a very clever market experiment designed to distinguish between the two different kinds of asymmetric information, Karlan and Zinman get some pretty surprising results. First, they do find evidence of asymmetric information in the market for loans.

Second, and this is the surprising result, they find that adverse-selection considerations are quantitatively important for female loans but unimportant for male loans, while moral hazard considerations are quantitatively important for male loans but unimportant for female loans. As I mentioned before, banks would deal differently with loans that are subject to, say, moral hazard as opposed to adverse selection. An implication of this observation is that, if banks are to deal effectively with informational asymmetries, males and females should be given different loan contracts. This, of course, might be somewhat problematic since, at least in the U.S., banks cannot discriminate between borrowers on the basis of sex.

How might, then, bankers deal with informational asymmetries, given that they seem to exist? This is an issue taken up by the Chakravarty and Yilmazer paper. Chakravarty and Yilmazer ask if a relationship between a bank and its customers is an effective way to deal with informational asymmetries. The idea here is that, via a longterm relationship between a bank and its customer, the bank will learn about the financial habits and behavior of its customer over time, and, as a result, informational asymmetries may tend to evaporate. One might think, then, that as bankers learn how risky or safe their customers (and potential borrowers) might be, banks would charge higher interest rates to their risky clients and lower rates to their safer clients. One can think of this as being a form of price discrimination that is based on fundamental differences between clients. What, in fact, they do find is that "discrimination" between clients occurs at the loan application and loan approval stages. That is, risky types of customers are weeded out at the application and loan stages, and customers who survive these stages get a loan and they all pay the same rate. This is a surprising result because it is not necessarily the case that risky borrows are unprofitable to the bank. The bank, however, for some reason seems to prefer to deny these risky people loans, as opposed to giving them loans but at a higher interest rate.

The big question that comes to my mind after reading both of these papers is: why do bankers appear to be throwing away valuable information (and profits!) by not exploiting what they have learned about their customers? In the case of the Karlan and Zinman paper, why don't banks use the fact that men and women pose different informational problems in the market for loans? In the case of the Chakravarty and Yilmazer paper, why do bankers, who are in a relationship, prefer to deny a loan to a risky customer rather than to approve the loan but charge the appropriate risk-adjusted interest rate? An easy answer to these questions is that it may be illegal for banks to "discriminate" against customers in this manner. The easy answer, however, may not be the correct one.

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