The Endowment Effect and Collateralized Loans

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Extended Abstract

Expanding access to credit is a central challenge in development. Despite decades of attempts to increase the supply of credit, take-up of credit for the purpose of making productive investments remains low. We test a novel theoretical reason why take-up of credit may by low: if borrowers suffer from the endowment effect due to loss aversion (Kahneman et al., 1990), then take-up of loans collateralized with the borrowers' existing assets may be particularly unattractive. Potential borrowers who are subject to an endowment effect will dislike placing existing assets at risk by promising them as collateral. In contrast, loans collateralized with the new asset to be purchased with the loan itself – a New-Asset Collateralized Loan (NACL) – may be an attractive form of financing. Borrowers may not dislike placing at risk future assets, which may not yet have entered the reference point.

We test this theory using a randomized experiment in Kenya, eliciting willingness to pay for items using two types of loans: a new asset-collateralized loan collateralized using the item being purchased, and a standard asset-collateralized loan (SACL) collateralized using an existing asset.

We begin by eliciting participants' valuations of various household and agricultural items using the Becker–DeGroot–Marschak method (BDM). Then, we identify the three items each individual values most similarly and randomly endow them with one of these items. After a week —so the first item enters their reference point—we elicit participants' willingness to pay for the remaining two items using loans. One of the items is randomly assigned to be financed using a SACL, with the initially endowed item used as collateral, while the other item is financed using a NACL, with the item being purchased as collateral. Random assignment of the endowed item and new items ensures that, on average, the collateral and item being purchased have the same value for both loans. Thus, any aggregate difference in willingness to pay between the NACL and the SACL can be attributed to an endowment effect over the collateral.

Preliminary results suggest that borrowers are willing to pay substantially more for NACLs than for SACLs. This is consistent with the hypothesis that people prefer loans that do not put existing assets at risk due to the endowment effect.

The extent to which borrowers understand, at the time of loan take-up, that their reference point may update to include the new asset has important welfare implications. If consumers correctly anticipate that they will become "attached" to their new asset, resulting in an endowment effect, their use of NACLs is unproblematic. If borrowers instead underestimate their future aversion to losing the asset – say due to projection bias over their reference point -- their take-up of a NACL might be a mistake and welfare-diminishing.

We shed light on the welfare consequences of NACLs by measuring the degree of projection bias over reference points. We do so by eliciting incentivized predictions of future willingness to take up NACLs and SACLs, during a baseline survey before the participant is actually endowed with the first item. The idea is that an individual who mistakenly projects his present reference point into the future will over-estimate his willingness to place a particular item at risk as collateral, and will thus over-estimate his future take-up of a SACL using that item as collateral. We find that borrowers do partially under-estimate their future endowment effect, although we detect substantial heterogeneity in the level of projection bias.

Finally, we structurally estimate a model of loan take-up with loss aversion and projection bias, obtaining individual estimates of loss-aversion and projection bias. This allows us to shed light on the overall welfare impacts of NACLs versus SACL.