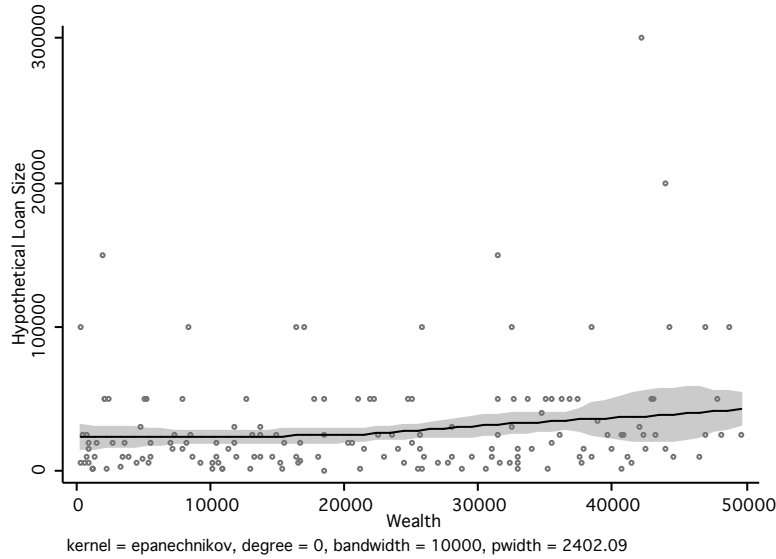


Online Appendix

‘Incentives and the de Soto Effect’

Timothy J. Besley
Konrad B. Burchardi
Maitreesh Ghatak

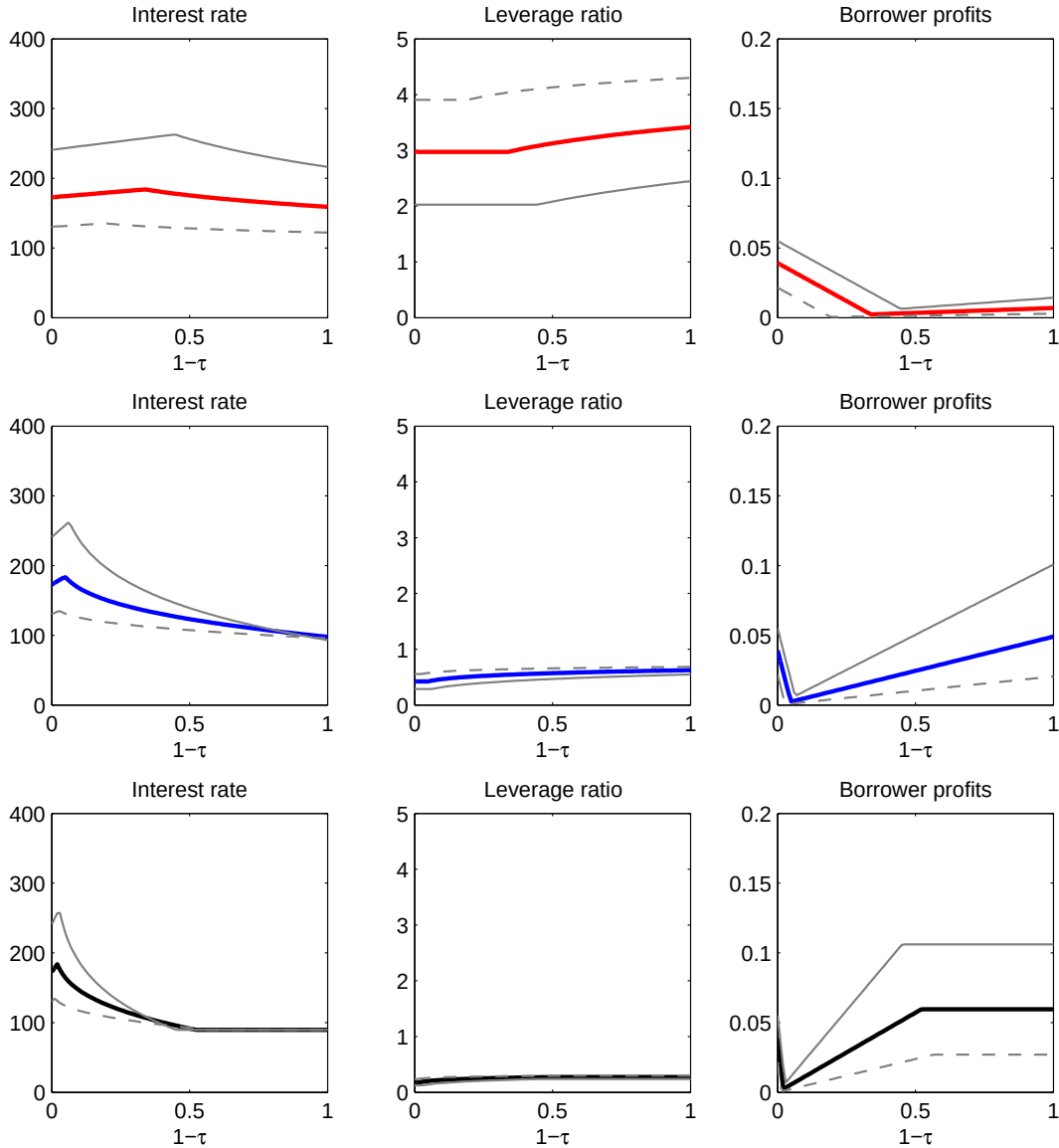
The Online Appendix provides supplementary figures. Supplementary Figure I is a scatterplot of the hypothetical interest rate which individuals state they would need to pay to a moneylender and the individual’s wealth, as measured by the value of the business assets. This figure is discussed in footnote 27 in Section 5.5.1 of the paper.



SUPPLEMENTARY FIGURE I: HYPOTHETICAL LOAN SIZES AND WEALTH (SRI LANKA)

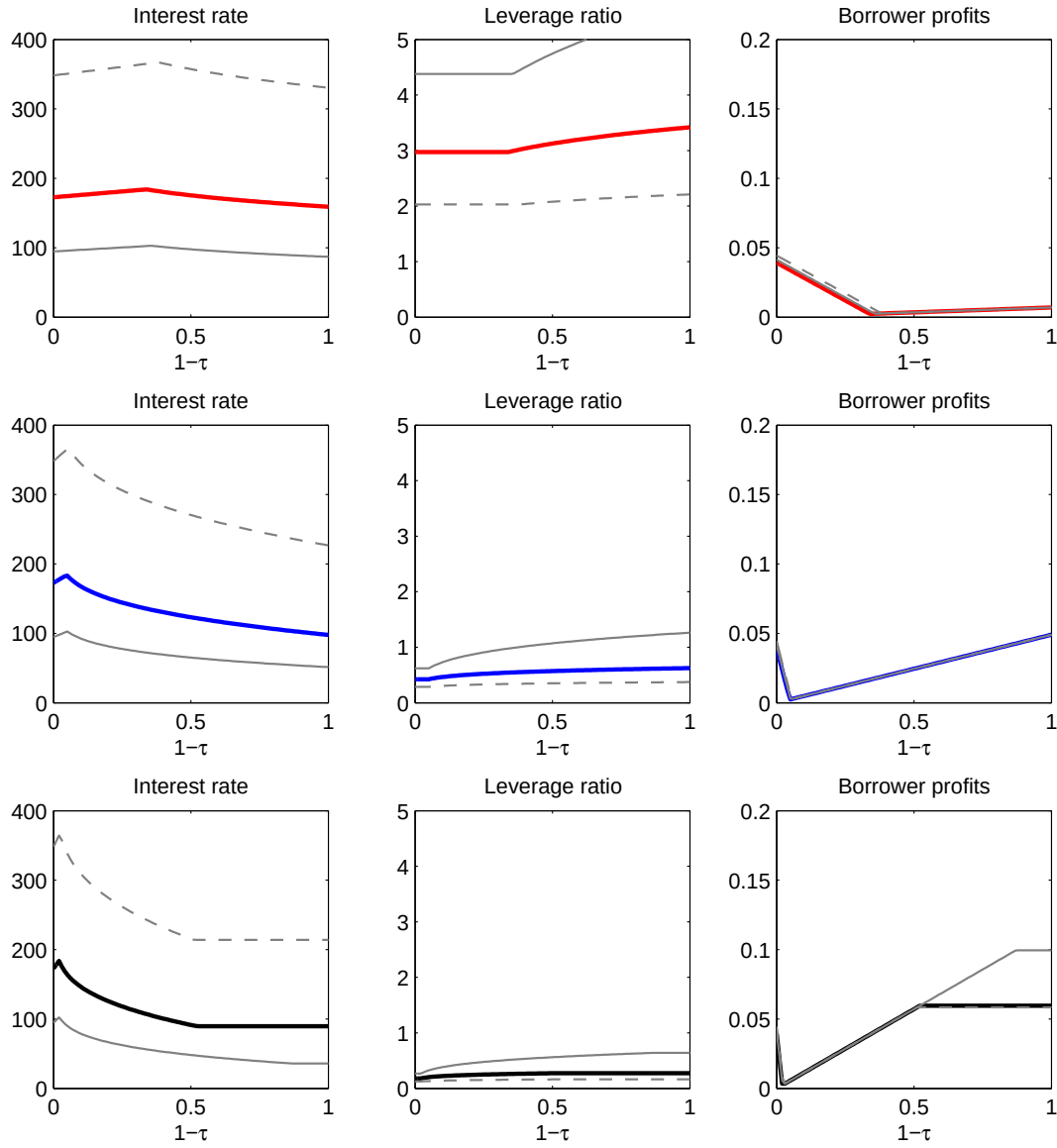
Notes: The figure is a scatterplot of the hypothetical loan size an individual would receive from a moneylender and the wealth of the individual. Both are measured in Sri Lankan rupees. The data is taken from the baseline survey of small scale entrepreneurs undertaken for the MMW study. The hypothetical loan size is the answer to the question ‘Suppose you wanted to borrow money from a moneylender. What is the maximum amount you would be allowed to borrow?’. The wealth is measured as the sum of the total replacement costs of all business assets and the market value of the inventories. For visual clarity it presents data only for individuals with wealth below 50,000 LKR, i.e. roughly one year of labour endowment. We focus on the lower wealth range since the model predicts a relation for wealth below 9,518 LKR, and this range would otherwise be difficult to see. The figure also excludes individuals with a stated hypothetical annual interest rate greater than 1000%.

Supplementary Figures II to VI present the results for robustness checks on α , β , B , the time horizon, and the wage, respectively. These are discussed in Section 5.5.2 of the paper. The thick lines in the upper, middle and lower row of each figure replicate the low, middle and high wealth group results, respectively, from Figure II in the main paper. The thin lines depict how the results would change when using different parameter values. The solid line represents the results we would have obtained if we increased the respective parameter value, and the dashed line represents the results we would have obtained if we decreased the respective parameter value. In evaluating the sensitivity of our results we are particularly concerned with the implications of the slope of the lines relating to the interest rate, leverage ratio and borrowers' profits.



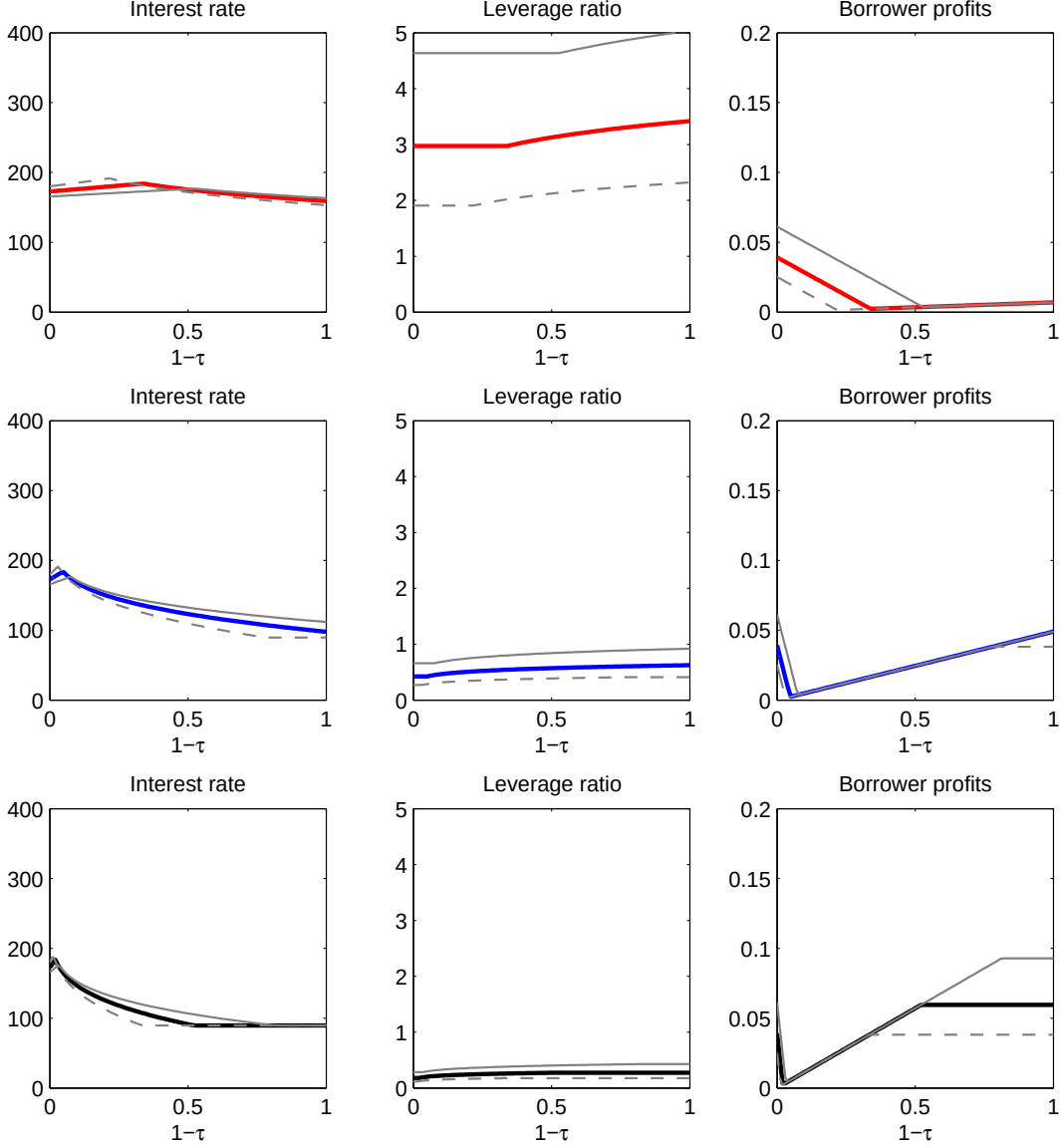
SUPPLEMENTARY FIGURE II: ROBUSTNESS, PERTURBING α

Notes: The thick lines in the upper, middle and lower row of the figure reproduce the low, middle and high wealth group results, respectively, from Figure II in the main paper. The thick lines hence present the model's predictions when parametrised (as explained in Section 5.2) with data from Sri Lanka and assuming that the outside option is autarky, i.e. $\bar{u} = 0$, corresponding to the case of a monopolistic lender. In these core results we use $\alpha = 0.076$. The dashed thin and solid thin lines depict how these results would change if we had used instead $\alpha = 0.026$ or $\alpha = 0.126$, respectively.



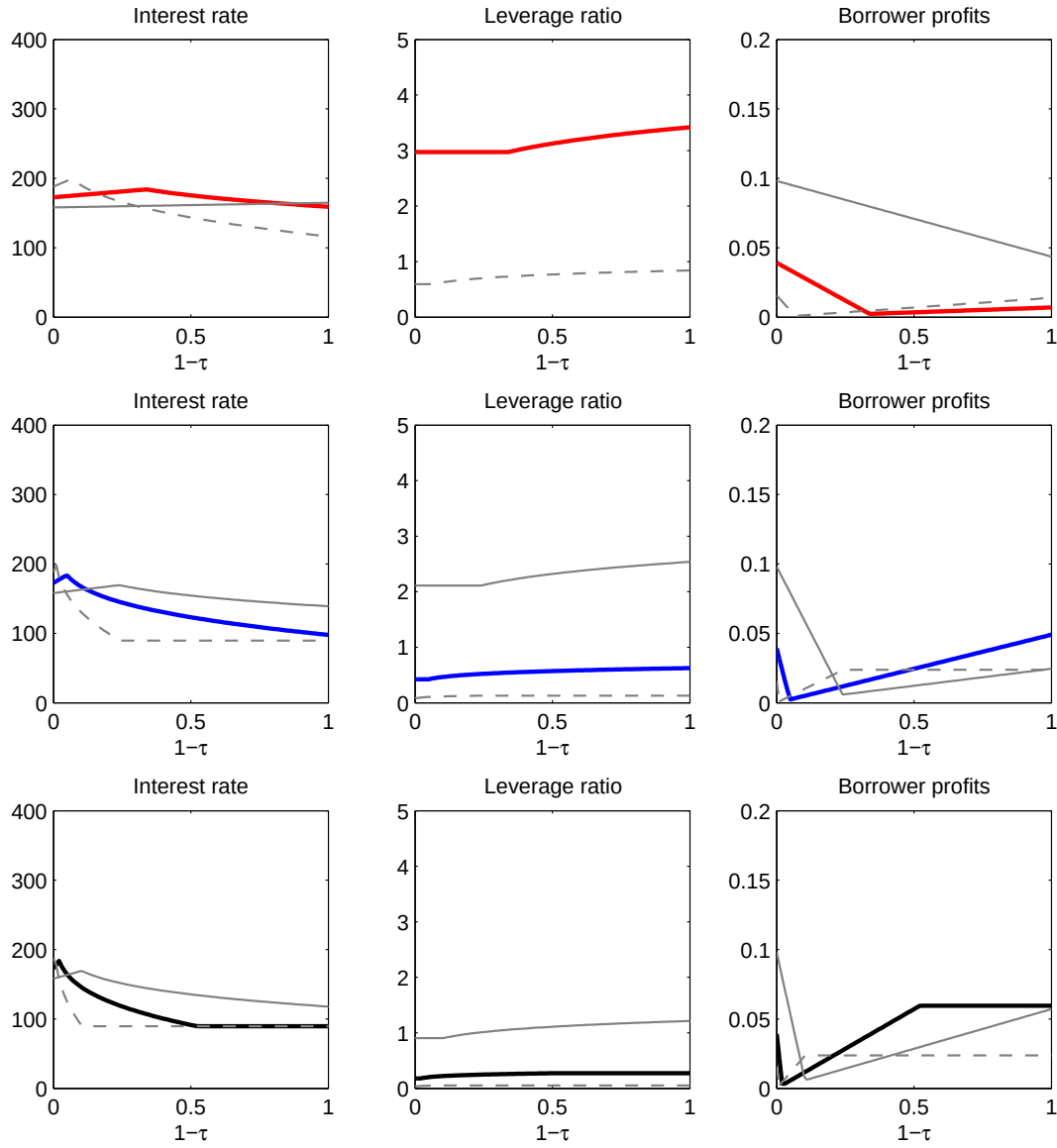
SUPPLEMENTARY FIGURE III: ROBUSTNESS, PERTURBING β

Notes: The thick lines in the upper, middle and lower row of the figure reproduce the low, middle and high wealth group results, respectively, from Figure II in the main paper. The thick lines hence present the model's predictions when parametrised (as explained in Section 5.2) with data from Sri Lanka and assuming that the outside option is autarky, i.e. $\bar{u} = 0$, corresponding to the case of a monopolistic lender. In these core results we use $\beta = 0.526$. The dashed thin and solid thin lines depict how these results would change if we had used instead $\beta = 0.318$ or $\beta = 0.734$, respectively. These correspond to how β would change if ϕ_2 took the value of the lower bound and the upper bound of the 95% confidence interval of its estimate instead.



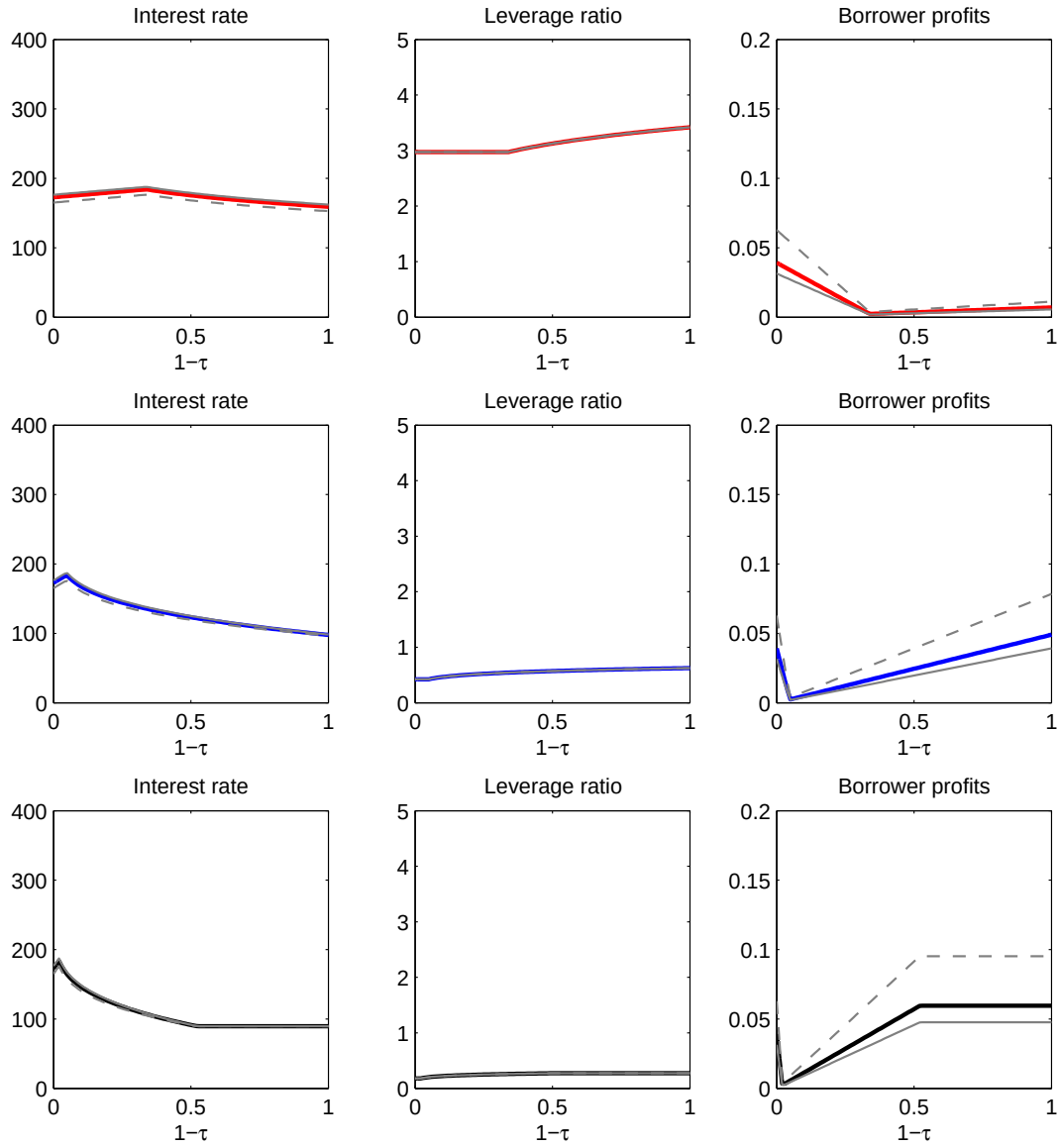
SUPPLEMENTARY FIGURE IV: ROBUSTNESS, PERTURBING B

Notes: The thick lines in the upper, middle and lower row of the figure reproduce the low, middle and high wealth group results, respectively, from Figure II in the main paper. The thick lines hence present the model's predictions when parametrised (as explained in Section 5.2) with data from Sri Lanka and assuming that the outside option is autarky, i.e. $\bar{u} = 0$, corresponding to the case of a monopolistic lender. In these core results we use $B = 1.754$. The dashed thin and solid thin lines depict how these results would change if we had used instead $B = 1.470$ or $B = 2.093$, respectively. These correspond to how B would change if ϕ_1 took the value of the lower bound and the upper bound of the 95% confidence interval of its estimate instead.



SUPPLEMENTARY FIGURE V: ROBUSTNESS, PERTURBING THE TIME HORIZON

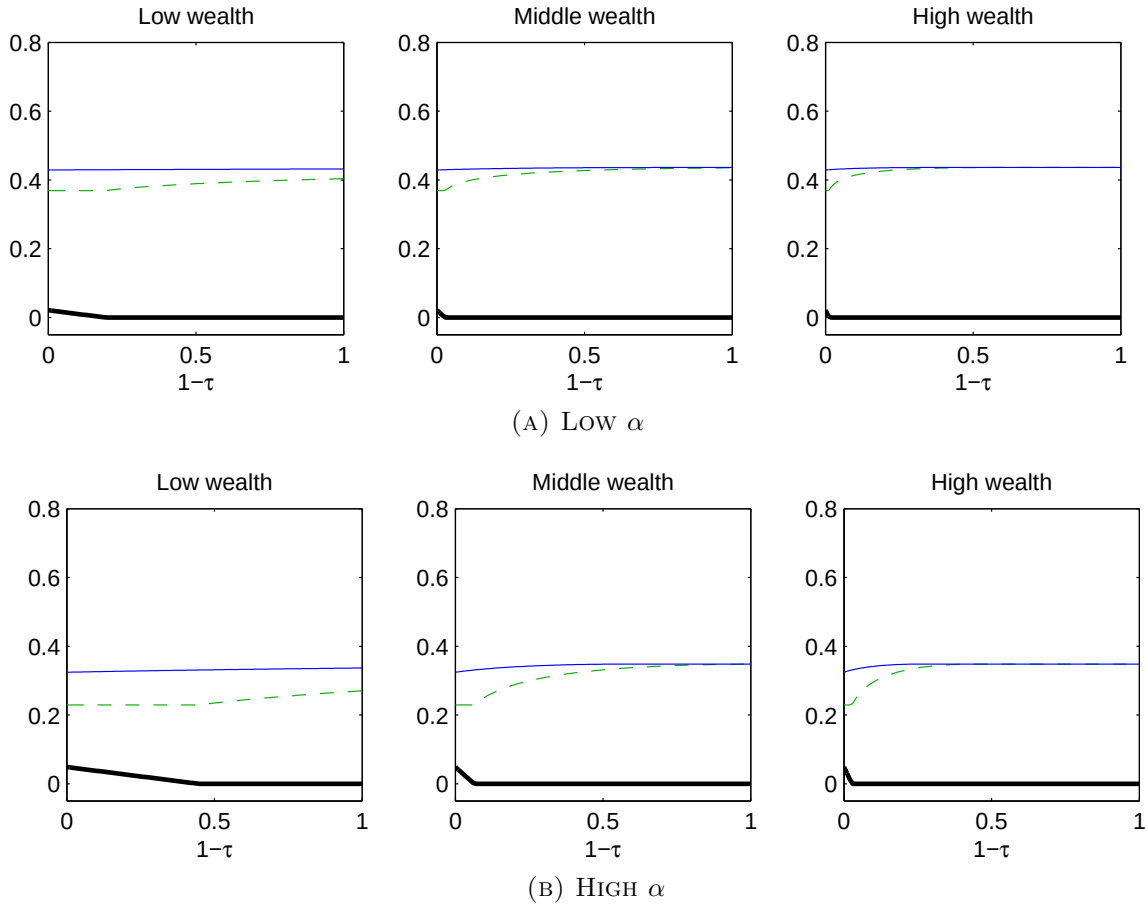
Notes: The thick lines in the upper, middle and lower row of the figure reproduce the low, middle and high wealth group results, respectively, from Figure II in the main paper. The thick lines hence present the model's predictions when parametrised (as explained in Section 5.2) with data from Sri Lanka and assuming that the outside option is autarky, i.e. $\bar{u} = 0$, corresponding to the case of a monopolistic lender. In these core results we use as time horizon 12 months. The dashed thin and solid thin lines depict how these results would change if we had used instead a time horizon of 6 months and 24 months, respectively.



SUPPLEMENTARY FIGURE VI: ROBUSTNESS, PERTURBING THE WAGE

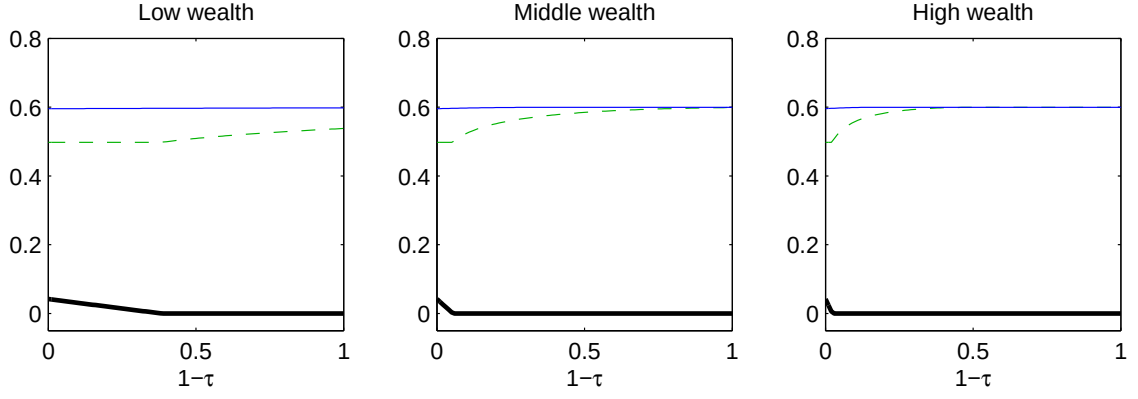
Notes: The thick lines in the upper, middle and lower row of the figure reproduce the low, middle and high wealth group results, respectively, from Figure II in the main paper. The thick lines hence present the model's predictions when parametrised (as explained in Section 5.2) with data from Sri Lanka and assuming that the outside option is autarky, i.e. $\bar{u} = 0$, corresponding to the case of a monopolistic lender. In these core results we use a wage of 8 LKR/hour to calibrate η . The dashed thin and solid thin lines depict how these results would change if we had used instead a wage rate of 5 or 10 LKR/hour, respectively.

Supplementary Figures VII to XI show how the results presented in Figure IV of the main paper would change if we perturbed α , β , B , the time horizon, and the wage as outlined in Section 5.5.2. Each of these figures consists of two Subfigures. Each Subfigure corresponds to Figure IV of the main paper. Hence each Subfigure presents the total surplus (dashed green line) and the utility of the borrower (thick black line) for the case where competition is absent, as well as the borrowers' utility in the perfectly competitive case (solid blue line) as a function of the extent to which capital can be collateralized as measured by $(1 - \tau)$ and for three wealth levels separately. The upper Subfigure (A) shows how the results of Figure IV would change if we perturbed the parameter of interest downwards, the lower Subfigure (B) shows how the results would change if we perturbed the parameter of interest upwards. In evaluating the sensitivity of our results we are particularly concerned with the implications of the slope of the lines relating to the borrower's utility and total surplus.

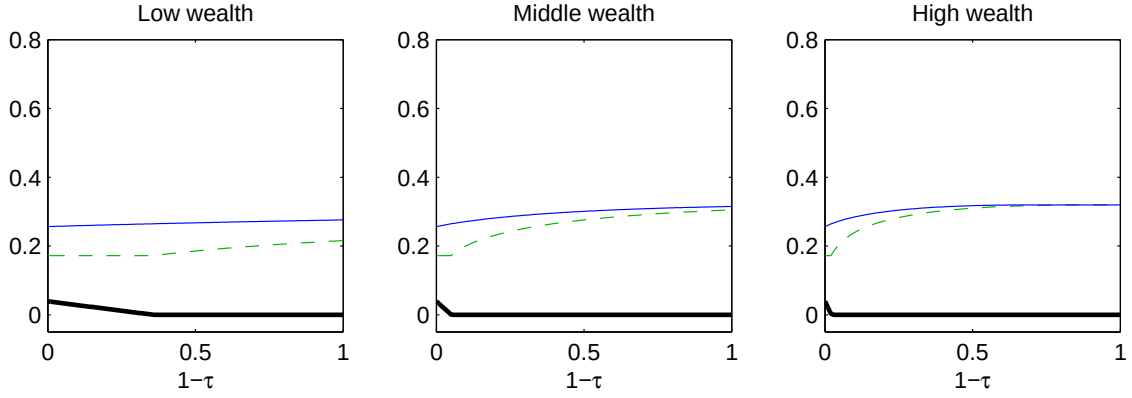


SUPPLEMENTARY FIGURE VII: ROBUSTNESS OF WELFARE RESULTS, PERTURBING α

Notes: Both Subfigures (A) and (B) correspond to Figure IV of the main paper. Each Subfigure presents the total surplus (dashed green line) and the utility of the borrower (thick black line) for the case where competition is absent, as well as the borrowers' utility in the perfectly competitive case (solid blue line) as a function of the extent to which capital can be collateralized as measured by $(1 - \tau)$. All these quantities are given as a fraction of the value of a year's labour endowment. Results are shown for three wealth levels separately, corresponding to the 5th (bold lines), 25th (solid lines) and 50th percentiles (dashed lines) of the wealth distribution in Sri Lanka. We parametrise the model as explained in Section 5.2) with data from Sri Lanka. However, in contrast to the core results (where we used $\alpha = 0.076$), we now use instead $\alpha = 0.026$ in Subfigure (A) and $\alpha = 0.126$ in Subfigure (B).



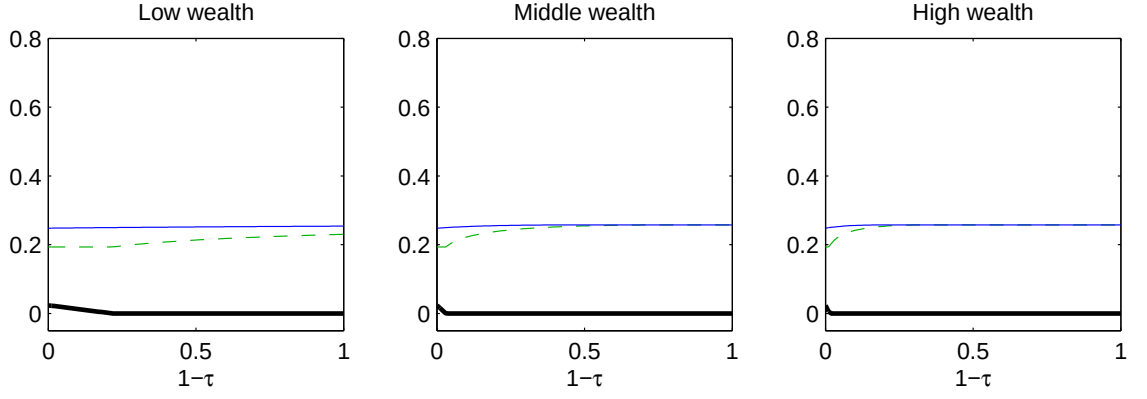
(A) Low β



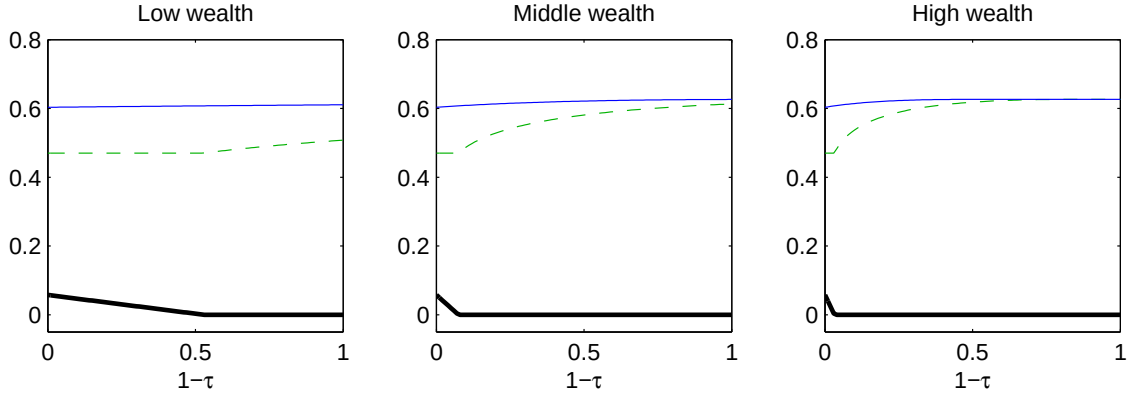
(B) High β

SUPPLEMENTARY FIGURE VIII: ROBUSTNESS OF WELFARE RESULTS, PERTURBING β

Notes: Both Subfigures (A) and (B) correspond to Figure IV of the main paper. Each Subfigure presents the total surplus (dashed green line) and the utility of the borrower (thick black line) for the case where competition is absent, as well as the borrowers' utility in the perfectly competitive case (solid blue line) as a function of the extent to which capital can be collateralized as measured by $(1 - \tau)$. All these quantities are given as a fraction of the value of a year's labour endowment. Results are shown for three wealth levels separately, corresponding to the 5th (bold lines), 25th (solid lines) and 50th percentiles (dashed lines) of the wealth distribution in Sri Lanka. We parametrise the model as explained in Section 5.2) with data from Sri Lanka. However, in contrast to the core results (where we used $\beta = 0.526$), we now use instead $\beta = 0.318$ in Subfigure (A) and $\beta = 0.734$ in Subfigure (B). These correspond to how β would change if ϕ_2 took the value of the lower bound and the upper bound of the 95% confidence interval of its estimate instead.



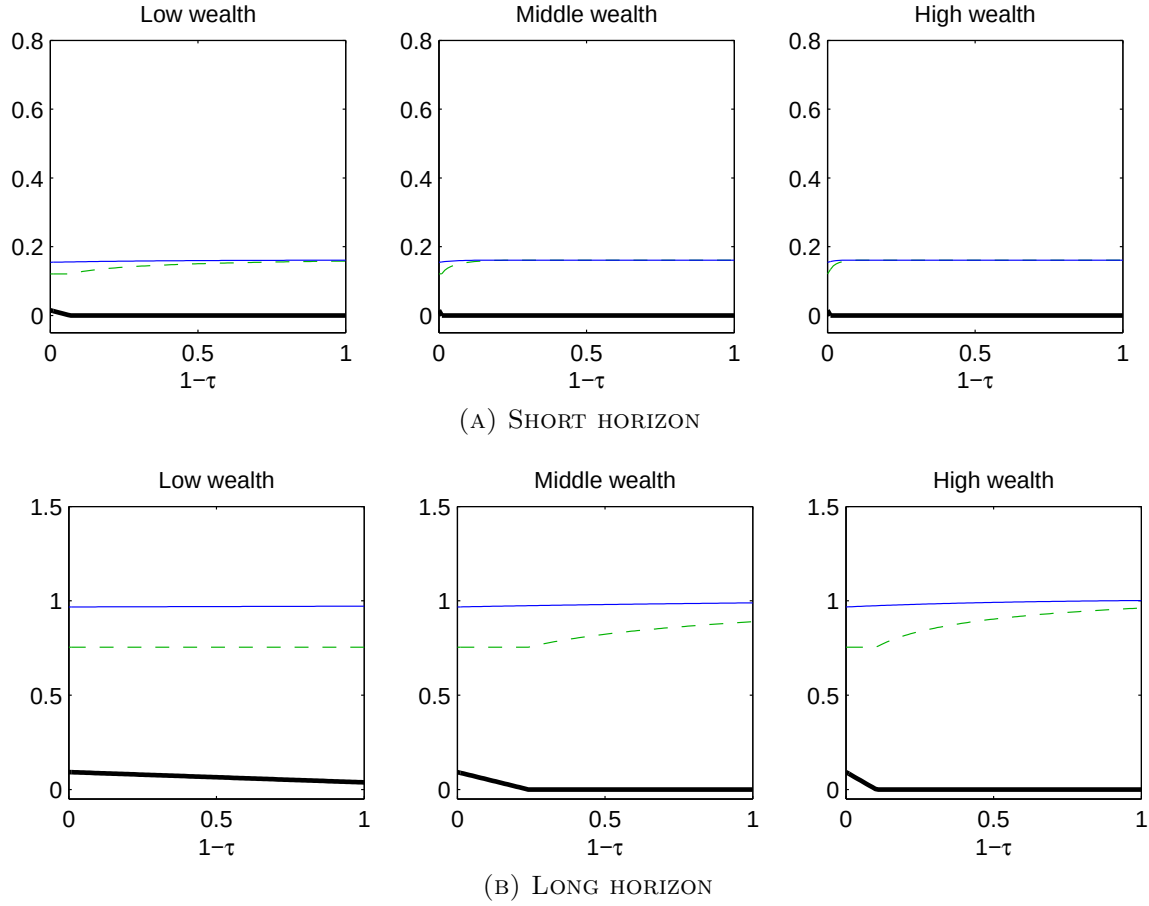
(A) LOW B



(B) HIGH B

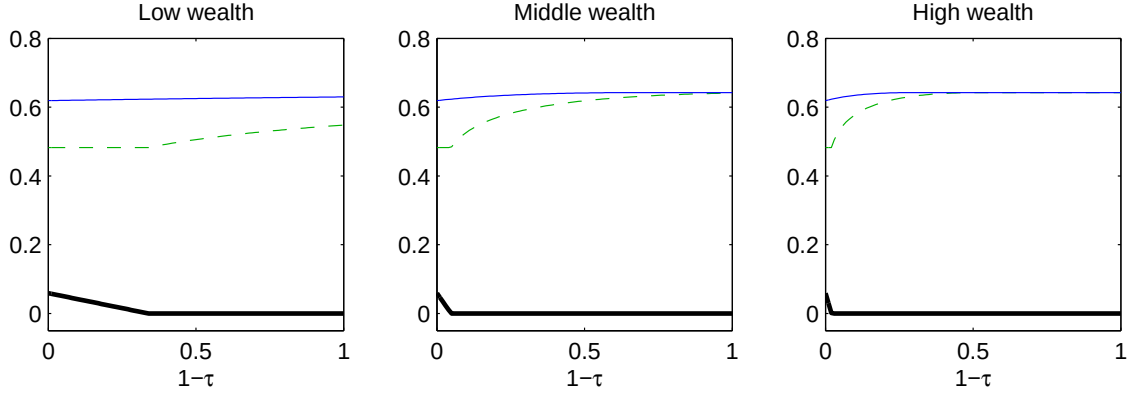
SUPPLEMENTARY FIGURE IX: ROBUSTNESS OF WELFARE RESULTS, PERTURBING B

Notes: Both Subfigures (A) and (B) correspond to Figure IV of the main paper. Each Subfigure presents the total surplus (dashed green line) and the utility of the borrower (thick black line) for the case where competition is absent, as well as the borrowers' utility in the perfectly competitive case (solid blue line) as a function of the extent to which capital can be collateralized as measured by $(1 - \tau)$. All these quantities are given as a fraction of the value of a year's labour endowment. Results are shown for three wealth levels separately, corresponding to the 5th (bold lines), 25th (solid lines) and 50th percentiles (dashed lines) of the wealth distribution in Sri Lanka. We parametrise the model as explained in Section 5.2) with data from Sri Lanka. However, in contrast to the core results (where we used $B = 1.754$), we now use instead $B = 1.470$ in Subfigure (A) and $B = 2.093$ in Subfigure (B). These correspond to how B would change if ϕ_1 took the value of the lower bound and the upper bound of the 95% confidence interval of its estimate instead.

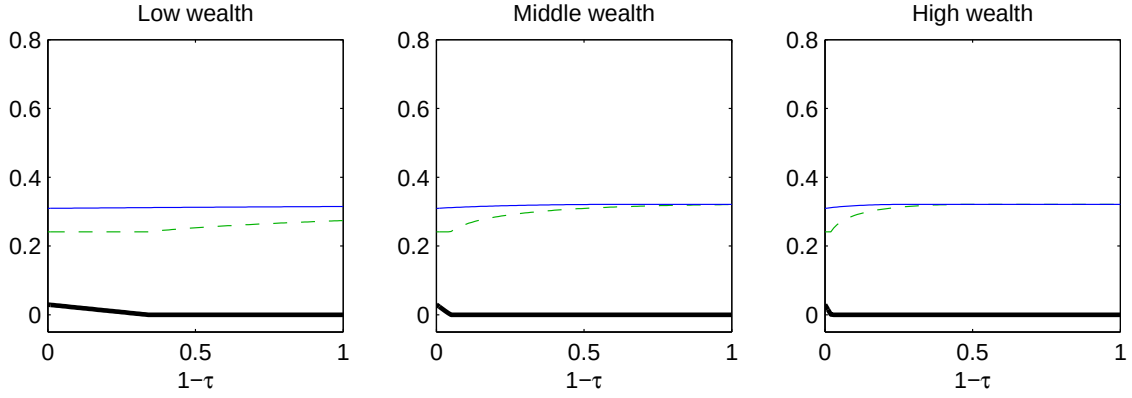


SUPPLEMENTARY FIGURE X: ROBUSTNESS OF WELFARE RESULTS, PERTURBING TIME HORIZON

Notes: Both Subfigures (A) and (B) correspond to Figure IV of the main paper. Each Subfigure presents the total surplus (dashed green line) and the utility of the borrower (thick black line) for the case where competition is absent, as well as the borrowers' utility in the perfectly competitive case (solid blue line) as a function of the extent to which capital can be collateralized as measured by $(1 - \tau)$. All these quantities are given as a fraction of the value of a year's labour endowment. Results are shown for three wealth levels separately, corresponding to the 5th (bold lines), 25th (solid lines) and 50th percentiles (dashed lines) of the wealth distribution in Sri Lanka. We parametrise the model as explained in Section 5.2) with data from Sri Lanka. However, in contrast to the core results (where we used a time horizon of 12 months), we now use instead a time horizon of 6 months in Subfigure (A) and of 24 months in Subfigure (B).



(A) LOW WAGE



(B) HIGH WAGE

SUPPLEMENTARY FIGURE XI: ROBUSTNESS OF WELFARE RESULTS, PERTURBING WAGE

Notes: Both Subfigures (A) and (B) correspond to Figure IV of the main paper. Each Subfigure presents the total surplus (dashed green line) and the utility of the borrower (thick black line) for the case where competition is absent, as well as the borrowers' utility in the perfectly competitive case (solid blue line) as a function of the extent to which capital can be collateralized as measured by $(1 - \tau)$. All these quantities are given as a fraction of the value of a year's labour endowment. Results are shown for three wealth levels separately, corresponding to the 5th (bold lines), 25th (solid lines) and 50th percentiles (dashed lines) of the wealth distribution in Sri Lanka. We parametrise the model as explained in Section 5.2) with data from Sri Lanka. However, in contrast to the core results (where we used a wage rate of 8 LKR/hour), we now use instead a wage rate of 5 LKR/hour in Subfigure (A) and 10 LKR/hour in Subfigure (B).