Effect of Land Certification on Credit in Rural Ethiopia

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Term Research Paper

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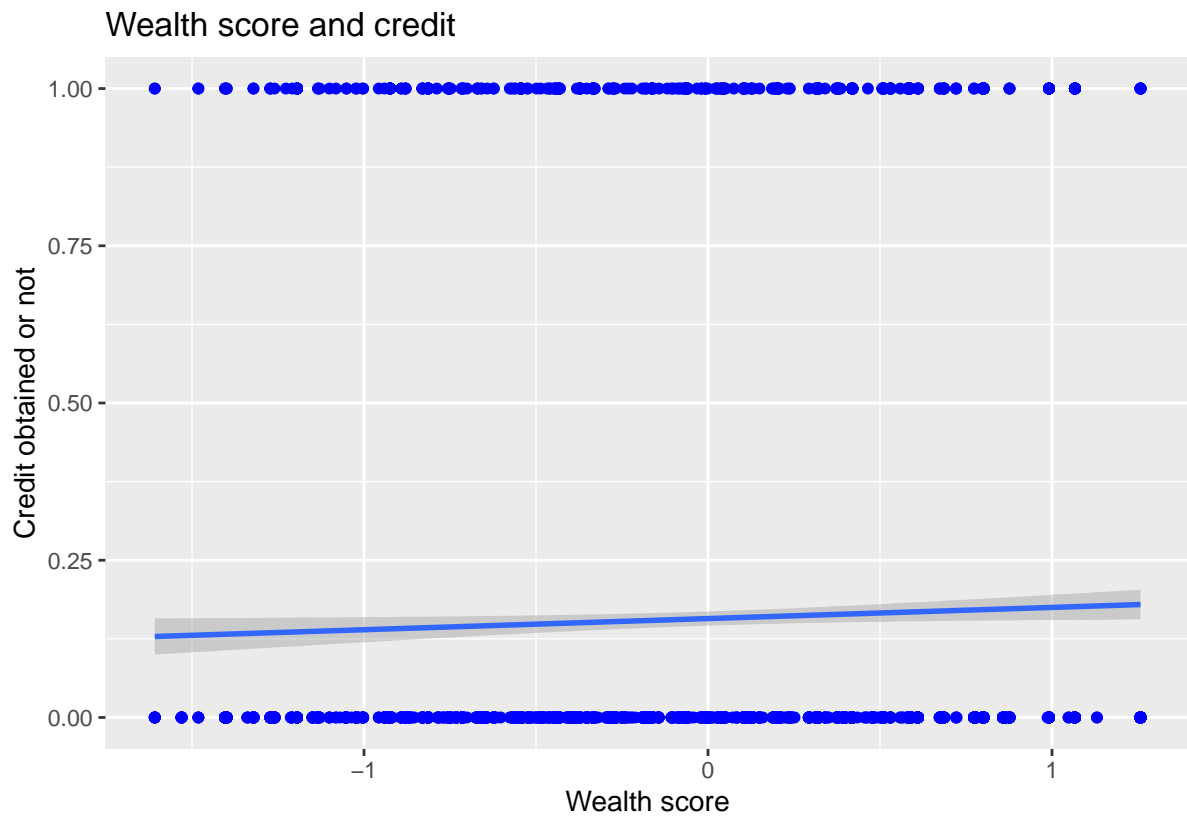
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8 Appendix - Figures and Tables

Figure 1: Relationship between wealth score and credit (obtained or not)

Table 1: Summary of data set - Regions, Districts, Villages and Households

| Killil (Region) | Count | | |
	Woreda (District)	Kebele (Village)	Household
SNNP	6	65	886
Amhara	9	67	892
Oromia	7	70	1091
Tigray	8	71	1126

Table 2: Summary of data set - Variables of interest

Variable	Count of hh	Percentage of hh	Mean
Land certification	3493	87.4	
Phase 1 Land certification	3197	80.0	
Phase 2 Land certification	856	21.4	
Female-headed hh	872	21.8	
Literate head of hh	1823	45.6	
Land dispute	393	9.8	
Experienced land redistribution	279	7.0	
Age of head of hh			52.34
Male adult members in hh			1.48
Female adult members in hh			1.42
Plots owned by the hh			3.39
Wealth			0.00

Table 3: Summary of credit-related variables

Variable	Count	Percentage
Total Households with credit (last 2 years)	628	
Sources of Credit		
Total Loans Obtained (last 2 years)	833	100.0
Micro-finance Institution	423	50.8
Individual	133	16.0
Savings and Credit Association	223	26.8
Other	54	6.5
Land certificate used to obtain credit		
First phase	86	10.3
Second phase	19	2.3
Both	26	3.1
None	702	84.3

Table 4: Does land registration affect credit?

	Dependent Variable: Obtained credit		
	Model 1	Model 2	Model 3
Land certification	0.048		
	(0.075)		
Phase 1 Land certification		0.193***	0.048
		(0.066)	(0.104)
Phase 2 Land certification		0.028	−0.182
		(0.061)	(0.130)
Age of head of hh	−0.013***	−0.013***	−0.015***
	(0.002)	(0.002)	(0.003)
Literate head of hh	0.149***	0.144**	0.154**
	(0.057)	(0.057)	(0.076)
Female-headed hh	−0.323***	−0.337***	−0.275***
	(0.075)	(0.076)	(0.098)
Male adult members in hh	0.084***	0.084***	0.130***
	(0.030)	(0.030)	(0.038)
Female adult members in hh	0.058*	0.055	0.111**
	(0.035)	(0.035)	(0.046)
Plots owned by the hh	0.073***	0.070***	0.022
	(0.011)	(0.011)	(0.017)
Land dispute	0.257***	0.262***	0.307***
	(0.077)	(0.077)	(0.103)
Wealth	0.274***	0.280***	0.236***
	(0.041)	(0.041)	(0.058)
Experienced land redistribution	0.038	0.032	−0.223
	(0.101)	(0.101)	(0.137)
AIC	3334.230	3327.970	2819.395
BIC	3403.429	3403.460	4605.980
Log Likelihood	−1656.115	−1651.985	−1125.697
Deviance	3312.230	3303.970	2251.395
Num. obs.	3987	3987	3987

Model 3 uses village (kebele) level fixed effects***$p < 0.01$; **$p < 0.05$; *$p < 0.1$

Table 5: Does land registration affect credit? - Marginal effects

	Dependent Variable: Obtained credit		
	(1)	(2)	(3)
Land certification	0.011		
	(0.017)		
Phase 1 Land certification		0.041***	0.000
		(0.013)	(0.016)
Phase 2 Land certification		0.007	−0.001
		(0.014)	(0.057)
Age of head of hh	−0.003***	−0.003***	−0.000
	(0.000)	(0.000)	(0.005)
Literate head of hh	0.034***	0.033**	0.001
	(0.013)	(0.013)	(0.056)
Female-headed hh	−0.067***	−0.069***	−0.001
	(0.014)	(0.014)	(0.081)
Male adult members in hh	0.019***	0.019***	0.001
	(0.007)	(0.007)	(0.046)
Female adult members in hh	0.013*	0.013	0.001
	(0.008)	(0.008)	(0.039)
Plots owned by the hh	0.017***	0.016***	0.000
	(0.003)	(0.003)	(0.008)
Land dispute	0.065***	0.067***	0.002
	(0.021)	(0.022)	(0.152)
Wealth	0.063***	0.064***	0.001
	(0.009)	(0.009)	(0.084)
Experienced land redistribution	0.009	0.007	−0.001
	(0.024)	(0.024)	(0.062)
AIC	3334.230	3327.970	2819.395
BIC	3403.429	3403.460	4605.980
Log Likelihood	−1656.115	−1651.985	−1125.697
Deviance	3312.230	3303.970	2251.395
Num. obs.	3987	3987	3987

Model 3 uses village (kebele) level fixed effects***$p < 0.01$; **$p < 0.05$; *$p < 0.1$