

Appendix A

Estimation results for the farm size–FUE relationship without control variables (1)

Variables	Rice		Maize		Wheat-maize		Rice-maize	
	OLS	2SLS	OLS	2SLS	OLS	2SLS	OLS	2SLS
Cropping area	0.284*** (0.022)	0.218*** (0.033)	0.266*** (0.014)	0.208*** (0.020)	0.288*** (0.025)	0.025 (0.045)	0.294*** (0.030)	0.234*** (0.047)
Constant	3.048*** (0.040)	2.960*** (0.052)	2.903*** (0.022)	2.863*** (0.025)	2.932*** (0.022)	2.782*** (0.031)	2.925*** (0.035)	2.884*** (0.044)
Observations	845	818	1135	1101	1057	1047	343	334
R ²	0.199	0.189	0.235	0.214	0.110	0.018	0.190	0.172

Robust standard errors appear in parentheses; asterisks *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Appendix B

Estimation results for the farm size–FUE relationship without control variables (2)

Variables	Rice		Maize		Wheat-maize		Rice-maize	
	OLS	2SLS	OLS	2SLS	OLS	2SLS	OLS	2SLS
Cropping area	0.277*** (0.036)	0.177*** (0.056)	0.242*** (0.017)	0.170*** (0.027)	0.320*** (0.026)	0.058 (0.124)	0.276*** (0.026)	0.222*** (0.037)
Cropping area square	-0.004 (0.013)	-0.023 (0.027)	-0.019** (0.009)	-0.035* (0.019)	0.037** (0.017)	0.029 (0.104)	-0.030 (0.023)	-0.029 (0.057)
Constant	3.049*** (0.039)	2.974*** (0.055)	2.926*** (0.025)	2.908*** (0.036)	2.920*** (0.023)	2.777*** (0.036)	2.952*** (0.046)	2.914*** (0.093)
Observations	845	818	1135	1101	1057	1047	343	334
R ²	0.199	0.188	0.238	0.214	0.113	0.026	0.194	0.176

Robust standard errors appear in parentheses; asterisks *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Appendix C

Estimation results for the farm size–FUE relationship with control variables (1)

Variables	Rice		Maize		Wheat-maize		Rice-maize	
	OLS	2SLS	OLS	2SLS	OLS	2SLS	OLS	2SLS
Cropping area	0.286*** (0.028)	0.128** (0.063)	0.234*** (0.023)	0.100** (0.041)	0.269*** (0.027)	0.042 (0.046)	0.374*** (0.047)	0.218* (0.123)
Soil quality	-0.030 (0.048)	-0.060 (0.051)	-0.088** (0.042)	-0.111*** (0.042)	-0.059 (0.039)	-0.059 (0.041)	-0.060 (0.074)	-0.052 (0.073)
Irrigation	0.057 (0.039)	0.056 (0.041)	0.057 (0.041)	0.068 (0.041)	0.088** (0.038)	0.062* (0.038)	-0.029 (0.064)	-0.005 (0.070)
Hired labor	-0.042 (0.065)	0.015 (0.069)	0.079 (0.053)	0.103* (0.053)	-0.048 (0.070)	-0.052 (0.073)	-0.055 (0.090)	-0.044 (0.087)
Farmland rental	-0.069 (0.052)	0.015 (0.058)	-0.087* (0.047)	-0.030 (0.050)	-0.120** (0.049)	-0.036 (0.053)	-0.223*** (0.074)	-0.191*** (0.073)
Num. of agri. labors	-0.016 (0.027)	-0.004 (0.029)	-0.052** (0.022)	-0.041* (0.022)	-0.000 (0.020)	0.015 (0.021)	-0.069* (0.037)	-0.053 (0.037)
Risk preference I	-0.086* (0.045)	-0.093** (0.045)	-0.032 (0.045)	-0.037 (0.046)	0.014 (0.044)	0.012 (0.046)	-0.052 (0.077)	-0.051 (0.071)
Risk preference II	-0.079 (0.051)	-0.084* (0.051)	-0.009 (0.043)	-0.014 (0.044)	-0.068* (0.041)	-0.065 (0.041)	0.092 (0.070)	0.108 (0.070)
Knowledge on interest	0.053 (0.053)	0.037 (0.053)	-0.014 (0.045)	-0.029 (0.046)	0.043 (0.044)	0.051 (0.045)	0.058 (0.088)	0.087 (0.088)
Knowledge on inflation	0.014 (0.056)	0.017 (0.055)	0.001 (0.047)	0.011 (0.047)	0.015 (0.053)	0.025 (0.054)	-0.0181 (0.079)	-0.032 (0.075)
Online banking	0.040 (0.085)	0.035 (0.086)	0.252*** (0.091)	0.250*** (0.090)	0.106 (0.070)	0.143* (0.077)	-0.091 (0.122)	-0.098 (0.116)
Business	-0.005	-0.010	-0.031	-0.037	0.042	0.019	0.124	0.127

	(0.059)	(0.061)	(0.072)	(0.072)	(0.055)	(0.056)	(0.096)	(0.095)
Agricultural enterprise			0.602*	0.631	0.716***	0.651***	0.204**	0.270***
			(0.365)	(0.423)	(0.174)	(0.197)	(0.079)	(0.091)
Agricultural cooperative	0.128	0.174	0.197	0.176	0.052	0.060	0.555***	0.493***
	(0.150)	(0.176)	(0.151)	(0.150)	(0.541)	(0.582)	(0.184)	(0.172)
Family farm	-0.249	-0.312	-0.104	-0.040	-0.197**	-0.176*		
	(0.325)	(0.307)	(0.433)	(0.363)	(0.090)	(0.091)		
Leading farm households	-0.183	-0.065	0.250	0.348*	-0.389***	-0.275	-0.144	-0.093
	(0.148)	(0.154)	(0.165)	(0.207)	(0.145)	(0.185)	(0.109)	(0.093)
Province	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	2.814***	3.085***	3.295***	3.141***	3.262***	3.081***	3.631***	3.488***
	(0.174)	(0.177)	(0.121)	(0.129)	(0.107)	(0.114)	(0.192)	(0.208)
Observations	845	812	1135	1099	1057	1046	343	334
R ²	0.277	0.243	0.282	0.256	0.207	0.148	0.288	0.262

Robust standard errors appear in parentheses; asterisks *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Appendix D

Estimation results for the farm size–FUE relationship with control variables (2)

Variables	Rice		Maize		Wheat-maize		Rice-maize	
	OLS	2SLS	OLS	2SLS	OLS	2SLS	OLS	2SLS
Cropping area	0.313***	0.130	0.229***	0.056	0.311***	0.215	0.349***	0.189*
	(0.038)	(0.089)	(0.027)	(0.050)	(0.029)	(0.151)	(0.045)	(0.101)
Cropping area square	0.013	0.001	-0.003	-0.032	0.047***	0.140	-0.026	-0.037
	(0.013)	(0.034)	(0.010)	(0.022)	(0.018)	(0.117)	(0.030)	(0.073)
Soil quality	-0.030	-0.060	-0.088**	-0.112***	-0.062	-0.066	-0.057	-0.048
	(0.048)	(0.051)	(0.042)	(0.042)	(0.039)	(0.041)	(0.073)	(0.071)
Irrigation	0.056	0.056	0.057	0.068	0.089**	0.069*	-0.026	-0.002
	(0.039)	(0.040)	(0.041)	(0.042)	(0.038)	(0.038)	(0.065)	(0.069)
Hired labor	-0.043	0.015	0.079	0.108**	-0.047	-0.047	-0.053	-0.042
	(0.065)	(0.069)	(0.053)	(0.053)	(0.069)	(0.071)	(0.089)	(0.086)
Farmland rental	-0.070	0.015	-0.085*	-0.013	-0.138***	-0.106	-0.223***	-0.191***
	(0.052)	(0.057)	(0.047)	(0.052)	(0.050)	(0.080)	(0.074)	(0.073)
Num. of agri. labors	-0.016	-0.004	-0.052**	-0.042*	-0.002	0.007	-0.065*	-0.048
	(0.027)	(0.030)	(0.022)	(0.023)	(0.020)	(0.021)	(0.037)	(0.037)
Risk preference I	-0.085*	-0.093**	-0.031	-0.033	0.010	0.001	-0.053	-0.053
	(0.045)	(0.046)	(0.045)	(0.046)	(0.044)	(0.047)	(0.077)	(0.072)
Risk preference II	-0.080	-0.084*	-0.009	-0.016	-0.065	-0.056	0.099	0.116
	(0.051)	(0.051)	(0.043)	(0.044)	(0.040)	(0.041)	(0.071)	(0.071)
Knowledge on interest	0.054	0.037	-0.013	-0.021	0.041	0.041	0.049	0.074
	(0.053)	(0.053)	(0.045)	(0.046)	(0.044)	(0.045)	(0.088)	(0.097)
Knowledge on inflation	0.013	0.017	0.001	0.006	0.018	0.031	-0.013	-0.024
	(0.056)	(0.055)	(0.047)	(0.047)	(0.053)	(0.053)	(0.081)	(0.079)
Online banking	0.035	0.035	0.252***	0.252***	0.091	0.090	-0.086	-0.090
	(0.085)	(0.087)	(0.091)	(0.089)	(0.070)	(0.081)	(0.124)	(0.122)
Business	-0.006	-0.010	-0.032	-0.049	0.036	0.005	0.121	0.124
	(0.059)	(0.060)	(0.072)	(0.072)	(0.055)	(0.057)	(0.096)	(0.094)
Agricultural enterprise			0.601*	0.614	0.702***	0.623***	0.177**	0.230*
			(0.361)	(0.375)	(0.185)	(0.234)	(0.087)	(0.136)
Agricultural cooperative	0.109	0.172	0.195	0.152	0.075	0.127	0.526***	0.454**
	(0.149)	(0.170)	(0.151)	(0.147)	(0.539)	(0.569)	(0.178)	(0.180)
Family farm	-0.250	-0.312	-0.098	0.020	-0.174*	-0.111		
	(0.328)	(0.308)	(0.428)	(0.301)	(0.090)	(0.109)		
Leading farm households	-0.211	-0.067	0.255	0.399*	-0.416***	-0.380**	-0.120	-0.061
	(0.154)	(0.169)	(0.166)	(0.217)	(0.136)	(0.163)	(0.094)	(0.104)
Province	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	2.791***	3.085***	3.296***	3.155***	3.261***	3.115***	3.628***	3.489***

	(0.177)	(0.177)	(0.121)	(0.130)	(0.107)	(0.119)	(0.192)	(0.207)
Observations	845	812	1135	1099	1057	1046	343	334
R^2	0.278	0.243	0.282	0.252	0.211	0.157	0.290	0.266

Robust standard errors appear in parentheses; asterisks *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Appendix E

Estimation results for the farm size–fertilizer use intensity relationship

Variables	Rice		Maize		Wheat-maize		Rice-maize	
	OLS	2SLS	OLS	2SLS	OLS	2SLS	OLS	2SLS
Cropping area	-0.287*** (0.023)	-0.159*** (0.048)	-0.246*** (0.017)	-0.105*** (0.031)	-0.216*** (0.025)	0.048 (0.041)	-0.453*** (0.043)	-0.211* (0.109)
Soil quality	0.039 (0.038)	0.055 (0.040)	-0.010 (0.033)	0.027 (0.034)	-0.019 (0.035)	-0.020 (0.038)	0.067 (0.066)	0.047 (0.066)
Irrigation	-0.022 (0.031)	-0.023 (0.032)	0.011 (0.033)	-0.001 (0.033)	0.035 (0.033)	0.057* (0.034)	0.106* (0.063)	0.060 (0.070)
Hired labor	-0.027 (0.049)	-0.068 (0.054)	-0.024 (0.042)	-0.039 (0.043)	0.113* (0.060)	0.122* (0.066)	0.054 (0.071)	0.022 (0.073)
Farmland rental	0.077** (0.039)	0.014 (0.044)	0.061* (0.035)	0.001 (0.039)	0.139*** (0.043)	0.043 (0.048)	0.250*** (0.061)	0.211*** (0.066)
Num. of agri. labors	0.013 (0.024)	0.005 (0.026)	0.041** (0.016)	0.038** (0.017)	-0.009 (0.018)	-0.027 (0.020)	0.049 (0.033)	0.026 (0.036)
Risk preference I	0.012 (0.041)	0.026 (0.043)	-0.031 (0.036)	-0.027 (0.037)	0.001 (0.039)	0.012 (0.041)	0.093 (0.079)	0.100 (0.075)
Risk preference II	0.034 (0.039)	0.037 (0.040)	0.043 (0.033)	0.056 (0.035)	0.062* (0.036)	0.061 (0.038)	-0.168*** (0.057)	-0.201*** (0.058)
Knowledge on interest	-0.040 (0.044)	-0.029 (0.044)	0.010 (0.032)	0.019 (0.033)	-0.006 (0.038)	-0.020 (0.039)	-0.041 (0.082)	-0.088 (0.084)
Knowledge on inflation	0.040 (0.041)	0.041 (0.042)	-0.054 (0.038)	-0.058 (0.039)	0.008 (0.049)	-0.006 (0.051)	0.023 (0.082)	0.046 (0.082)
Online banking	-0.067 (0.062)	-0.057 (0.065)	-0.171** (0.077)	-0.154* (0.083)	-0.068 (0.064)	-0.109 (0.076)	-0.099 (0.106)	-0.085 (0.101)
Business	-0.002 (0.044)	0.001 (0.047)	-0.014 (0.048)	-0.011 (0.051)	-0.007 (0.046)	0.022 (0.048)	-0.094 (0.086)	-0.095 (0.088)
Agricultural enterprise			-0.456 (0.595)	-0.504 (0.659)	-0.144 (0.239)	-0.070 (0.252)	0.391*** (0.117)	0.288** (0.134)
Agricultural cooperative	-0.126 (0.089)	-0.153 (0.114)	-0.106 (0.165)	-0.234* (0.132)	-0.385 (0.259)	-0.397 (0.310)	-0.398** (0.186)	-0.280 (0.174)
Family farm	-0.004 (0.184)	0.052 (0.174)	0.139 (0.138)	0.043 (0.075)	0.198** (0.079)	0.178** (0.083)		
Leading farm households	0.018 (0.157)	-0.079 (0.159)	-0.026 (0.173)	-0.146 (0.209)	0.251* (0.140)	0.111 (0.204)	0.314** (0.127)	0.205** (0.104)
Province	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	6.212*** (0.127)	5.885*** (0.140)	5.738*** (0.087)	5.903*** (0.097)	5.739*** (0.091)	5.902*** (0.101)	5.094*** (0.158)	5.404*** (0.209)
Observations	845	816	1135	1101	1057	1046	343	334
R^2	0.314	0.276	0.275	0.226	0.173	0.069	0.372	0.303

Robust standard errors appear in parentheses; asterisks *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Appendix F

Estimation results for the farm size–yield relationship

Variables	Rice		Maize		Wheat-maize		Rice-maize	
	OLS	2SLS	OLS	2SLS	OLS	2SLS	OLS	2SLS
Cropping area	-0.006 (0.017)	-0.031 (0.042)	-0.006 (0.015)	-0.002 (0.029)	0.058*** (0.015)	0.091*** (0.025)	-0.072** (0.031)	0.007 (0.067)

Soil quality	-0.004 (0.033)	-0.004 (0.033)	-0.094*** (0.028)	-0.085*** (0.028)	-0.080*** (0.022)	-0.079*** (0.022)	-0.001 (0.047)	-0.005 (0.046)
Irrigation	0.036 (0.027)	0.033 (0.027)	0.068** (0.028)	0.067** (0.028)	0.122*** (0.022)	0.119*** (0.022)	0.077* (0.041)	0.055 (0.043)
Hired labor	-0.066 (0.043)	-0.054 (0.045)	0.054 (0.041)	0.051 (0.041)	0.059 (0.046)	0.070 (0.046)	-0.002 (0.054)	-0.022 (0.053)
Farmland rental	0.017 (0.032)	0.028 (0.039)	-0.023 (0.032)	-0.027 (0.034)	0.022 (0.026)	0.007 (0.027)	0.022 (0.046)	0.021 (0.047)
Num. of agri. labors	-0.001 (0.015)	0.000 (0.015)	-0.002 (0.016)	-0.001 (0.017)	-0.010 (0.010)	-0.012 (0.009)	-0.017 (0.023)	-0.027 (0.025)
Risk preference I	-0.059* (0.033)	-0.062* (0.033)	-0.062** (0.030)	-0.067** (0.028)	0.025 (0.023)	0.023 (0.023)	0.040 (0.042)	0.049 (0.041)
Risk preference II	-0.037 (0.034)	-0.047 (0.034)	0.039 (0.031)	0.046 (0.031)	-0.003 (0.021)	-0.005 (0.021)	-0.089** (0.044)	-0.093** (0.043)
Knowledge on interest	0.015 (0.036)	0.010 (0.036)	-0.008 (0.032)	-0.009 (0.032)	0.030 (0.025)	0.031 (0.025)	0.024 (0.055)	-0.000 (0.053)
Knowledge on inflation	0.075** (0.036)	0.071* (0.036)	-0.039 (0.035)	-0.045 (0.035)	0.023 (0.029)	0.019 (0.028)	0.011 (0.056)	0.014 (0.056)
Online banking	-0.019 (0.061)	-0.022 (0.061)	0.106* (0.056)	0.098* (0.058)	0.045 (0.040)	0.034 (0.041)	-0.192*** (0.062)	-0.183*** (0.061)
Business	-0.012 (0.038)	-0.010 (0.038)	-0.052 (0.049)	-0.047 (0.050)	0.041 (0.031)	0.041 (0.030)	0.038 (0.061)	0.032 (0.058)
Agricultural enterprise			0.149 (0.254)	0.130 (0.252)	0.575*** (0.129)	0.582*** (0.125)	0.596*** (0.120)	0.559*** (0.128)
Agricultural cooperative	0.010 (0.133)	0.023 (0.129)	-0.145 (0.128)	-0.057 (0.121)	-0.336 (0.286)	-0.336 (0.275)	0.274 (0.170)	0.213 (0.159)
Family farm	-0.250 (0.152)	-0.262* (0.149)	0.003 (0.333)	-0.001 (0.331)	0.009 (0.051)	0.002 (0.051)		
Leading farm households	-0.158* (0.090)	-0.140 (0.093)	0.209*** (0.071)	0.199*** (0.072)	-0.148 (0.122)	-0.164 (0.124)	0.039 (0.145)	0.112 (0.131)
Province	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	6.191*** (0.106)	6.144*** (0.111)	6.200*** (0.0787)	6.205*** (0.0863)	6.119*** (0.051)	6.150*** (0.051)	6.106*** (0.099)	6.195*** (0.131)
Observations	845	816	1135	1101	1057	1046	343	334
R ²	0.101	0.097	0.182	0.177	0.142	0.134	0.282	0.269

Robust standard errors appear in parentheses; asterisks *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Appendix G

Estimation results for all crops

Variables	FUE		Fertilizer use intensity		Yield	
	OLS	2SLS	OLS	2SLS	OLS	2SLS
Cropping area	0.274*** (0.012)	0.116*** (0.025)	-0.279*** (0.010)	-0.110*** (0.021)	-0.005 (0.008)	0.005 (0.016)
Soil quality	-0.070*** (0.023)	-0.085*** (0.024)	0.011 (0.019)	0.033 (0.020)	-0.058*** (0.015)	-0.052*** (0.015)
Irrigation	0.075*** (0.021)	0.088*** (0.021)	0.009 (0.017)	-0.010 (0.018)	0.084*** (0.014)	0.078*** (0.014)
Hired labor	-0.012 (0.031)	0.006 (0.033)	0.018 (0.026)	-0.000 (0.028)	0.006 (0.023)	0.005 (0.023)
Farmland rental	-0.102*** (0.026)	-0.042 (0.028)	0.120*** (0.021)	0.054** (0.023)	0.018 (0.017)	0.012 (0.018)
Num. of agri. labors	-0.018 (0.012)	-0.006 (0.013)	0.013 (0.011)	-0.001 (0.012)	-0.005 (0.007)	-0.007 (0.007)
Risk preference I	-0.027 (0.024)	-0.039 (0.025)	0.004 (0.021)	0.015 (0.023)	-0.023 (0.016)	-0.024 (0.016)
Risk preference II	-0.029	-0.034	0.022	0.028	-0.006	-0.006

	(0.024)	(0.024)	(0.020)	(0.021)	(0.015)	(0.015)
Knowledge on interest	0.027 (0.026)	0.025 (0.026)	-0.013 (0.021)	-0.010 (0.022)	0.015 (0.017)	0.014 (0.017)
Knowledge on inflation	0.014 (0.028)	0.017 (0.028)	0.000 (0.023)	-0.008 (0.025)	0.015 (0.019)	0.009 (0.019)
Online banking	0.116*** (0.043)	0.113** (0.045)	-0.095*** (0.036)	-0.096** (0.039)	0.022 (0.028)	0.017 (0.029)
Business	0.022 (0.033)	0.018 (0.034)	-0.025 (0.026)	-0.021 (0.028)	-0.003 (0.021)	-0.003 (0.021)
Agricultural enterprise	0.582*** (0.146)	0.586*** (0.159)	-0.140 (0.215)	-0.152 (0.218)	0.442*** (0.115)	0.435*** (0.113)
Agricultural cooperative	0.144 (0.130)	0.203 (0.138)	-0.169** (0.080)	-0.208** (0.096)	-0.025 (0.098)	-0.005 (0.099)
Family farm	-0.150 (0.240)	-0.187 (0.226)	0.030 (0.125)	0.066 (0.115)	-0.119 (0.130)	-0.121 (0.130)
Leading farm households	-0.061 (0.099)	0.066 (0.108)	0.098 (0.079)	-0.017 (0.095)	0.037 (0.064)	0.050 (0.063)
Province	Yes	Yes	Yes	Yes	Yes	Yes
Constant	3.176*** (0.061)	3.037*** (0.067)	5.691*** (0.051)	5.847*** (0.058)	6.159*** (0.038)	6.176*** (0.040)
Observations	3380	3297	3380	3297	3380	3297
R ²	0.244	0.199	0.259	0.191	0.127	0.127

Robust standard errors appear in parentheses; asterisks *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Appendix H

Quantile regression results for rice

Variables	q10	q25	q50	q75	q90
Cropping area	0.254*** (0.039)	0.208*** (0.031)	0.258*** (0.029)	0.303*** (0.033)	0.278*** (0.045)
Soil quality	-0.011 (0.074)	-0.057 (0.059)	-0.096* (0.055)	-0.085 (0.062)	-0.162* (0.085)
Irrigation	0.201*** (0.061)	0.146*** (0.048)	0.074* (0.045)	-0.006 (0.051)	-0.106 (0.070)
Hired labor	-0.138 (0.096)	-0.019 (0.076)	-0.021 (0.071)	0.011 (0.080)	0.019 (0.110)
Farmland rental	0.003 (0.078)	0.011 (0.062)	-0.109* (0.058)	-0.103 (0.065)	-0.051 (0.090)
Num. of agri. labors	-0.025 (0.034)	-0.005 (0.027)	-0.014 (0.025)	-0.026 (0.028)	0.029 (0.039)
Risk preference I	-0.161** (0.076)	-0.087 (0.060)	-0.035 (0.056)	-0.021 (0.063)	0.085 (0.087)
Risk preference II	0.001 (0.076)	-0.086 (0.058)	-0.077 (0.054)	-0.068 (0.061)	-0.167** (0.084)
Knowledge on interest	0.157* (0.081)	0.075 (0.064)	0.060 (0.059)	0.034 (0.067)	0.079 (0.093)
Knowledge on inflation	0.085 (0.087)	0.121* (0.069)	0.031 (0.064)	0.018 (0.072)	0.074 (0.099)
Online banking	0.017 (0.128)	0.048 (0.101)	0.112 (0.094)	0.045 (0.106)	0.075 (0.146)
Business	-0.256*** (0.085)	-0.038 (0.067)	0.023 (0.062)	-0.017 (0.071)	0.090 (0.097)
Agricultural enterprise					
Agricultural cooperative	-0.044 (0.266)	0.072 (0.211)	0.357* (0.195)	0.230 (0.221)	-0.024 (0.305)
Family farm	-0.319	-0.373	-0.245	-0.213	0.282

	(0.387)	(0.307)	(0.284)	(0.321)	(0.443)
Leading farm	0.073	-0.131	-0.035	-0.261	-0.136
households	(0.337)	(0.266)	(0.247)	(0.279)	(0.385)
Province	Yes	Yes	Yes	Yes	Yes
Constant	2.411***	2.627***	3.168***	3.641***	3.830***
	(0.201)	(0.159)	(0.148)	(0.167)	(0.230)
Observations	845	845	845	845	845

Robust standard errors appear in parentheses; asterisks *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Appendix I

Quantile regression results for maize

Variables	q10	q25	q50	q75	q90
Cropping area	0.171*** (0.043)	0.209*** (0.032)	0.263*** (0.024)	0.266*** (0.026)	0.255*** (0.035)
Soil quality	-0.024 (0.083)	-0.081 (0.063)	-0.101** (0.047)	-0.060 (0.051)	-0.015 (0.068)
Irrigation	0.061 (0.082)	0.047 (0.062)	0.034 (0.046)	0.050 (0.050)	0.079 (0.067)
Hired labor	0.153 (0.112)	0.070 (0.084)	0.092 (0.063)	0.069 (0.068)	-0.016 (0.091)
Farmland rental	-0.130 (0.091)	-0.086 (0.069)	-0.149*** (0.052)	-0.064 (0.055)	-0.063 (0.074)
Num. of agri. labors	-0.010 (0.045)	-0.024 (0.034)	-0.043* (0.026)	-0.063** (0.028)	-0.015 (0.037)
Risk preference I	-0.078 (0.093)	-0.053 (0.070)	-0.048 (0.053)	0.001 (0.056)	0.078 (0.076)
Risk preference II	0.003 (0.087)	0.015 (0.066)	-0.011 (0.050)	0.009 (0.053)	-0.017 (0.071)
Knowledge on interest	-0.090 (0.090)	-0.081 (0.068)	-0.031 (0.051)	0.044 (0.055)	0.090 (0.073)
Knowledge on inflation	0.005 (0.097)	0.018 (0.073)	0.026 (0.055)	0.125** (0.059)	-0.049 (0.079)
Online banking	0.562*** (0.186)	0.338** (0.140)	0.273*** (0.105)	0.306*** (0.113)	0.107 (0.152)
Business	-0.033 (0.129)	0.006 (0.097)	-0.009 (0.073)	0.035 (0.078)	0.062 (0.105)
Agricultural enterprise	1.112 (0.841)	0.441 (0.635)	1.079** (0.477)	0.606 (0.511)	0.442 (0.686)
Agricultural cooperative	-0.023 (0.527)	-0.020 (0.398)	0.145 (0.299)	-0.053 (0.321)	0.001 (0.430)
Family farm	-0.309 (0.833)	-0.519 (0.628)	-0.804* (0.472)	0.112 (0.506)	-0.037 (0.679)
Leading farm	0.354 (0.418)	0.207 (0.315)	0.111 (0.237)	-0.067 (0.254)	0.665* (0.341)
households					
Province	Yes	Yes	Yes	Yes	Yes
Constant	2.424***	2.877***	3.281***	3.434***	3.570***
	(0.232)	(0.175)	(0.132)	(0.141)	(0.189)
Observations	1135	1135	1135	1135	1135

Robust standard errors appear in parentheses; asterisks *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Appendix J

Quantile regression results for wheat-maize

Variables	q10	q25	q50	q75	q90
Cropping area	0.252***	0.282***	0.292***	0.285***	0.217***

	(0.041)	(0.037)	(0.028)	(0.039)	(0.046)
Soil quality	-0.113*	-0.152**	-0.106**	0.015	0.069
	(0.066)	(0.059)	(0.045)	(0.063)	(0.073)
Irrigation	0.130**	0.047	0.073*	0.058	0.191***
	(0.060)	(0.053)	(0.041)	(0.057)	(0.067)
Hired labor	-0.153	-0.156	-0.058	0.036	0.000
	(0.109)	(0.097)	(0.074)	(0.103)	(0.120)
Farmland rental	-0.079	-0.162**	-0.115**	-0.157**	-0.149*
	(0.079)	(0.070)	(0.054)	(0.075)	(0.087)
Num. of agri. labors	-0.022	-0.020	-0.014	0.025	0.044
	(0.030)	(0.027)	(0.020)	(0.028)	(0.033)
Risk preference I	-0.001	-0.027	0.020	-0.018	-0.005
	(0.071)	(0.064)	(0.049)	(0.068)	(0.079)
Risk preference II	-0.143**	-0.033	-0.042	-0.039	-0.080
	(0.063)	(0.057)	(0.043)	(0.060)	(0.070)
Knowledge on	-0.015	0.010	0.034	0.050	0.162**
interest	(0.068)	(0.061)	(0.046)	(0.065)	(0.076)
Knowledge on	0.078	0.054	0.019	-0.030	-0.034
inflation	(0.081)	(0.072)	(0.055)	(0.077)	(0.090)
Online banking	0.250**	0.165	0.146*	0.131	0.005
	(0.118)	(0.106)	(0.081)	(0.112)	(0.131)
Business	-0.031	-0.011	0.091	0.049	-0.023
	(0.085)	(0.076)	(0.058)	(0.081)	(0.094)
Agricultural	0.956**	0.673*	0.981***	0.678*	0.469
enterprise	(0.389)	(0.347)	(0.264)	(0.369)	(0.432)
Agricultural	-0.725	-0.875*	0.508	0.540	0.160
cooperative	(0.504)	(0.450)	(0.342)	(0.478)	(0.559)
Family farm	0.585	0.240	-0.164	-0.662	-1.220
	(0.864)	(0.771)	(0.588)	(0.820)	(0.959)
Leading farm	-0.050	-0.267	-0.399	-0.711*	-0.373
households	(0.437)	(0.390)	(0.297)	(0.415)	(0.485)
Province	Yes	Yes	Yes	Yes	Yes
Constant	2.549***	2.974***	3.100***	3.370***	3.584***
	(0.162)	(0.145)	(0.110)	(0.154)	(0.180)
Observations	1057	1057	1057	1057	1057

Robust standard errors appear in parentheses; asterisks *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Appendix K

Quantile regression results for rice-maize

Variables	q10	q25	q50	q75	q90
Cropping area	0.401***	0.405***	0.349***	0.379***	0.360***
	(0.077)	(0.052)	(0.052)	(0.074)	(0.082)
Soil quality	-0.198	-0.090	-0.039	-0.084	0.112
	(0.127)	(0.087)	(0.086)	(0.123)	(0.136)
Irrigation	0.079	0.023	-0.023	-0.052	-0.031
	(0.110)	(0.075)	(0.074)	(0.107)	(0.118)
Hired labor	-0.246*	-0.165*	0.004	-0.034	0.074
	(0.138)	(0.094)	(0.093)	(0.134)	(0.148)
Farmland rental	-0.240**	-0.191**	-0.268***	-0.276**	-0.220*
	(0.114)	(0.078)	(0.077)	(0.111)	(0.122)
Num. of agri. labors	-0.071	-0.054	-0.073*	-0.068	-0.056
	(0.059)	(0.040)	(0.040)	(0.057)	(0.063)
Risk preference I	0.034	-0.018	-0.069	-0.101	0.045
	(0.122)	(0.083)	(0.082)	(0.118)	(0.131)
Risk preference II	0.133	0.028	0.012	0.057	0.013
	(0.117)	(0.080)	(0.079)	(0.114)	(0.126)

Knowledge on interest	-0.049 (0.135)	0.056 (0.092)	0.121 (0.091)	0.153 (0.131)	0.340** (0.145)
Knowledge on inflation	-0.034 (0.155)	0.058 (0.106)	-0.027 (0.105)	-0.134 (0.151)	-0.198 (0.167)
Online banking	0.151 (0.196)	0.117 (0.134)	-0.061 (0.133)	-0.195 (0.191)	-0.083 (0.211)
Business	0.092 (0.152)	0.148 (0.104)	0.258** (0.103)	0.106 (0.147)	0.010 (0.163)
Agricultural enterprise	0.871 (0.634)	0.444 (0.433)	0.272 (0.429)	-0.148 (0.616)	-0.509 (0.681)
Agricultural cooperative	1.484 (0.999)	0.780 (0.683)	0.585 (0.676)	0.298 (0.971)	-0.370 (1.074)
Family farm					
Leading farm households	-0.331 (0.409)	-0.103 (0.279)	-0.219 (0.276)	-0.283 (0.397)	-0.426 (0.439)
Province	Yes	Yes	Yes	Yes	Yes
Constant	3.555*** (0.919)	3.713*** (0.628)	3.793*** (0.621)	3.821*** (0.893)	3.585*** (0.987)
Observations	343	343	343	343	343

Robust standard errors appear in parentheses; asterisks *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Appendix L

Quantile regression results for all crops

Variables	q10	q25	q50	q75	q90
Cropping area	0.258*** (0.022)	0.256*** (0.016)	0.277*** (0.013)	0.279*** (0.015)	0.289*** (0.020)
Soil quality	-0.068 (0.043)	-0.094*** (0.031)	-0.115*** (0.026)	-0.047 (0.029)	-0.008 (0.040)
Irrigation	0.121*** (0.038)	0.066** (0.028)	0.066*** (0.023)	0.039 (0.026)	0.077** (0.035)
Hired labor	-0.016 (0.059)	-0.048 (0.043)	-0.005 (0.035)	-0.015 (0.040)	-0.048 (0.055)
Farmland rental	-0.037 (0.047)	-0.095*** (0.034)	-0.119*** (0.028)	-0.101*** (0.032)	-0.107** (0.043)
Num. of agri. labors	-0.023 (0.021)	-0.027* (0.015)	-0.031** (0.012)	-0.022 (0.014)	0.032* (0.019)
Risk preference I	-0.071 (0.046)	-0.052 (0.033)	-0.018 (0.028)	-0.056* (0.032)	0.022 (0.043)
Risk preference II	-0.033 (0.043)	-0.019 (0.031)	-0.018 (0.026)	0.003 (0.029)	-0.069* (0.040)
Knowledge on interest	-0.009 (0.046)	0.003 (0.034)	0.029 (0.028)	0.069** (0.032)	0.076* (0.043)
Knowledge on inflation	0.039 (0.051)	0.038 (0.037)	0.032 (0.031)	0.016 (0.035)	-0.053 (0.048)
Online banking	0.176** (0.081)	0.171*** (0.058)	0.148*** (0.048)	0.081 (0.055)	0.094 (0.075)
Business	-0.052 (0.057)	0.011 (0.041)	0.051 (0.034)	0.0406 (0.039)	-0.012 (0.053)
Agricultural enterprise	0.646* (0.344)	0.687*** (0.249)	0.335 (0.206)	0.644*** (0.235)	0.346 (0.318)
Agricultural cooperative	-0.199 (0.231)	0.162 (0.167)	0.215 (0.138)	0.220 (0.158)	0.044 (0.214)
Family farm	-0.467 (0.364)	-0.333 (0.263)	-0.163 (0.217)	-0.105 (0.248)	0.355 (0.336)
Leading farm	-0.058	0.003	-0.176	-0.219	-0.258

households	(0.208)	(0.150)	(0.124)	(0.142)	(0.192)
Province	Yes	Yes	Yes	Yes	Yes
Constant	2.529***	2.928***	3.196***	3.545***	3.706***
	(0.113)	(0.082)	(0.068)	(0.077)	(0.105)
Observations	3380	3380	3380	3380	3380

Robust standard errors appear in parentheses; asterisks *, **, and *** indicate significance at the 10%, 5%, and 1% levels, respectively.

Appendix M

Main reasons for renting out (in) and not renting out (in) farmland

Main reasons for renting out farmland	Percent (%)	Main reasons for not renting out farmland	Percent (%)
Not engaged in agricultural production	58.38	Engaged in agricultural production for income	83.13
Village's promotion	12.19	No one is willing to rent	11.20
Rent	8.64	Rent is too low	2.61
Transferring residence	7.20	Others	3.06
Others villagers' drive	3.06		
Others	10.53		
Main reasons for renting in farmland	Percent (%)	Main reasons for not renting in farmland	Percent (%)
Expand scale of agricultural production	37.50	Insufficient energy to cultivate more land	73.74
Meet our own needs	33.89	Low farm incomes, high rent	10.71
Land revenue	21.23	No proper transferor	8.46
Others	7.38	No suitable land	3.06
		Others	4.03

Appendix N

Tenant category and rent

Tenant category	Percent (%)	Rent (Yuan)	Percent (%)
Common farmer from local village	58.56	0	28.26
Common farmer not from local village	10.16	0-200	16.62
Large-scale farm	14.61	200-400	11.59
Small and medium-sized farms	0.23	400-600	10.76
Farmers' cooperative	0.91	600-800	12.59
Village collective	4.00	800-1000	8.93
Company or enterprise	9.93	1000-1500	8.13
Others	1.60	2000-	3.12
Total	100.00	Total	100.00