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The path to smart farming: Profiling farmers' adoption of technologies in Türkiye

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Electronic supplementary material (ESM)

Supplementary Tables S1–2

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Table S1. MCA analysis results for active variables

Variables	Dim.1	Contribution	cos2	v.test	Dim.2	Contribution	cos2
Antalya	0.280	0.403	0.013	2.044	0.603	2.218	0.060
Erzurum	–0.538	2.300	0.081	–5.120	0.207	0.406	0.012
Konya	0.455	0.718	0.022	2.658	–0.162	0.109	0.003
Manisa	0.755	5.609	0.211	8.277	–0.449	2.352	0.075
Samsun	–1.098	7.281	0.240	–8.819	–0.011	0.001	0.000
Şanlıurfa	0.117	0.054	0.002	0.732	0.076	0.027	0.001
Female	1.151	2.522	0.073	4.868	1.021	2.351	0.057
Male	–0.064	0.139	0.073	–4.868	–0.056	0.130	0.057
> 55	–0.668	4.648	0.179	–7.615	0.013	0.002	0.000
18–25	1.339	0.803	0.022	2.691	1.175	0.734	0.017
26–35	1.079	5.602	0.177	7.583	0.627	2.247	0.060
36–45	0.453	2.024	0.076	4.972	–0.007	0.001	0.000
46–55	–0.304	1.004	0.039	–3.570	–0.333	1.429	0.047
HS	0.176	0.304	0.011	1.926	–0.134	0.211	0.007
P+S	–0.276	0.445	0.015	–2.172	0.051	0.018	0.000
Primary	–0.865	8.788	0.357	–10.753	–0.025	0.009	0.000
University	1.121	11.262	0.411	11.535	0.148	0.234	0.007
Both of them	–0.466	3.721	0.193	–7.913	–0.041	0.034	0.001
Livestock	0.040	0.003	0.000	0.158	2.204	9.674	0.235
Plant production	0.450	3.566	0.190	7.838	–0.171	0.608	0.027
< 5 ha	–0.001	0.000	0.000	–0.018	0.798	9.635	0.344
> 10 ha	0.082	0.105	0.005	1.281	–0.476	4.206	0.171
5–10 ha	–0.159	0.201	0.007	–1.515	–0.343	1.110	0.033
non agricultural income_N	–0.223	0.815	0.041	–3.640	0.036	0.025	0.001
non agricultural lincome_Y	0.184	0.673	0.041	3.640	–0.030	0.021	0.001
< 10 y	1.468	10.621	0.338	10.459	0.450	1.181	0.032
> 20 y	–0.480	5.755	0.504	–12.779	–0.154	0.699	0.052
10–20 y	0.732	3.480	0.116	6.142	0.250	0.480	0.014
insurance_N	–0.247	1.275	0.083	–5.172	0.447	4.952	0.270
insurance_Y	0.334	1.728	0.083	5.172	–0.605	6.710	0.270
inheritor_N	0.212	0.594	0.026	2.882	0.129	0.262	0.010
inheritor_Y	–0.121	0.339	0.026	–2.882	–0.074	0.149	0.010
< 1 years	0.432	0.733	0.023	2.704	–0.871	3.524	0.092
> 11 years	–0.244	0.631	0.025	–2.818	0.124	0.194	0.006
0	–0.094	0.069	0.002	–0.882	1.076	10.600	0.312
2–5 years	0.169	0.191	0.006	1.444	–0.684	3.730	0.106
6–10 years	0.067	0.033	0.001	0.606	–0.219	0.421	0.012
E	0.485	2.500	0.097	5.609	0.046	0.027	0.001
P	–0.200	1.032	0.097	–5.609	–0.019	0.011	0.001
credit_N	–0.028	0.015	0.001	–0.546	0.610	8.658	0.435
credit_Y	0.033	0.018	0.001	0.546	–0.712	10.101	0.435
landowner_N	0.570	1.236	0.038	3.506	1.109	5.551	0.144

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Variables	Dim.1	Contribution	cos2	v.test	Dim.2	Contribution	cos2
landowner_Y	–0.067	0.144	0.038	–3.506	–0.130	0.649	0.144
info_N	–0.300	1.493	0.075	–4.942	0.328	2.117	0.090
info_Y	0.251	1.249	0.075	4.942	–0.274	1.770	0.090
spread_N	–1.005	3.505	0.106	–5.874	0.305	0.383	0.010
spread_Y	0.106	0.370	0.106	5.874	–0.032	0.040	0.010

MCA – Multiple Correspondence Analysis; 'Dim.1' and 'Dim.2' – 'Dimensions', indicating the aspects in which the variables are described; contribution – contributions of the variables to the definition of the dimensions; cos2 – quality of the representation for variables on the factor map; v.test – criterion with a normal distribution
Source: Own calculations

Table S2. Logit model results (expanded)

Variables	Coefficient	SE	Significance	Wald	95% Confidence interval	
					lower bound	upper bound
Region						
Antalya	0.643	0.502	0.200	1.640	–0.341	1.626
Erzurum	0.571	0.442	0.197	1.667	–0.296	1.437
Konya	0.448	0.535	0.402	0.702	–0.600	1.496
Manisa	0.955	0.443	0.031**	4.647	0.087	1.823
Samsun	1.700	0.487	0.000***	12.185	0.745	2.654
Şanlıurfa (reference)	–	–	–	–	–	–
Gender						
Male	–1.079	0.560	0.054*	3.708	–2.177	0.019
Female (reference)	–	–	–	–	–	–
Age						
18–35 ages	0.101	0.442	0.819	0.052	–0.766	0.968
36–45 ages	–0.491	0.343	0.153	2.046	–1.164	0.182
46–55 ages	0.228	0.309	0.460	0.546	–0.377	0.834
> 55 ages (reference)	–	–	–	–	–	–
Education						
Primary school	0.190	0.385	0.622	0.243	–0.565	0.944
Primary + secondary	–0.262	0.410	0.523	0.407	–1.065	0.542
High school	–0.126	0.360	0.726	0.123	–0.832	0.580
University (reference)	–	–	–	–	–	–
Land						
< 5 ha	0.192	0.312	0.537	0.380	–0.419	0.804
5–10 ha	0.423	0.311	0.174	1.851	–0.186	1.033
> 10 ha (reference)	–	–	–	–	–	–
Landowner						
Landowner_Y	–0.281	0.402	0.485	0.488	–1.069	0.507
Landowner_N (reference)	–	–	–	–	–	–
Experience						
< 10 y	0.020	0.448	0.965	0.002	–0.859	0.898
10–20 y	0.108	0.367	0.768	0.087	–0.610	0.827

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Variables	Coefficient	SE	Significance	Wald	95% Confidence interval	
					lower bound	upper bound
> 20 y (reference)	–	–	–	–	–	–
Insurance						
Insurance_Y	–0.551	0.284	0.052*	3.762	–1.107	0.006
Insurance_N (reference)	–	–	–	–	–	–
Info						
Info_Y	–0.542	0.248	0.029**	4.790	–1.028	–0.057
Info_N (reference)	–	–	–	–	–	–
Spread						
Spread_Y	–1.442	0.440	0.001***	10.722	-2.305	–0.579
Spread_N (reference)	–	–	–	–	–	–
Tractor						
0	0.833	0.356	0.019**	5.493	0.136	1.530
< 1 years	–0.150	0.441	0.116	0.116	–1.015	0.715
2–5 years	–1.136	0.363	0.002***	9.816	–1.846	–0.425
6–10 years	0.312	0.339	0.358	0.845	–0.353	0.977
> 11 years (reference)	–	–	–	–	–	–
Credit						
Credit_Y	–0.674	0.275	0.014**	6.000	–1.214	–0.135
Credit_N (reference)	–	–	–	–	–	–
Level of significance						
–2 Log Likehood	531.828					
Nagelkerke R^2	0.358					

*, **, ***P < 0.1; 0.05; 0.01; SE – standard error