Exercício C17.1

ii) Modelo linear de probabilidades

Equação 1: estimação OLS
Dependent Variable: FAVWIN
Method: Least Squares
Sample: 1 553
Included observations: 553

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.576949	0.028235	20.43418	0.0000
SPREAD	0.019366	0.002339	8.280648	0.0000

R-squared	0.110672	Mean dependent var	0.763110
Adjusted R-squared	0.109058	S.D. dependent var	0.425559
S.E. of regression	0.401684	Akaike info criterion	1.017307
Sum squared resid	88.90382	Schwarz criterion	1.032915
Log likelihood	-279.2855	Hannan-Quinn criter.	1.023405
F-statistic	68.56913	Durbin-Watson stat	2.111997
Prob(F-statistic)	0.000000		

Equação 2: estimação robusta à heterocedasticidade
Dependent Variable: FAVWIN
Method: Least Squares
Sample: 1 553
Included observations: 553
White Heteroskedasticity-Consistent Standard Errors & Covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.576949	0.031657	18.22510	0.0000
SPREAD	0.019366	0.001922	10.07656	0.0000

R-squared	0.110672	Mean dependent var	0.763110
Adjusted R-squared	0.109058	S.D. dependent var	0.425559
S.E. of regression	0.401684	Akaike info criterion	1.017307
Sum squared resid	88.90382	Schwarz criterion	1.032915
Log likelihood	-279.2855	Hannan-Quinn criter.	1.023405
F-statistic	68.56913	Durbin-Watson stat	2.111997
Prob(F-statistic)	0.000000		

iii) $\hat{\mathrm{P}}\left[favwin = 1 \middle| spread = 10\right] = 0.7706$

iv) Modelo probit

Dependent Variable: FAVWIN
Method: ML - Binary Probit (Quadratic hill climbing)
Sample: 1 553
Included observations: 553
Convergence achieved after 4 iterations
Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.010593	0.103747	-0.102101	0.9187
SPREAD	0.092463	0.012181	7.590712	0.0000

McFadden R-squared	0.129439	Mean dependent var	0.763110
S.D. dependent var	0.425559	S.E. of regression	0.399128
Akaike info criterion	0.960442	Sum squared resid	87.77617
Schwarz criterion	0.976049	Log likelihood	-263.5622
Hannan-Quinn criter.	0.966539	Restr. log likelihood	-302.7499
LR statistic	78.37538	Avg. log likelihood	-0.476604
Prob(LR statistic)	0.000000		

Obs with Dep=0	131	Total obs	553
Obs with Dep=1	422		

v) $\hat{\mathrm{P}}\left[favwin = 1 \middle| spread = 10\right] = 0.819$

vi) Modelo probit e teste de significância conjunta dos três últimos regressores

Dependent Variable: FAVWIN
Method: ML - Binary Probit (Quadratic hill climbing)
Sample: 1 553
Included observations: 553
Convergence achieved after 4 iterations
Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.055180	0.128763	-0.428540	0.6683
SPREAD	0.087884	0.012949	6.786915	0.0000
FAVHOME	0.148575	0.137057	1.084039	0.2783
FAV25	0.003068	0.158690	0.019333	0.9846
UND25	-0.219808	0.250584	-0.877183	0.3804

McFadden R-squared	0.132479	Mean dependent var	0.763110
S.D. dependent var	0.425559	S.E. of regression	0.399241
Akaike info criterion	0.967963	Sum squared resid	87.34770
Schwarz criterion	1.006981	Log likelihood	-262.6418
Hannan-Quinn criter.	0.983207	Restr. log likelihood	-302.7499
LR statistic	80.21622	Avg. log likelihood	-0.474940
Prob(LR statistic)	0.000000		

Obs with Dep=0	131	Total obs	553
Obs with Dep=1	422		

Teste de exclusão das três últimas variáveis

Redundant Variables: FAVHOME FAV25 UND25

Log likelihood ratio	1.840843	Prob. Chi-Square(3)	0.6061

Test Equation:
Dependent Variable: FAVWIN
Method: ML - Binary Probit (Quadratic hill climbing)
Sample: 1 553
Included observations: 553
Convergence achieved after 4 iterations
Covariance matrix computed using second derivatives

Variable	Coefficient	Std. Error	z-Statistic	Prob.
C	-0.010593	0.103747	-0.102101	0.9187
SPREAD	0.092463	0.012181	7.590712	0.0000

McFadden R-squared	0.129439	Mean dependent var	0.763110
S.D. dependent var	0.425559	S.E. of regression	0.399128
Akaike info criterion	0.960442	Sum squared resid	87.77617
Schwarz criterion	0.976049	Log likelihood	-263.5622
Hannan-Quinn criter.	0.966539	Restr. log likelihood	-302.7499
LR statistic	78.37538	Avg. log likelihood	-0.476604
Prob(LR statistic)	0.000000		

Obs with Dep=0	131	Total obs	553
Obs with Dep=1	422		