Factors of savings: Lima Case
Chi square test of independence and Logit univariate

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Contents

Data

The source of the data is "Encuesta Nacional de Demanda de Servicios Financieros y Nivel de Cultura Financiera en el Perú" provided by Superintendencia de Banca y Seguros (SBS)

The regions selected were Lima and Callao. The sample was reduced to all the interviewed who are heads of a household.

Variables definition

- Savings: (Dichotomic variable) Cases are the ones who answered in the question "p_55" the options from 1 to 6; Control, 7 and 8. In other words, Cases are the people who are saving money when they get old (or retired), while Controls are not saving money.

- Age: (Numeric variable) Question "p_3".

- Education: (Ordered variable) Question "p_8". The ones who marked the option 1 they do not have education, and were assigned the rank "0"; option 2, just kindergarten education, and were assigned the rank "1"; option 3 and 4, primary education with rank "2"; option 5 and 6, secondary education with rank "3", the rest of options, superior education with rank "4".

- Marital Status: (Categorical variable) Question "p_4".

- Sex: (Dichotomic variable) Question "p_2". Men were assigned "0" and Women, "1".

- Income: (Ordered variable) Question "p_27". People who earned less than 400 soles were assigned "0"; more or equal than 400 soles and less than 750 soles, "1"; more or equal than 750 soles and less than 1500 soles, "2"; more or equal than 1500 soles, "3".

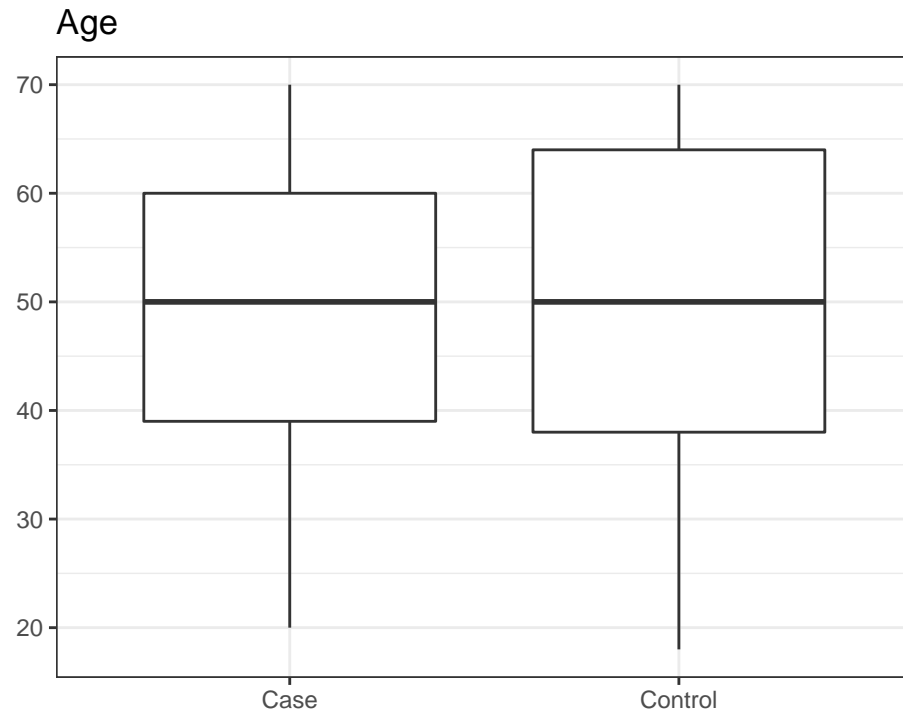- NumMembersAtHome: (Numeric Variable). Question "p_5". Number of people who live in the household.

Age

Age

Table 1: Results of univariate logit

	Estimate	Std..Error	z.value	Pr. . . z..
(Intercept)	-0.5391082	0.3264031	-1.6516638	0.0986031
data[, i]	0.0040803	0.0063728	0.6402689	0.5219978

Table 2: Odds Ratio

	OR	X2.5..	X97.5..
(Intercept)	0.5832682	0.3062601	1.102768
data[, i]	1.0040886	0.9916377	1.016751

H0: The coefficient of Savings is zero
H1: The coefficient of Savings is not zero
Result: Accept H0. With 95% of confidence it could be affirmed that the coefficient of Savings is zero
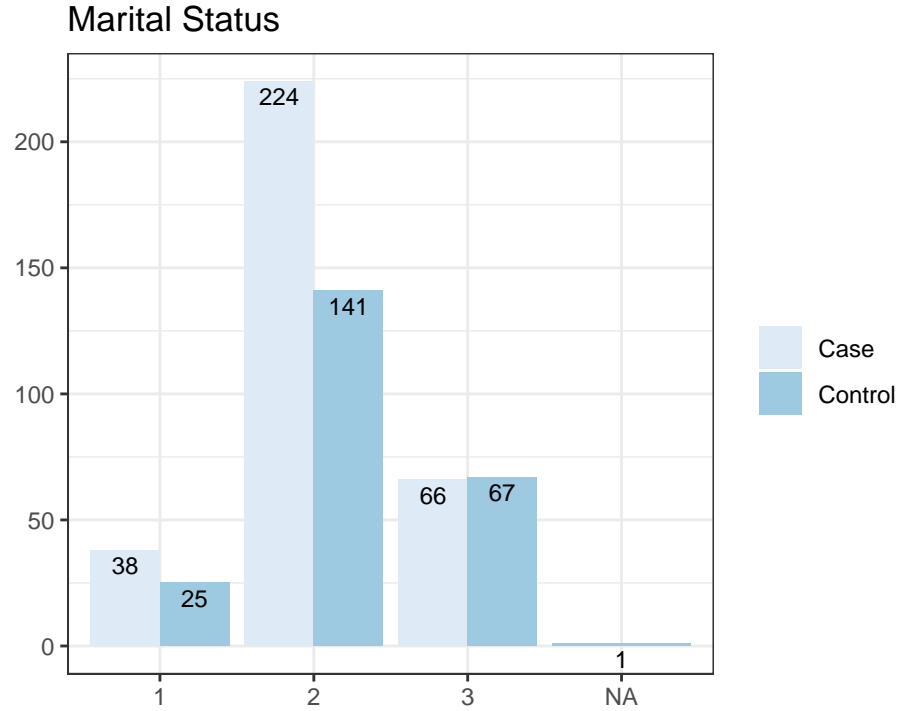
Marital Status

Marital Status

Table 3: Table of Frequencies

Marital.Status	Case	% Case	Control	% Control
1	38	11.59	25	10.73
2	224	68.29	141	60.52
3	66	20.12	67	28.76

Table 4: Chi square test of independence

Variable	Statistic	Parameter	p.value
Marital Status	5.638374	2	0.0596544

H0: Savings and Marital Status are independent
H1: Savings and Marital Status are not independent
Result: Accept H0. With 95% of confidence it could be affirmed that Savings and Marital Status are independent
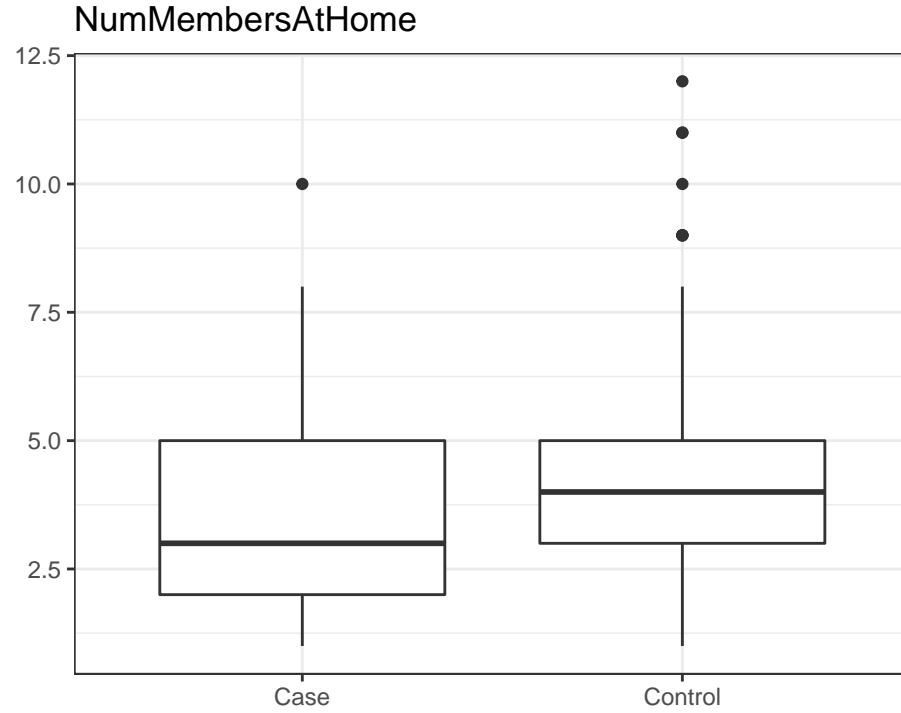
NumMembersAtHome

NumMembersAtHome

Table 5: Results of univariate logit

	Estimate	Std..Error	z.value	Pr...z..
(Intercept)	-0.8529278	0.1978362	-4.311283	0.0000162
data[, i]	0.1357396	0.0466388	2.910442	0.0036092

Table 6: Odds Ratio

	OR	X2.5..	X97.5..
(Intercept)	0.4261654	0.2877692	0.6256423
data[, i]	1.1453836	1.0460733	1.2564215

H0: The coefficient of Savings is zero
H1: The coefficient of Savings is not zero
Result: Reject H0. With 95% of confidence it could be affirmed that the coefficient of Savings is not zero
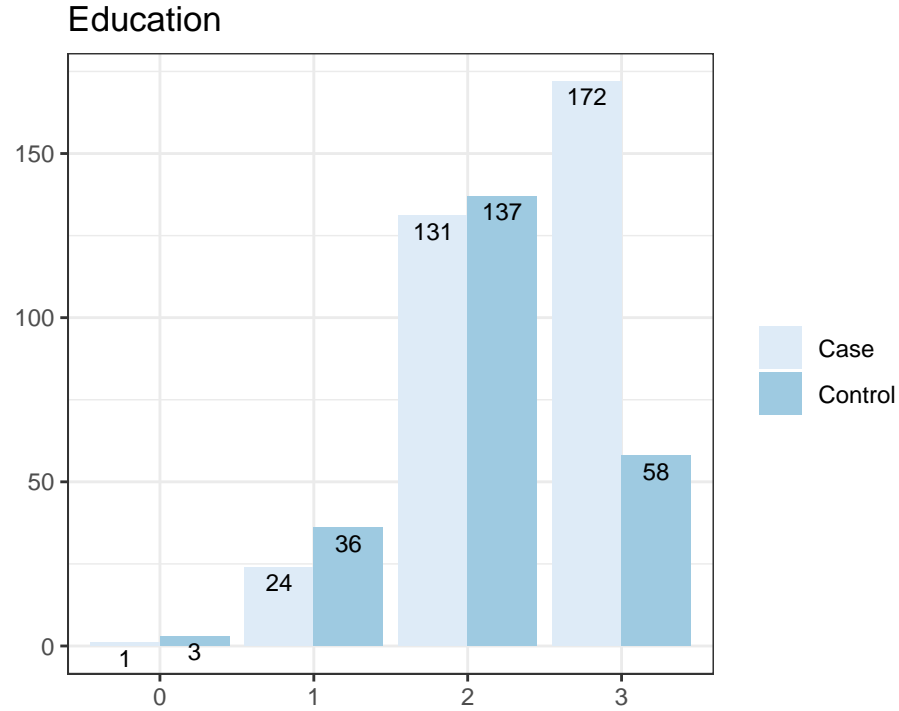
Education

Education

Table 7: Table of Frequencies

Education	Case	% Case	Control	% Control
0	1	0.30	3	1.28
1	24	7.32	36	15.38
2	131	39.94	137	58.55
3	172	52.44	58	24.79

Table 8: Chi square test of independence

Variable	Statistic	Parameter	p.value
Education	45.59172	3	0

H0: Savings and Education are independent
H1: Savings and Education are not independent
Result: Reject H0. With 95% of confidence it could be affirmed that Savings and Education are not independent
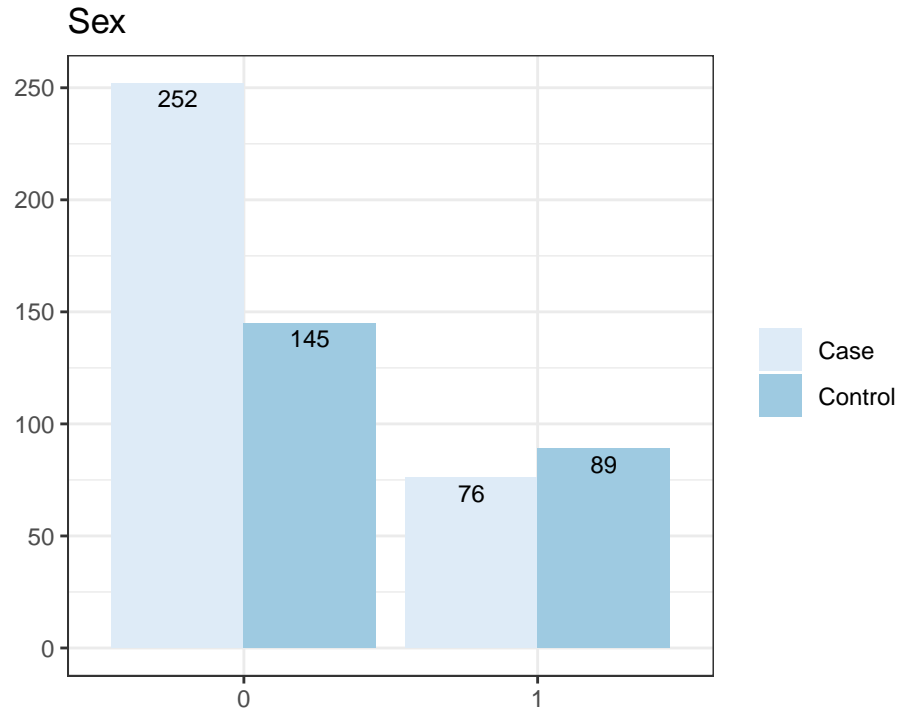
Sex

Table 9: Table of Frequencies

Sex	Case	% Case	Control	% Control
0	252	76.83	145	61.97
1	76	23.17	89	38.03

Table 10: Chi square test of independence

Variable	Statistic	Parameter	p.value
Sex	14.54759	1	0.0001367

H0: Savings and Sex are independent
H1: Savings and Sex are not independent
Result: Reject H0. With 95% of confidence it could be affirmed that Savings and Sex are not independent
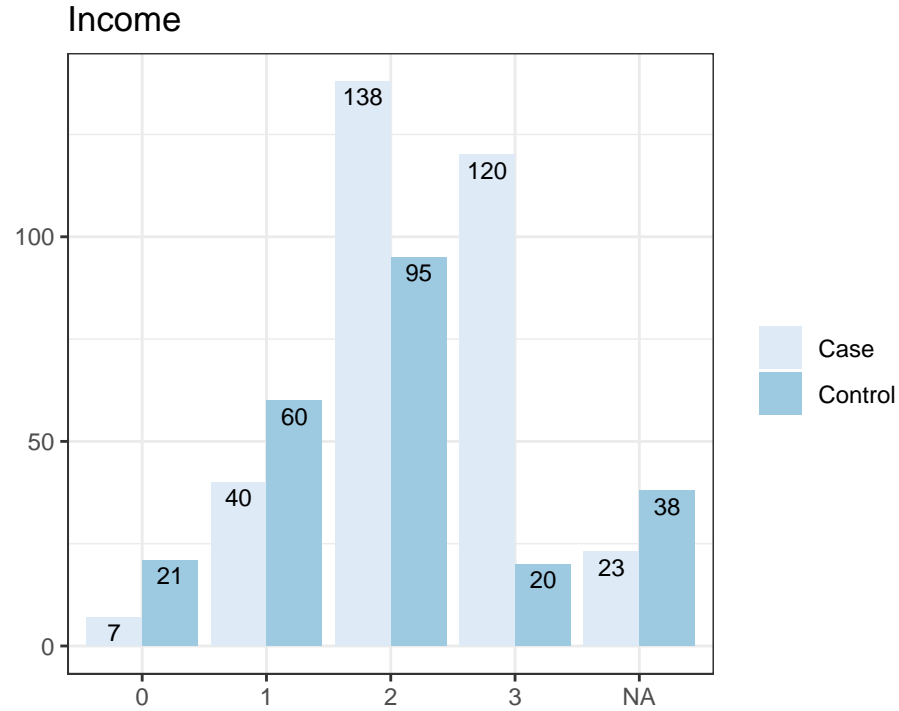
Income

Table 11: Table of Frequencies

Income	Case	% Case	Control	% Control
0	7	2.30	21	10.71
1	40	13.11	60	30.61
2	138	45.25	95	48.47
3	120	39.34	20	10.20

Table 12: Chi square test of independence

Variable	Statistic	Parameter	p.value
Income	69.9612	3	0

H0: Savings and Income are independent
H1: Savings and Income are not independent
Result: Reject H0. With 95% of confidence it could be affirmed that Savings and Income are not independent