# Logistic regression

Dependent Y	LUOF_logical
Method	Enter
Sample size	82656
Positive cases <sup>a</sup>	6321 (7.65%)
Negative cases <sup>b</sup>	76335 (92.35%)
<sup>a</sup> LUOF logical = 1	

<sup>&</sup>lt;sup>a</sup> LUOF\_logical = 1

### **Overall Model Fit**

Null model -2 Log Likelihood	44645.974
Full model -2 Log Likelihood	43609.128
Chi-squared	1036.846
DF	4
Significance level	P < 0.0001
Cox & Snell R <sup>2</sup>	0.01247
Nagelkerke R <sup>2</sup>	0.02987

#### **Coefficients and Standard Errors**

Variable	Coefficient	Std. Error	Wald	<u>P</u>
Income10k	-0.11881	0.0051343	535.4922	<0.0001
Latino	0.45152	0.039300	132.0013	<0.0001
Black	0.19439	0.046629	17.3791	<0.0001
No_Majority	0.31363	0.036187	75.1164	<0.0001
Constant	-1.84872	0.037868	2383.3492	<0.0001

### **Odds Ratios and 95% Confidence Intervals**

Variable	Odds ratio	95% CI
Income10k	0.8880	0.8791 to 0.8970
Latino	1.5707	1.4543 to 1.6965
Black	1.2146	1.1085 to 1.3308
No Majority	1.3684	1.2747 to 1.4690

#### **Hosmer & Lemeshow test**

Chi-squared	3.9808
<u>DF</u>	8
Significance level	P = 0.8588

b LUOF\_logical = 0

## Contingency table for Hosmer & Lemeshow test [Hide]

Croun	Y=	Y=0		Y=1	
Group	Observed	Expected	Observed	Expected	Total
1	8015	8026.178	251	239.822	8266
2	7901	7884.047	366	382.953	8267
3	7790	7799.526	476	466.474	8266
4	7724	7734.596	542	531.404	8266
5	7691	7678.933	575	587.067	8266
6	7631	7627.150	636	639.850	8267
7	7578	7570.135	689	696.865	8267
8	7489	7490.006	777	775.994	8266
9	7385	7360.895	881	905.105	8266
10	7131	7163.534	1128	1095.466	8259

# Classification table (cut-off value p=0.5)

Actual group	Predicted group		Dereent correct
	0	1	Percent correct
Y = 0	76335	0	100.00%
Y = 1	6321	0	0.00%
Percent of cases correctly classified			92.35%

## **ROC** curve analysis

Area under the ROC curve (AUC)	0.618
Standard Error	0.00358
95% Confidence interval	0.615 to 0.621

C:income\_population\_LUOF\_count.csv

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