Universidad
Carlos III de Madrid

Effectiveness of Minimum Drinking Age Law on Youth Alcohol Consumption

Spain Case Study

Celia Martín San Juan

Literature Review

1. **Restriction or distribution Hypothesis**

   MDAL is effective (Kaestner and Yarnoff, 2009)

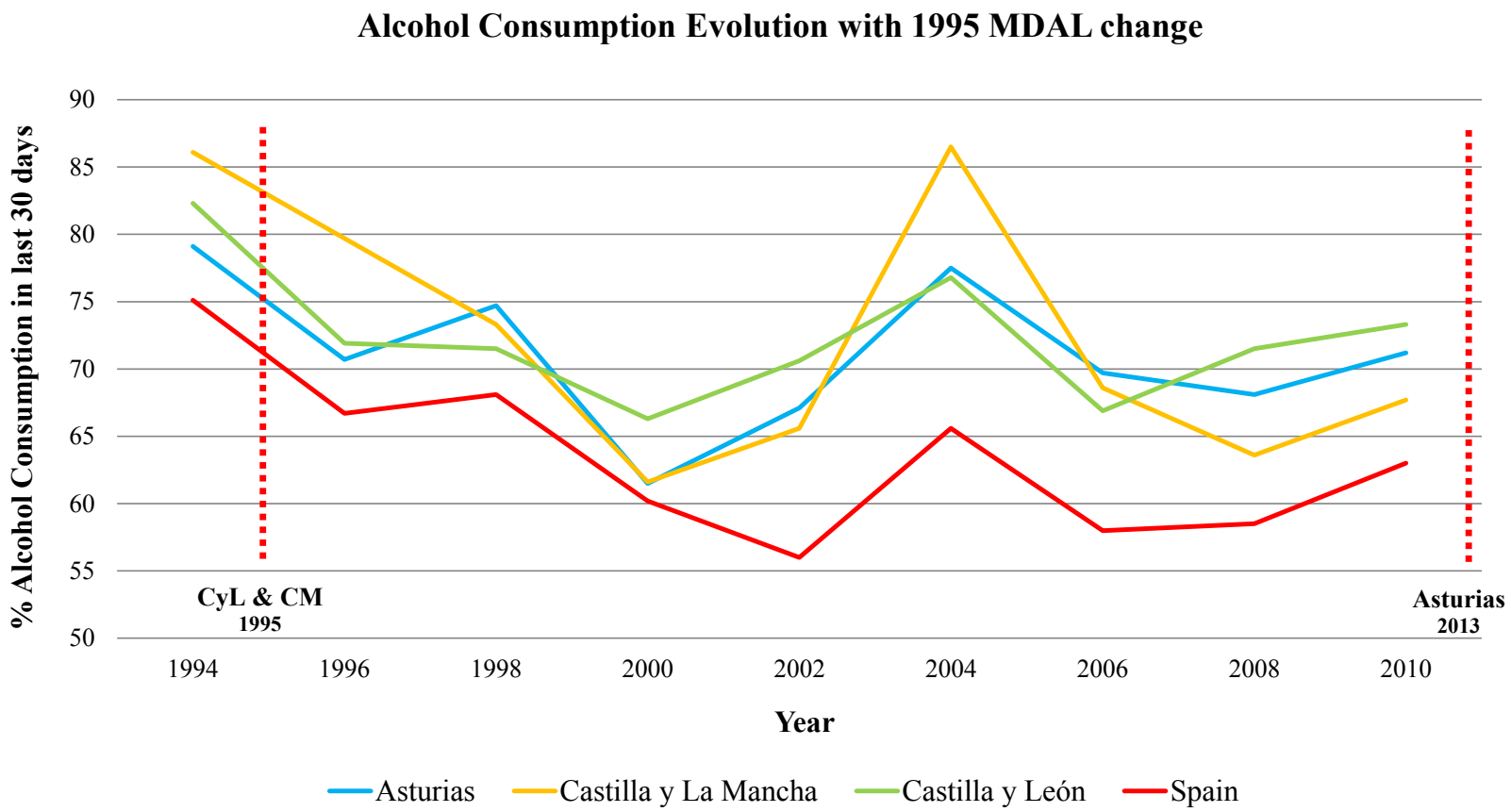
2. **Null Hypothesis**

   MDAL is not effective (Stella and Dodder, 1992)

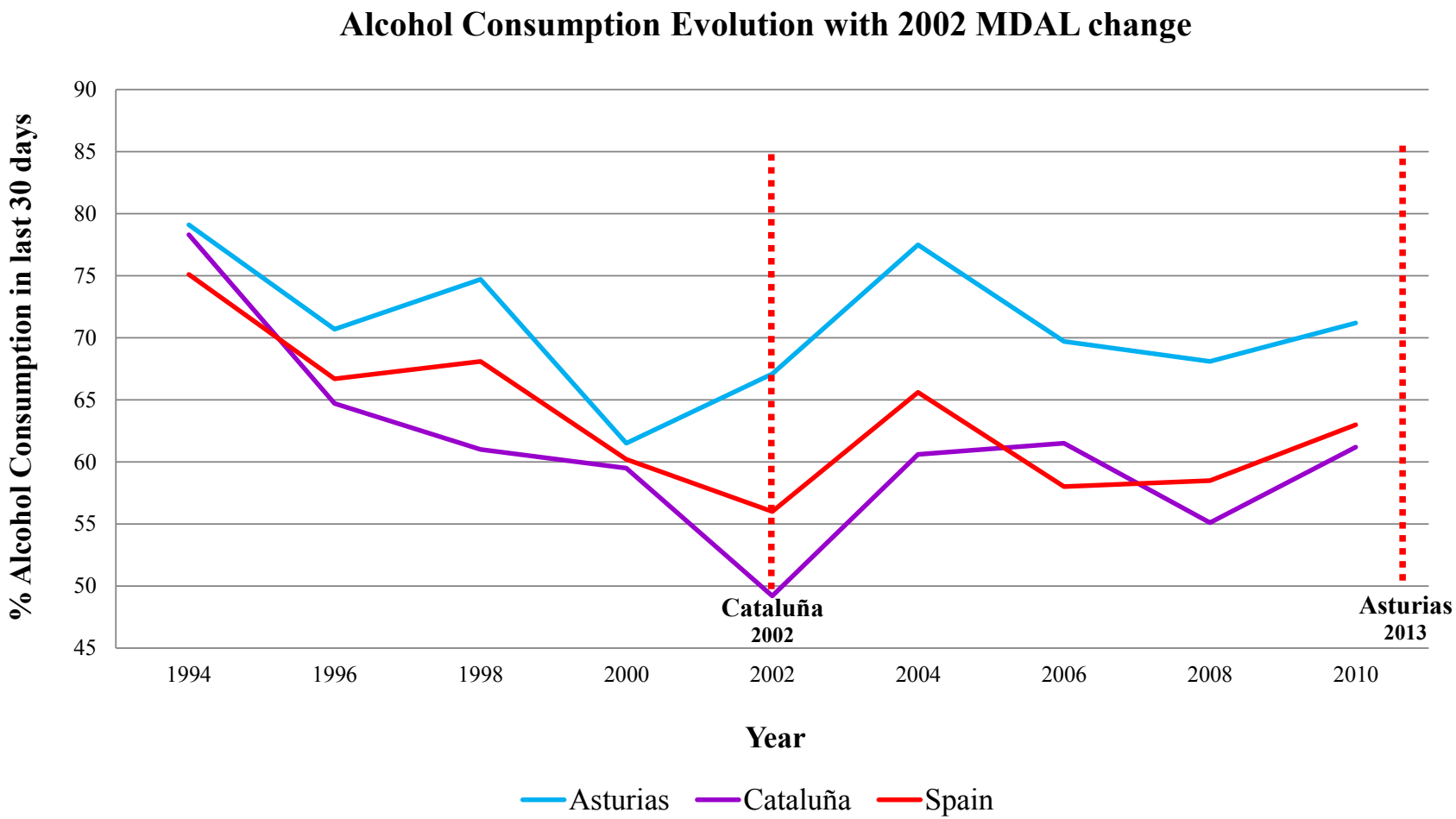
3. **Forbidden Fruit Hypothesis**

   MDAL makes drinking more attractive (Alexander, 1967)

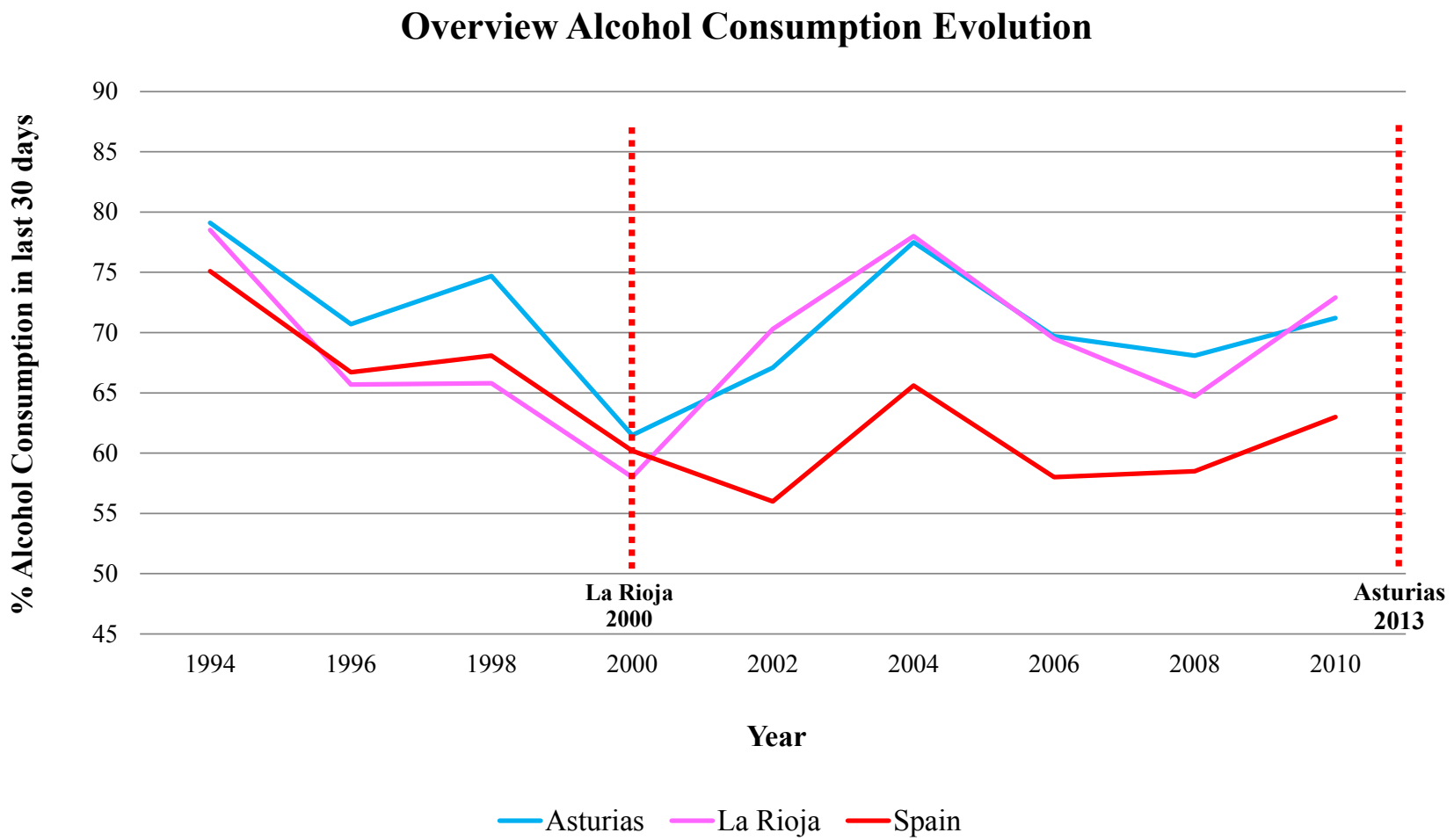
Graph Analysis: CM &CL



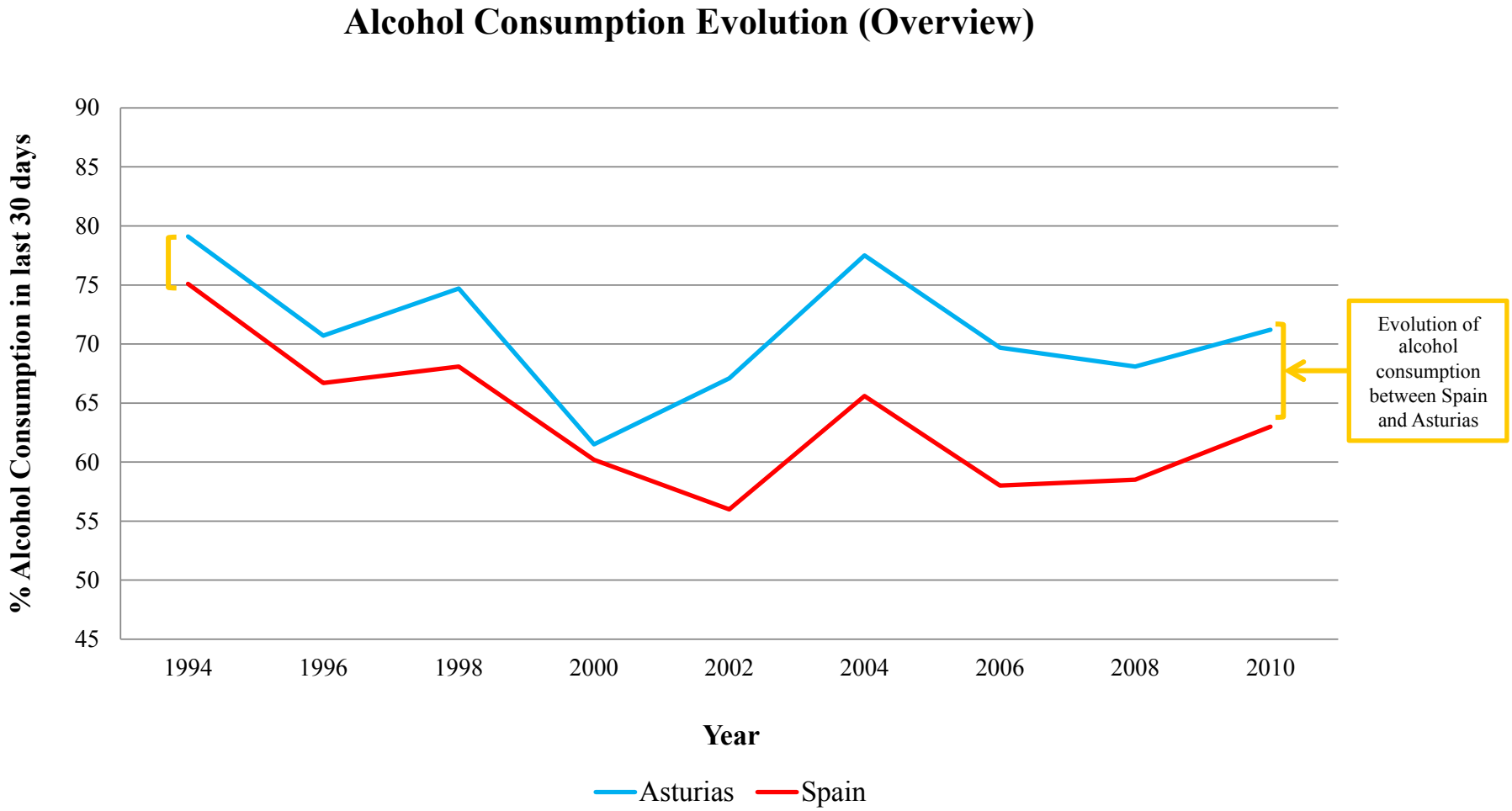
Graph Analysis: Cataluña



Graph Analysis: La Rioja



Graph Analysis



Formal Analysis

1. Consumption $_{it} = \beta_0 + \alpha$ region $_i + \beta$ year $_t + \gamma$policy $_{it} + e_{it}$

Obs.	Consumption	Coef.	Std.Err	T	P > /t/	[95% Conf. Interval]		R^2	Adj. R^2
102	Policy	-.5818603	2.113521	-0.28	0.784	-4.791301	3.627581	0.8627	0.8175
	_cons	77.34981	1.707093	45.31	0.000	73.94984	80.74978		

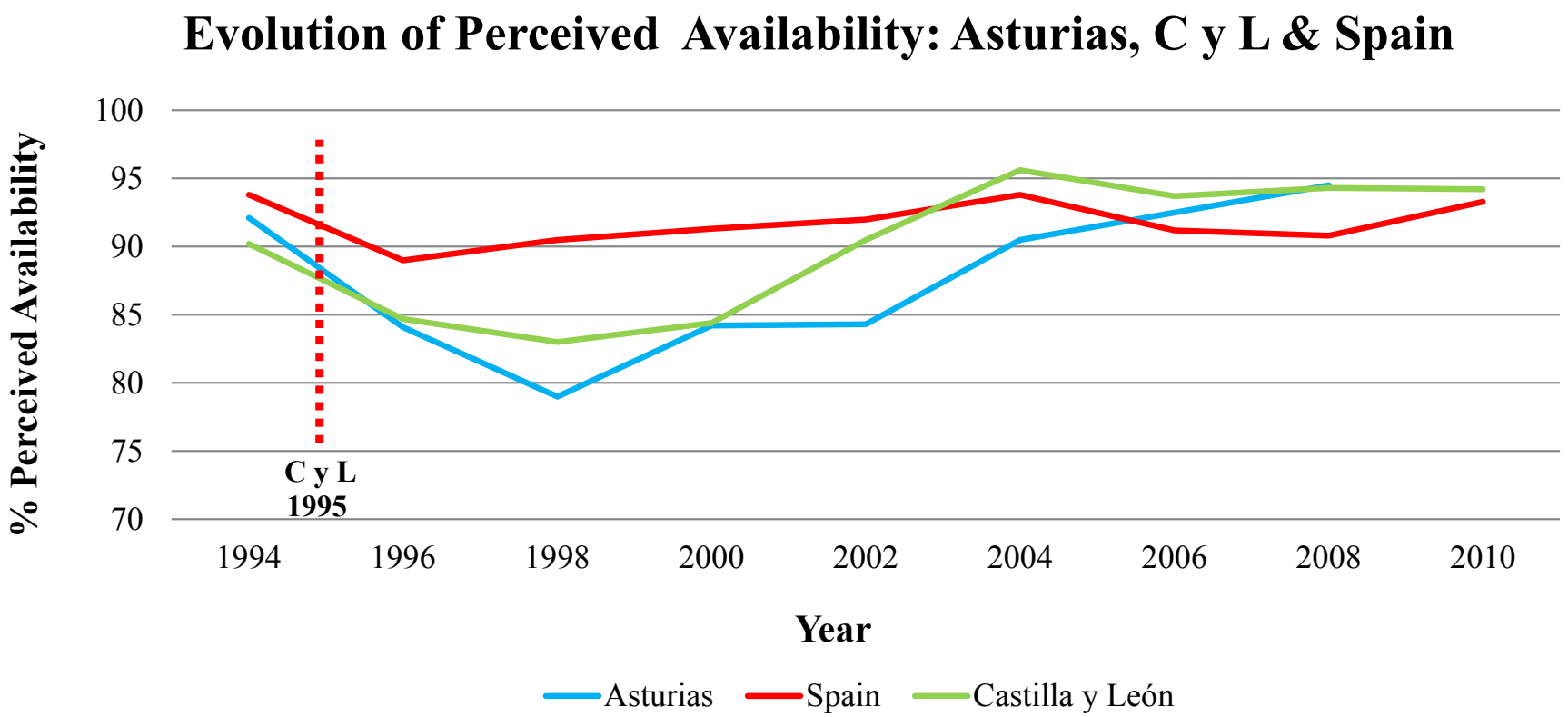
2. Consumption $_{it} = \beta_0 + \alpha$ region $_i + \beta$ year $_t + \gamma$yearspolicy $_{it} + e_{it}$

Obs.	Consumption	Coef.	Std.Err	T	P > /t/	[95% Conf. Interval]		R^2	Adj. R^2
102	years_policy	-.2129858	.5227835	-0.41	0.685	-1.254199	.8282277	0.8628	0.8177
	_cons	77.43343	1.728452	44.80	0.000	73.99092	80.87594		

Why MDAL is not effective?

PERCEIVED AVAILABILITY 2008 (%)	
Andalucía	89.7
Aragón	93.1
Asturias	94.5
Baleares	89.4
Canarias	87.3
Cantabria	92
Castilla y la mancha	-
Castilla y león	94.3
Cataluña	-
Extremadura	91.1
Madrid	90
Murcia	90.2
La rioja	93.6
Spain	90.8

Why MDAL is not effective?



Policy Recommendations

A combination of:

- **Taxation**

  "Binge drinking is quite alcohol-price responsive"
  (Keng and Huffman, 2007)

- **Self-enforcement laws through Communities (Grube, 1997)**

  "Youth alcohol consumption causes are psicosocial"
  (Duarte et al, 2009)

Thanks for listening!

STATA Output

Number of obs	102
F(9,92)	5.16
Prob > F	0.0000
R-squared	0.3356
Adj R-squared	0.2706
Root MSE	7.2818

Consumption	Coef.	Std.Err	T	P > /t/	[95% Conf.	Interval]
policy	-.5395544	2.157907	-0.25	0.803	-4.825344	3.746236
_Iyear_1996	-10.10418	4.685626	-2.16	0.034	-19.41024	-.7981238
_Iyear_1998	-11.70689	4.539458	-2.58	0.011	-20.72264	-2.691135
_Iyear_2000	-20.20812	4.394728	-4.60	0.000	-28.93643	-11.47982
_Iyear_2002	-18.1444	4.436141	-4.09	0.000	-26.95496	-9.333844
_Iyear_2004	-11.80745	4.165272	-2.83	0.006	-20.08004	-3.534862
_Iyear_2006	-19.13686	4.165272	-4.59	0.000	-27.40946	-10.86427
_Iyear_2008	-18.98981	4.165272	-4.56	0.000	-27.2624	-10.71722
_Iyear_2010	-15.19792	4.244028	-3.58	0.001	-23.62692	-6.768913
_cons	80.86	3.256535	24.83	0.000	74.39224	87.32776

STATA Output

Number of obs	102
F(9,92)	13.99
Prob > F	0.0000
R-squared	0.8627
Adj R-squared	0.8175
Root MSE	3.6424

Consumption	Coef.	Std.Err	T	P > /t/	[95% Conf.	Interval]
Policy	-.5818603	2.113521	-0.28	0.784	-4.791301	3.627581
_Iyear_1996	-10.08726	2.453908	-4.11	0.000	-14.97464	-5.199878
_Iyear_1998	-11.62559	2.417031	-4.81	0.000	-16.43952	-6.811652
_Iyear_2000	-16.78343	2.508207	-6.69	0.000	-21.77896	-11.78791
_Iyear_2002	-15.50634	2.624648	-5.91	0.000	-20.73378	-10.2789
_Iyear_2004	-7.199394	2.546196	-2.83	0.006	-12.27058	-2.128206
_Iyear_2006	-14.52881	2.546196	-5.71	0.000	-19.59999	-9.457618
_Iyear_2008	-14.38175	2.546196	-5.65	0.000	-19.45294	-9.31056
_Iyear_2010	-10.9054	2.552573	-4.27	0.000	-15.98929	-5.821509
_cons	77.34981	1.707093	45.31	0.000	73.94984	80.74978
Region		F(16, 76)=	18.231	0.000		

STATA Output

Number of obs	102
F(9,76)	14.01
Prob > F	0.0000
R-squared	0.8628
Adj R-squared	0.8177
Root MSE	3.6403

Consumption	Coef.	Std.Err	T	P > /t/	[95% Conf.	Interval]
years_policy	-.2129858	.5227835	-0.41	0.685	-1.254199	.8282277
_Iyear_1996	-10.23481	2.311794	-4.43	0.000	-14.83915	-5.630471
_Iyear_1998	-11.7458	2.246165	-5.23	0.000	-16.21943	-7.27218
_Iyear_2000	-16.91516	2.168312	-7.80	0.000	-21.23372	-12.59659
_Iyear_2002	-15.51812	2.314554	-6.70	0.000	-20.12796	-10.90829
_Iyear_2004	-7.019729	2.487541	-2.82	0.006	-11.9741	-2.065362
_Iyear_2006	-14.16121	2.798311	-5.06	0.000	-19.73453	-8.587893
_Iyear_2008	-13.82623	3.146233	-4.39	0.000	-20.09249	-7.559959
_Iyear_2010	-10.13846	3.573053	-2.84	0.006	-17.25481	-3.022104
_cons	77.43343	1.728452	44.80	0.000	73.99092	80.87594
region		F(16,76)=	18.024	0.000		