What's the weather today? It's smiling with some improvements over the weekend

Baldi Simona (University of Genova)
Canova Luciano (Enrico Mattei School)
Lentini Gianluca (University of Milan)

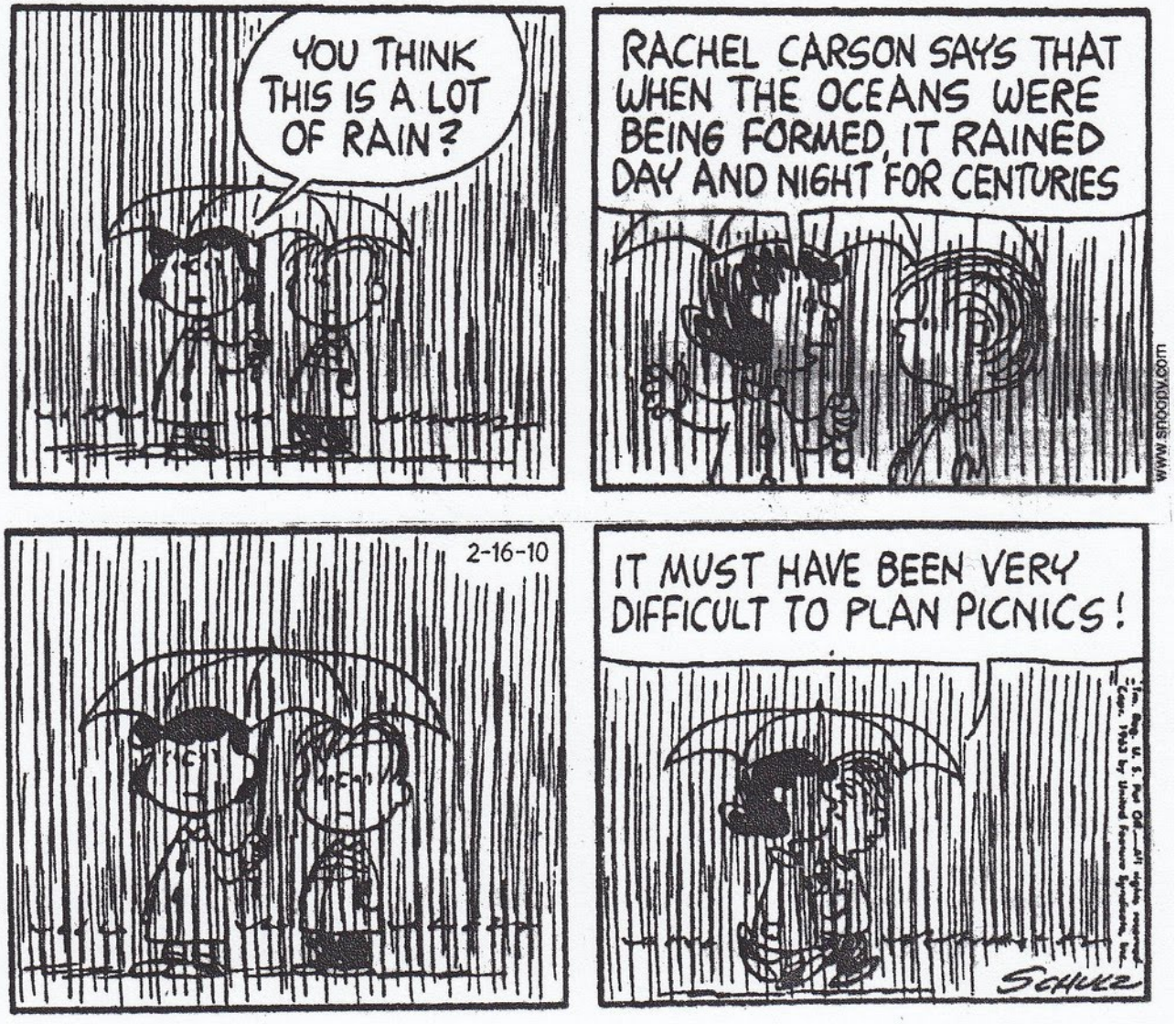
FEEM, 1 March 2012


10:04
iL Meteo
Milano
nubi sparse
agg. 09:20
17°C
Martedì 5
16°/19°
Mercoledì 6
12°/22°
Giovedì 7
14°/22°
Venerdì 8
uffi
Sabato 9
ancora?
Domenica 10
che palle
Lunedì 11
10°/16°

Structure of the presentation

- Aim of the paper
- Literature review
- Climate in Italy
- Description of data
- Results

PEANUTS CHARLES SCHULZ



Literature on climate

- Easterlin paradox (1974), Kahneman and Deaton (2010)
- non market goods evaluation: climate and happiness (Maddison and Rehdanz, 2011; Moro et al., 2008)
- Climate and social cohesion (Durante, 2009)
- Climate and health:

  - Berry et al. (2011) farmers' mental health

  - Kim et al. (2011): suicide mortality; Bushman et al. (2005): risk of aggression

SWB and climate: problems with data

- Reliability of subjective evaluation of well-being (Kahneman, 1998; Schwarz)
- Not exploited temporal dimension of climate (that is, climate variability and change)
- Use of averages (or max and min), but…
- Averages are not consistent with instant utility
- They can’t drive or determine a discrete and punctual report of subjective well-being

What we do in our paper

- Use day of the interview (Martinnson and Akay, 2009)
- Exploit temporal dimension of climate:

  1. we study the effect of punctual meteorological values on a specific day on the answer to the subjective well-being question;
  2. we consider the relative difference of the weather in the day of the interview with respect to the weather of the day before and with respect to the mean of the previous seven days

- Dependent variable: “Considering all aspects of your life, how happy would you say you are? Give a score from 1 to 10, 1 meaning “Very unhappy”, 10 meaning “Very happy” and the values in between representing intermediate states”

Data

- Original dataset, merging SHIW 2006 and meteorological data from Department of Physics (University of Milan)
- Meteorological data:

  - air temperature (°C)

  - precipitation (mm/day)

  - relative humidity (%)

  - relative eliophany (%, nr of hours of direct solar radiation per day with respect to the astronomical expected values)

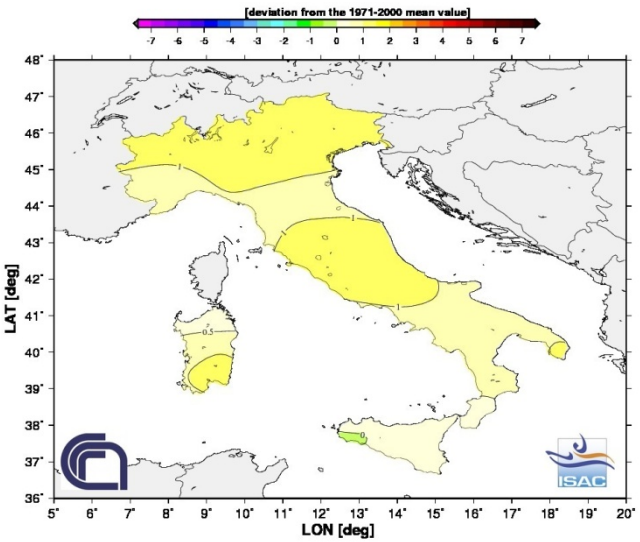
17 meteorological stations

Table 1: Italian stations and available meterological series for each variable.

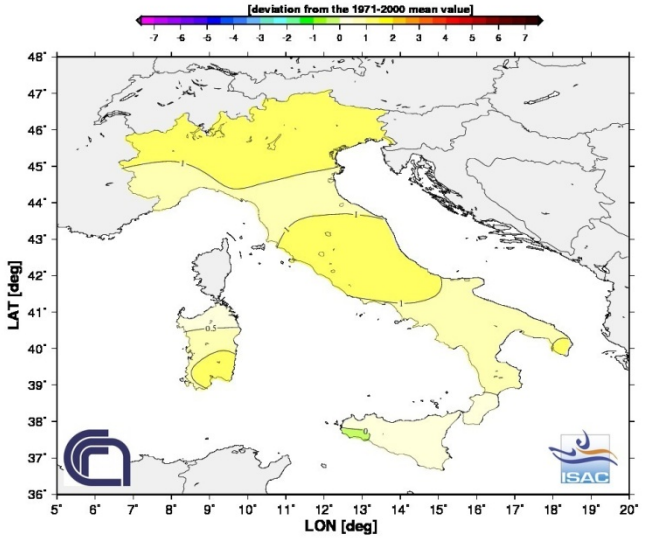
STATION	TEMP	PREC	RH	ELIOPHANY
Ancona (AN)	Falconara AM	Falconara AM	Falconara AM	Monsampolo
Bologna (BO)	Borgo Panigale AM	Urban	Borgo Panigale AM	Cesena
Brescia (BS)	Ghedi AM	Ghedi AM	Ghedi AM	Verona Villafranca AM
Brindisi (BR)	AM	AM	AM	AM
Cagliari (CA)	Elmas AM	Elmas AM	Elmas AM	Elmas AM
Firenze (FI)	Ximeniano Obs.	Ximeniano Obs.	Arezzo AM	S. Piero a Grado
Genova (GE)	Sestri	University	Sestri	Albenga
Milano (MI)	Brera Obs.	Brera Obs.	Piacenza	Piacenza
Napoli (NA)	Capodichino AM	Capodichino AM	Capodichino AM	Castel Volturno
Palermo (PA)	Punta Raisi AM	Observatory	Trapani Birgi AM	Trapani Birgi AM
Perugia (PG)	Marsciano	Santa Giuliana	Marsciano	Marsciano
Pescara (PE)	Urban	Urban	Urban	Castel di Sangro
Reggio Calabria (RC)	Urban	Urban	Urban	Sibari
Roma (RM)	Ciampino AM	Ciampino AM	Ciampino AM	Ciampino AM
Torino (TO)	Caselle AM	SMI	Caselle AM	Novara Cameri AM
Trieste (TS)	AM	AM	AM	AM
Venezia (VE)	Tessera AM	Cavanis	Tessera AM	Treviso S. Angelo AM

Note: AM stands for Aeronautica Militare, or Air Force. SMI is the Italian Meteorological Society.

Maps



Temperature Anomalies, Year 2011

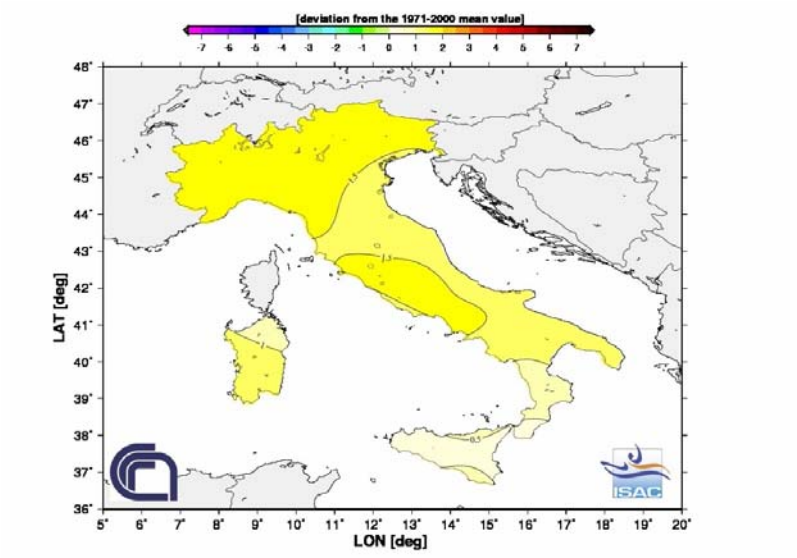


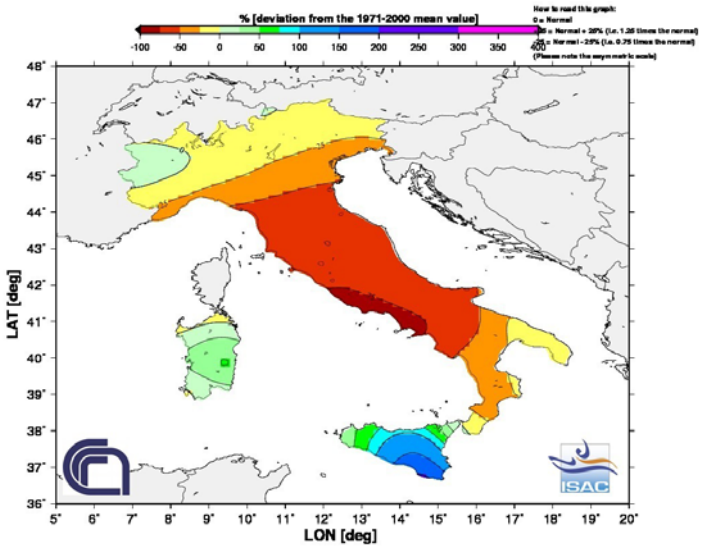
Precipitation Anomalies, Year 2011

Variations of temperatures (in °C) and precipitation (in %) in the year 2011 with respect to the 1971-2000 averages.
It's not a climate issue, it's a climate (temporal) change issue…

http://www.isac.cnr.it/~climstor/climate_news.html

Maps





Temperature Anomalies, Autumn 2011

Precipitation Anomalies, Autumn 2011

Variations of temperatures (in °C) and precipitation (in %) in the Autumn 2011 with respect to the 1971-2000 averages.
It's not a climate issue, it's a climate (temporal) change issue…

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The Pasterze Glacier

Pasterze Glacier (Austria) – winter 1875:2004

Descriptive statistics on happiness

Table 2: Descriptive statistics for *happy* variable

Value	Percent	Cum.
1	0.94	0.94
2	0.82	1.76
3	2.58	4.34
4	4.46	8.79
5	10.67	19.47
6	17.74	37.2
7	27.84	65.04
8	23.86	88.9
9	6.03	94.94
10	5.06	100

SHIW 2006

- 7768 households (19551 individuals and 13009 income-earners)
- Interviews collected between March, 1 and October 30 2007
- Due to availability of meteorological data, merging for day and place of interview, our sample is restricted to **6816** people
- Subjective well-being question is asked just to a subsample: **3298** people

Empirical strategy

- Ordered probit on swb
- Probit model (rescaled swb as a dummy variable)
- Robustness checks using different dependent variables:

  - **salut** (subjective evaluation of health status)

  - **condgen** (subjective evaluation of financial conditions)

	(1)	(2)	(3)
	Ordered probit	Ordered probit	Probit
sex	0.0243	0.0234	-0.00975
	(0.0525)	(0.0600)	(0.0735)
age	-0.0260***	-0.0217***	-0.0337***
	(0.00567)	(0.00637)	(0.00834)
age sq	0.000169***	0.000128*	0.000209**
	(6.14e-05)	(6.83e-05)	(9.11e-05)
household size	-0.0984***	-0.118***	-0.138***
	(0.0240)	(0.0259)	(0.0363)
medium edu	0.243***	0.166**	0.377***
	(0.0643)	(0.0744)	(0.0907)
high edu	0.353***	0.283**	0.401***
	(0.0976)	(0.114)	(0.149)
North-west area	-0.276***	-0.364***	-0.245**
	(0.0879)	(0.107)	(0.115)
Centre area	-0.300***	-0.281***	-0.308***
	(0.0698)	(0.0815)	(0.0935)
South area	-0.495***	-0.484***	-0.596***
	(0.0865)	(0.0956)	(0.113)
Islands area	0.199*	0.129	0.131
	(0.107)	(0.117)	(0.134)
town size: 20000-40000 inhab	-0.361***	-0.188*	-0.334***
	(0.0957)	(0.101)	(0.117)
town size: 40000-500000 inhab	-0.0357	0.121	-0.0216
	(0.0792)	(0.0878)	(0.102)
town size: more than 500000 inhab	-0.337***	-0.199**	-0.339***

	(0.0775)	(0.0907)	(0.108)
married	0.517***	0.501***	0.602***
	(0.0641)	(0.0730)	(0.0909)
ln income	0.273***	0.399***	0.392***
	(0.0362)	(0.0501)	(0.0724)
wage earner	-0.181**	-0.216**	-0.0606
	(0.0898)	(0.102)	(0.133)
self employed	-0.139	-0.253**	-0.212
	(0.107)	(0.125)	(0.148)
not employed	-0.0919	-0.147	-0.0831
	(0.0921)	(0.103)	(0.126)
eliofaniarel	0.00292**	0.00365***	0.00419***
	(0.00116)	(0.00125)	(0.00149)
temperature	-0.0160***	-0.0137*	-0.0209**
	(0.00616)	(0.00720)	(0.00832)
Observations	2,745	2,745	2,745

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Focus on results

- Happiness decreasing and convex in age (U – shaped)
- Married people happier than unmarried
- Education significantly and positively correlated with swb
- Income has a positive and significant impact
- **Meteo**:

  - **temperature** produces significant and negative effect on swb

  - **eliophany**: more sunlight is associated with increasing swb

Robustness checks

- Clustered observations at local level
- Different dependent variables: salut and condgen

  - Results hold for eliophany, with a strong and positive impact on swb

Conclusions

- Original contribution to swb literature:
  - new dataset combining SHIW with meteo
  - temporal dimension of meteorological data
- Strong and positive impact of sunlight on swb
- Problems: lack of data for winter season
- Policy relevance? Evaluation of non-market goods?

Thanks for your attention!!!

Precipitations

	march			april			may			june			july			august			september			october		
Prov	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	mean
BS	0	25.6	1.54	0	10.6	0.44	0	43.2	3.31	0	58.9	3.24	0	23.8	0.82	0	21	2.32	0	58.4	4.28	0	18.6	1.52
TO	0	14.4	1.05	0	18.4	0.69	0	45	3.72	0	63.8	7.17	0	13	0.65	0	48.6	2.96	0	29.8	2.73	0	24.2	1.74
MI	0	7.4	0.95	0	1.8	0.13	0	27.4	2.79	0	14.6	1.47	0	5	0.27	0	20	3.08	.	.	.	0	15.4	1.01
VE	0	20.8	2.90	0	0.2	0.01	0	37.2	2.70	0	14.4	1.44	0	9.8	1.01	0	19.6	2.12	0	118.8	7.51	0	11.8	1.32
TR	0	60.2	2.85	0	0.1	0.01	0	82.3	3.88	0	15.4	1.87	0	9	0.98	0	16.6	2.31	0	31.8	3.04	0	12.2	0.84
GE	0	6.6	0.42	0	38	3.89	0	14.6	1.14	0	14.8	0.51	0	20.8	1.14	0	1.8	0.08	0	46	3.60	0	31	2.56
BO	0	28	3.63	0	12	0.66	0	15.2	1.34	0	59	4.40	0	1	0.04	0	8	0.61	0	9	0.83	0	66.2	4.64
FI	0	11.2	0.99	0	5.6	0.25	0	28.4	3.03	0	42.6	1.92	0	2.2	0.08	0	74.4	4.71	0	22.6	2.19	0	39	3.26
PG	0	31.2	2.38	0	1.4	0.07	0	24.8	2.49	0	31.4	1.51	0	3.6	0.12	0	13.8	1.23	0	15.6	1.31	0	32.2	1.63
AN	0	30	6.57	0	20	2.04	0	32	5.14	0	18	1.41	0	0	0.00	0	26	4.12	0	5	1.67	0	20.2	10.10
RO	0	16.8	2.42	0	8.8	0.66	0	14.6	1.15	0	15.6	0.74	0	0.1	0.00	0	0.9	0.09	0	22.4	1.36	0	16.4	1.20
NA	0	41	4.56	0	23.8	2.74	0	22.4	2.03	0	10.4	0.60	0	0	0.00	0	3	0.10	0	77.8	3.59	0	41.4	2.94
BR	0	39.4	3.38	0	50	2.55	0	7.4	0.79	0	6	0.32	0	0	0.00	0	0.4	0.02	0	19.8	1.98	0	8.9	1.40
RC	0	22	2.48	0	18.8	0.91	0	14.2	0.86	0	23.8	4.28	0	0.4	0.20	0	0.2	0.03	0	18	3.17	0	83	5.96
PA	0	25.2	4.06	0	18.8	2.01	0	12	0.65	0	5.2	0.36	0	0	0.00	0	0	0.00	0	10.2	1.06	0	35.2	4.17
CA	0	14	2.12	0	25.2	2.47	0	9.8	0.60	0	20.2	0.74	0	0.8	0.03	0	0.1	0.02	0	0.1	0.01	0	10.5	0.97
Total	0	60.2	2.55	0	50	1.18	0	82.3	2.15	0	63.8	1.90	0	23.8	0.36	0	74.4	1.47	0	118.8	2.77	0	83	2.29

Temperatures

	march			april			may			june			july			august			september			october		
prov	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	mean
BS	5.3	12.5	9.78	11.5	21	16.59	14.3	25.8	20.07	15.4	27.1	22.57	19.4	28.6	24.82	17	27.2	23.22	13.2	23.3	18.79	6.6	20.5	13.84
TO	4.8	12.1	8.66	8.7	20.3	15.70	10.5	23	16.84	17.5	24	20.70	18	25.2	21.87	14.9	25.2	20.76	13.8	20.8	17.99	6.7	18.8	12.86
MI	9.1	19.4	15.02	13.9	25.7	21.59	15	29.4	22.55	16.4	30.9	25.59	23.7	33.6	29.11	19	29.9	25.82	.	.	.	11.7	23.4	17.57
VE	5.3	14.3	10.61	10.9	19	15.99	13.6	25.3	18.41	17.1	26.4	22.33	18.8	29.4	24.18	19.8	25.7	22.89	14.2	22.1	18.32	8.2	19.7	13.91
TR	7.4	17.5	12.48	10.9	21.6	17.49	16.1	25.8	20.48	19.4	27.1	23.81	18.8	30.2	25.18	21.4	27.5	23.97	14.8	22.5	19.35	8.6	20.4	15.09
GE	7.7	15.1	12.47	10.5	21.4	16.69	14.9	24.9	18.72	16.8	25.9	21.36	20.3	26.1	22.98	17.6	26	22.50	11.8	23.2	19.96	10.1	20.5	16.30
BO	4.8	15	9.99	11.3	21.5	16.03	15.2	26.1	20.07	16.7	27.2	22.63	19.9	30.2	26.17	18.3	28.6	23.79	13.7	24.4	19.30	8.2	22.4	13.89
FI	5.6	15.7	11.34	11.6	20.7	17.41	14.5	27.1	19.67	17.2	29.3	23.44	21.6	30.5	26.30	20	28.5	24.36	13.4	24.3	20.19	7.6	21.9	15.71
PG	3.8	14.1	10.25	10.5	18.1	14.70	12.7	23.6	17.69	15.8	26.3	21.86	19.6	28.8	24.69	19	27.3	23.39	10.4	23.7	18.17	6.1	20.8	14.06
AN	8.3	17.9	12.49	11.6	18.4	15.20	15	24.1	19.42	17.5	26.8	22.64	18.7	28.5	23.87	19.1	27.1	22.77	16.4	22.1	18.64	8.5	19.7	14.33
RO	6.5	13.9	10.94	12	18.9	15.59	14.5	24.2	18.44	15.9	27.1	22.32	20.6	29.2	25.07	19.7	31.5	25.39	16.2	24.5	20.63	8.9	22.1	16.56
NA	8	15.9	12.78	12.7	19.2	16.51	16.8	22.6	19.15	17.7	28.1	22.77	22.3	29.3	25.27	23	31.6	26.54	16.8	24.9	21.02	8.5	22.2	17.40
BR	9.9	15.6	12.87	11.5	18.1	14.79	15.8	24.4	19.54	18.1	32.7	23.66	23	36.6	26.37	22.8	30.3	26.35	16.1	27.5	21.05	11.5	20	16.62
RC	9.7	17.6	14.22	13	21.3	16.72	18.5	24.9	21.47	17.6	33.6	25.03	24.3	35.8	28.52	26.9	32.4	28.85	20.1	28.1	24.00	12.9	25.3	20.80
PA	8.1	17.4	13.65	13.8	20.3	17.01	17.5	23.6	20.06	17.6	30.6	22.96	21.1	31.6	24.94	23.4	31.5	26.31	19.2	27.9	23.31	13.3	22.6	19.36
CA	7.3	17	12.58	11.4	18	15.74	16.3	24.7	19.23	17.6	26.8	23.02	21.7	29.7	25.10	23	31.2	26.08	17.5	28.1	22.16	10.6	24.3	18.24
Total	3.8	19.4	11.92	8.7	25.7	16.49	10.5	29.4	19.52	15.4	33.6	22.90	18	36.6	25.34	14.9	32.4	24.57	10.4	28.1	20.26	6.1	25.3	16.10

Eliophany

	march			april			may			june			july			august			september			october		
prov	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	mean
BS	0	86.8	45.41	2.3	87.1	68.36	0	84.8	55.30	0	82.6	48.09	23.6	85.5	76.09	0	85.8	50.29	0	87.5	62.73	0	86.6	42.29
TO	0	82.3	42.93	5.4	78.2	54.97	0	83.2	44.19	0	72.9	41.68	7	83	65.38	0	82	38.97	0	86	59.28	0	78.3	43.06
MI	0	90.8	52.48	0	89.8	64.89	0.7	88.3	55.90	0	80.3	51.88	26.9	83.5	71.69	2.2	85.9	46.54	0	91.9	66.08	0	92	50.44
VE	0	93.8	44.78	18	87.2	68.11	0	86.2	54.33	0	82.7	51.64	37.7	86.2	70.96	3.6	83.2	54.54	4.2	89.8	60.08	0	93.6	41.82
TR	0	82.4	40.19	9.4	86.6	65.53	29.9	84.4	65.51	2.6	82.7	61.10	16	86.5	70.72	0	88.2	54.53	28	82.7	64.58	0	95.8	51.86
GE	0	95.3	55.18	0	95	70.65	2.9	93.2	61.35	15	92.9	59.87	42.9	94.9	82.67	3.6	93.8	65.87	7.4	96.7	75.96	0	95.8	69.17
BO	0	93.4	49.62	0	94.7	77.10	14.4	95.2	71.74	2.4	96.3	68.54	63.1	96.6	86.84	8.1	95.2	67.76	30.9	93.3	74.22	0	90.7	45.47
FI	0	92.7	44.79	1.4	94.1	68.09	0.5	93.3	61.85	0.9	93.1	54.18	34.9	93.6	80.45	2.8	93.9	66.31	27.5	94.8	73.74	0	94.5	61.36
PG	1.2	94.2	44.93	0.4	95.4	72.64	9.6	94.4	59.27	6.9	89.4	63.07	42.2	94.7	83.49	13.5	95.8	69.10	20.1	97	66.03	0	95.9	51.90
AN	0	90.4	44.75	0	92.8	73.67	4.2	91.3	60.27	23.4	92.8	70.96	3.3	93.5	80.28	28.2	94.3	74.08	0.1	95.8	67.71	0	95.7	40.75
RO	0	87	43.57	0	88.4	61.52	3.3	86.1	61.20	0	83.1	67.20	40.7	87.3	78.70	22	89.2	70.38	15.3	89.6	63.57	0	92.5	57.09
NA	0	96	55.32	0.4	94.2	68.60	18.6	93.2	64.06	21	92.6	69.54	39.2	96.4	86.16	27.4	94.9	78.07	0	96.7	76.62	0	95.1	61.57
BR	0	88.2	46.99	0	91.3	69.13	6.4	88.9	60.33	10	86.8	66.90	69.8	86.8	81.56	54.7	90.6	78.00	0	92.8	68.84	0	95.5	40.42
RC	0	93.5	49.47	0	91.5	60.25	15	92.4	62.42	1.8	92.7	70.26	57.1	92.7	87.60	58.8	93	83.48	6.1	93.5	73.42	0	95.5	46.77
PA	0	88.6	48.88	3	90.4	61.28	0	87	63.43	0	81.9	68.88	65.7	92.7	82.19	24.5	90	74.86	7.9	94.7	65.98	0	82.6	51.81
CA	0.8	83	49.52	11.4	81.4	41.71	7.9	84.8	54.71	6.7	83.8	70.50	68.9	87.5	79.90	61.9	93.1	83.02	1.7	83.7	55.58	15.6	87.3	55.76
Total	0	96	47.81	0	95.4	66.55	0	95.2	60.19	0	96.3	61.99	3.3	96.6	79.87	0	95.8	67.98	0	97	68.13	0	95.9	50.80

Relative humidity

	march			april			may			june			july			august			september			october		
	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	mean	min	max	
	24.25	100	61.97	24.75	87.5	44.24	24.25	100	51.36	37.5	100	60.77	25	69.75	37.38	25.75	99.5	51.28	25.75	100	52.99	35.5	100	
	33.75	85.25	59.80	36.25	82	52.68	36	86.5	58.73	46.75	82.25	65.55	34.5	75.25	49.74	38.75	83	58.28	37.25	75.5	56.30	47.75	79.5	
	31	95.25	63.06	34.75	93.5	56.72	36	93.5	59.50	35.25	96	64.96	20.5	64	42.52	36.75	96	64.20	16.75	95.75	53.56	47	98.75	
	38.25	84.5	59.41	39	74.25	54.05	34.75	96.75	62.23	39.75	83	62.34	37.5	72.5	56.43	43.75	89.5	61.24	43.5	91	62.19	45.25	93	
	26.25	92.75	56.25	16.5	75	52.40	22.25	85	61.22	43.75	80.5	61.04	33.75	73.75	55.39	37.5	89.5	63.06	29.75	82	56.74	27.5	82.5	
	41	84.75	64.89	40.5	83.25	66.34	48	81	67.48	52.75	87.75	74.90	48.5	84.75	70.24	53	84.75	69.40	40.25	86	67.65	38.75	74.75	
	44.25	95.75	67.57	35	84.25	55.69	34	86.75	52.50	26.5	94.25	57.58	19.5	80.75	34.68	23.25	85.5	47.49	30.25	73.5	47.51	45.5	94.75	
	32	84	57.55	24	79.75	39.48	22.25	84	49.95	28.5	84.25	47.95	21.25	45.5	31.54	22.75	77.5	43.64	22.75	87.75	45.39	34.25	90	
	41.3	83.2	64.41	34.7	78.6	45.41	33.1	84.6	52.07	31.1	68.6	45.45	20.6	51.7	29.53	24.4	82.5	42.78	28.1	72.2	45.07	31.8	91.5	
	40	83	67.18	36.25	83.75	61.87	44	84.5	63.74	35.25	91.75	64.31	33	72.5	51.34	44	95.5	66.48	51.75	84.75	62.88	44	83.75	
	45	81.4	64.99	37.5	73.6	55.28	31.2	80.5	56.51	33.5	89	60.96	22.5	59.1	38.44	22.3	67.1	46.09	26.2	76.8	52.28	29.3	86.5	
	44.75	81.75	63.89	31.25	85.25	60.89	43	79.75	65.47	41.5	76.5	59.33	39	68	55.24	39.75	74.25	53.01	35	88.25	54.30	35.25	76.25	
	47	93.25	69.88	47.75	87.5	70.94	29.25	86.5	60.08	23.25	88.25	62.70	15.5	82.5	55.90	36.5	76.25	58.80	43.75	76.75	59.51	44	83.75	
	40	88.75	60.09	45.75	78	64.03	35.75	87.25	54.47	37.75	86.5	55.55	37.75	71.5	48.32	37.25	86.25	58.95	43.25	82	56.58	45.5	87	
	55.5	86	75.77	37.25	82.5	66.09	42.25	85.75	70.50	11.5	89.75	62.48	31.25	80.25	63.27	34.75	88.5	66.74	36.25	89.5	68.39	50.75	88	
	52.5	82	66.61	43.5	82	62.08	27.75	80.5	51.03	33.25	73	50.26	28.5	65	42.21	28	67.5	44.54	39	82.5	55.36	38.75	88.5	
	24.25	100	64.12	16.5	93.5	56.53	22.25	100	58.21	11.5	100	59.04	15.5	84.75	46.80	22.3	99.5	55.17	16.75	100	55.48	27.5	100	

Descriptives of covariates

		All sample					Subsample reporting happy score				
variable	label	mean	std dev	min	max	n. obs	mean	std dev	min	max	n. obs
sex	sex	0.482	0.500	0	1	6816	0.482	0.500	0	1	3298
eta	age	44.869	22.493	0	98	6816	44.779	22.464	0	95	3298
agesq	age squared	2519.083	2024.048	0	9604	6816	2509.650	2021.502	0	9025	3298
ncom	household size	3.144	1.342	1	9	6816	3.126	1.381	1	9	3298
edu 1	low education level	0.610	0.488	0	1	6816	0.619	0.486	0	1	3298
edu 2	medium education level	0.305	0.460	0	1	6816	0.300	0.458	0	1	3298
edu 3	high education level	0.086	0.280	0	1	6816	0.081	0.273	0	1	3298
area 1	North-east area	0.293	0.455	0	1	6816	0.295	0.456	0	1	3298
area 2	North-west area	0.112	0.316	0	1	6816	0.127	0.333	0	1	3298
area 3	Centre area	0.312	0.463	0	1	6816	0.312	0.464	0	1	3298
area 4	South area	0.184	0.388	0	1	6816	0.179	0.383	0	1	3298
area 5	Islands area	0.098	0.298	0	1	6816	0.087	0.282	0	1	3298
acom4c1	town size: 0-20000 inhab	0.188	0.391	0	1	6816	0.171	0.376	0	1	3298
acom4c2	town size: 20000 - 40000 inhab	0.200	0.400	0	1	6816	0.217	0.413	0	1	3298
acom4c3	town size: 40000-500000 inhab	0.369	0.482	0	1	6816	0.372	0.483	0	1	3298
acom4c4	town size: more than 500000 inhab	0.244	0.429	0	1	6816	0.240	0.427	0	1	3298
married	married people	0.511	0.500	0	1	6816	0.509	0.500	0	1	3298
y	income	36519.320	26299.560	0	473503.7	6816	36451.250	28621.290	0	473503.7	3298
logy	income squared	10.306	0.689	2.465	13.068	6815	10.298	0.678	2.465	13.068	3297
q 1	Employed	0.291	0.454	0	1	6816	0.293	0.455	0	1	3298
q 2	self employed	0.069	0.253	0	1	6816	0.636	0.256	0	1	3298
q 3	not employed	0.640	0.480	0	1	6816	0.636	0.481	0	1	3298
perc	wage earner	0.661	0.474	0	1	6816	0.663	0.473	0	1	3298