

APPENDIX

(EASTERLIN, WANG, & WANG, GROWTH AND HAPPINESS IN CHINA, 1990-2015)

Table A3.1. Mean Subjective Well-Being, Five Series, Total Population, China, 1990-2015^a

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	WVS	Gallup1	CGSS	CGSS	Gallup2	Gallup2	Horizon	Horizon
	(1-10)	(1-4)	(1-5)	(MA ^b)	(0-10)	(MA ^b)	(Cities)	(MA ^b)
				(1-5)		(0-10)	(1-5)	(1-5)
1990	7.29							
1995	6.83							
1997		2.82					3.69 ^d	
1998							3.48 ^d	3.54
1999		2.78			4.7 ^c		3.44 ^d	3.40
2000							3.27	3.33
2001	6.53						3.28 ^d	3.29
2002							3.33	3.29
2003							3.26	3.32
2004		2.67			4.5 ^c		3.38	3.31
2005			3.41				3.28	3.39
2006		2.76	3.46	3.52	4.56		3.52	3.38
2007	6.76				4.86	4.76	3.35	3.46
2008			3.68	3.64	4.85	4.72	3.51	3.44
2009					4.45	4.65	3.47	3.46
2010			3.77	3.77	4.65	4.71	3.41	3.47
2011			3.86	3.80	5.04	4.93	3.53	3.50
2012	6.85		3.78	3.79	5.09	5.12	3.57	3.53
2013			3.72		5.24	5.18	3.49	3.52
2014					5.20	5.25	3.51	3.61
2015					5.30			

Sources: WVS (World Values Survey: www.worldvaluessurvey.org); Gallup1 and Gallup2: (www.gallup.com); Horizon Research Consultancy Group, series for "cities" (www.agmr.com/members/horizon.html)

a. For specific questions and response options, see text, Technical Box 1. The scale for each survey is shown above in parentheses.

b. Three-year moving average, centered.

c. 1-10 scale

d. 1-4 scale, mean computed from 5, 4, 2, 1 coding.

Table A3.2. Real GDP per Capita and Price Level of Household Consumption, 1988-2015

Year	Real GDP per Capita (2011 US dollars)			Price Level (US 2005 = 100)		
	(1)	(2)	(3)	(4)	(5)	(6)
	Rate of Change (%)			Rate of Change (%)		
	Annual	Annual	MA ^c	Annual	Annual	MA ^c
1988	2408			13.3		
1989	2361	-1.94		15.6	17.45	
1990	2386	1.08	1.37	12.8	-18.05	-1.28
1991	2505	4.98	4.43	12.4	-3.24	-5.00
1992	2687	7.24	6.66	13.2	6.29	3.40
1993	2896	7.78	7.31	14.1	7.16	1.19
1994	3095	6.90	8.59	12.7	-9.87	6.74
1995	3439	11.09	6.82	15.6	22.95	10.32
1996	3523	2.45	6.52	18.4	17.89	15.86
1997	3735	6.00	2.56	19.7	6.74	11.63
1998	3706	-0.76	3.50	21.7	10.27	6.29
1999	3901	5.26	3.35	22.1	1.86	6.27
2000	4118	5.56	5.90	23.5	6.67	3.92
2001	4401	6.87	7.66	24.3	3.23	2.67
2002	4866	10.56	8.39	23.8	-1.90	1.87
2003	5243	7.75	9.62	24.9	4.27	2.60
2004	5796	10.56	9.58	26.2	5.41	5.51
2005	6400	10.43	10.77	28.0	6.84	5.93
2006	7126	11.33	10.68	29.6	5.54	9.47
2007	7858	10.29	7.95	34.3	16.02	15.66
2008	8034	2.23	6.97	43.0	25.43	14.54
2009	8709	8.41	6.41	44.0	2.18	12.15
2010	9456	8.58	8.30	47.8	8.85	7.68
2011	10205	7.92	7.92	53.6	12.02	9.22
2012	10945	7.25	7.27	57.2	6.81	8.35
2013	11673	6.66	6.92	60.8	6.22	5.49
2014	12473	6.85	6.63	62.9	3.45	4.23
2015	13271 ^a	6.40		64.8 ^b	3.03	

Sources: Real GDP per capita 1988-2014 (Penn World Table 9.0, <http://www.rug.nl/research/ggdc/data/pwt/>), Real GDP per capita 2015 (NBS of China, <http://www.stats.gov.cn/>), Price level 1988-2014 (Penn World Table 9.0, <http://www.rug.nl/research/ggdc/data/pwt/>), Price level 2015 (NBS of China, <http://www.stats.gov.cn/>).

a. Extrapolated by the NBS series, assuming the 2015 growth rate is the same (6.4%) in both series.

b. Extrapolated by the NBS series, assuming the ratio of the NBS CPI (1978=100) to the PWT price level in 2015 is 9.5, following the decreasing trend of the ratio since 2011.

c. Three-year moving average, centered.

**Table A3.3. Urban Unemployment Rate, Four Series, 1988-2015
(percent of labor force)**

Year	(1) NBER	(2) GWP	(3) NBER (MA ^a)	(4) GWP (MA ^a)	(5) CHIP	(6) Census
1988	3.5				0.4	
1989	3.0		3.5			
1990	3.9		3.6			4.3
1991	3.8		3.8			
1992	3.7		3.7			
1993	3.5		3.8			
1994	4.1		3.9			
1995	4.0		4.1		3.4	
1996	4.1		4.3			
1997	4.9		4.6			
1998	4.9		5.1			
1999	5.6		6.1			
2000	7.8		7.2			11.3/8.3 ^b
2001	8.2		8.8			
2002	10.4		9.7		11.6	
2003	10.4		10.2			
2004	9.9		10.1			
2005	10.0		9.8			9.6/6.9 ^b
2006	9.4		9.2			
2007	8.1		8.9		7.9	
2008	9.1		8.7			
2009	8.9	8.2				
2010		8.7		7.3		4.8 ^b
2011		4.9		6.3		
2012		5.3		5.0		
2013		4.7		4.1	4.2	
2014		2.3		4.2		
2015		5.5				

Sources: NBER (urban *hukou* population): Feng, Hu, and Moffitt 2015; GWP (www.gallup.com); CHIP (urban households, <http://www.ciidbnu.org/chip/index.asp>); Census (random samples of the Census data from the NBS of China, and statistics on <http://www.stats.gov.cn/>).

a. Three-year moving average, centered.

b. Urban (city + town) population; other census values are for urban *hukou* population.

**Table A3.4. Safety Net Indicators by Level of Education, 1988-2013
(urban households)**

		A. Pension coverage (percent of males ages 60+ and females ages 55+)				
		1988	1995	2002	2007	2013
1	All	99.5	99.5	79.8	84.6	83.1
2	College or more	99.2	99.7	90.9	95.4	90.3
3	Middle school or high school	99.8	99.7	88.7	90.6	86.8
4	Primary school or less	99.9	99.1	63.1	64.6	74.9
5	Row 2 - Row 4	-0.7	0.6	27.8	30.8	15.4
		B. Healthcare coverage (percent of population ages 15+)				
		1988	1995	2002	2007	2013
6	All	(99) ^a	75.4	56.4		92.1
7	College or more	(99)	87.4	71.2		91.3
8	Middle school or High School	(99)	74.6	52.8		91.9
9	Primary school or less	(99)	61.5	43.3		94.7
10	Row 7 - Row 9	(0)	25.9	27.9		-3.4

Source: CHIP (urban households, <http://www.ciidbnu.org/chip/index.asp>). Healthcare was not asked in 1988 and 2007.

a. Values for 1988 assume coverage was nearly universal, based on responses on self-rated health (SRH) by income and education in the 1990 WVS which are very close together. Cf. Inglehart et al. 1998, V83.

Table A3.5. Measures of Social Capital, 1990-2012

	1990	1995	2001	2007	2012
Most people can be trusted (% agree)	60.4	52.3	54.4	52.8	63.2
Civic cooperation (10=always; 1=never)					
Wrong to falsely claim benefits	9.30	8.63	8.86	7.48	7.33
Wrong to avoid fare	9.42	9.39	9.66	8.96	8.38
Wrong to cheat on tax	9.46	9.47	9.42	9.00	8.79
Bribing not acceptable	9.66	9.79	9.65	9.28	9.03
Mean	9.46	9.34	9.41	8.67	8.36

Source: WVS. Specific questions and response options are given in Technical Box 2.

Table A3.6. Indicators of trends in environmental pollution and housing prices, 1990-2014

Year	Coal		Housing Prices
	Consumption (million tons)	Housing Prices RMB/sq. meter	(MA ^a) RMB/sq. meter
1990	1055		
1991			
1992			
1993			
1994			
1995	1377		
1996			
1997			
1998			
1999			
2000	1357	1948	
2001		2017	2019
2002		2092	2102
2003		2197	2299
2004		2608	2581
2005	2434	2937	2888
2006		3119	3234
2007		3645	3447
2008		3576	3893
2009		4459	4253
2010	3490	4725	4726
2011		4993	5049
2012		5430	5424
2013	4244	5850	5738
2014		5933	

Sources: Coal Consumption, Department of Energy Statistics, National Bureau of Statistics (2015). China Energy Statistical Yearbook 2014. China Statistics Press; Housing Prices, NBS of China.

a. Three-year moving average, centered.

Table A3.7. Predictors of SWB in World Happiness Reports, 1990-2012

	(1) GDP p.c. US\$ 2011	(2) Life Expectancy yrs.	(3) Freedom of Choice (1-10) ^a	(4) Bribery acceptable (1-10) ^b
1990	2386	69.0	7.04	1.34
1995	3439	69.9	6.80	1.21
2001	4401	72.2	7.15	1.35
2007	7858	74.3	7.29	1.72
2012	10945	75.4	7.14	1.97

a. 1 = none; 10 = a great deal.

b. 1 = never; 10 = always.

Source: Col. (1) Table A2, col.1
Col. (2) World Bank, World Development Indicators
Cols. (3), (4) World Values Survey

Table A3.8. Actual and Predicted Mean Ladder of Life, 2006-2015

Year	Actual ladder	Predicted ladder	1.96 s.e.
2006	4.56	5.04	0.09
2007	4.86	5.49	0.08
2008	4.85	5.52	0.08
2009	4.45	5.44	0.08
2010	4.65	5.38	0.08
2011	5.04	5.46	0.08
2012	5.09	5.44	0.06
2013	5.24	5.41	0.08
2014	5.20	5.42	0.08
2015	5.30	5.37	0.08

Sources: Cols. 2 and 4, Gallup World Poll. Col. 3, based on equation in Helliwell et al (2016), p. 16, Table 2.1, col. 1.

Table A3.9. Mean Life Satisfaction, Top and Bottom Income Terciles, and Standard Deviation of Life Satisfaction, 1990-2012 (scale 1-10)

	(1) 1990	(2) 1995	(3) 2007	(4) 2012
All	7.29	6.83	6.77	6.86
Top Tercile	7.30	7.77	7.53	7.47
Bottom Tercile	7.12	5.89	5.53	6.46
Top minus bottom	0.18	1.88	2.00	1.01
Life Satisfaction St. Dev.	2.10	2.42	2.43	1.98

Source: World Values Survey.

Table A3.10. Unemployment Rate, by Level of Education, 1988-2013 (per cent of labor force)

	1988	1995	2002	2007	2013
All	0.4	3.4	11.6	7.9	4
College or more	0.0	0.8	3.8	3.6	2.8
Middle school or high school	0.5	3.7	13.8	8.8	5.2
Primary school or less	0.1	3.9	18.5	12.5	4.2
Primary minus college	0.1	3.1	14.7	8.9	1.5

Source: World Values Survey.

Table A11. Mean Financial Satisfaction, Top and Bottom Income Terciles, 1990-2012 (scale 1-10)

	(1) 1990	(2) 1995	(3) 2007	(4) 2012
All	6.10	6.11	6.06	6.18
Top third	6.34	7.25	7.38	7.00
Bottom third	5.73	4.90	5.00	5.54
Top minus bottom	0.61	2.35	2.38	1.46

Source: World Values Survey.

Table A3.12. Mean Self-Reported Health, Top and Bottom Income Terciles, 1990-2012 (scale 1-5)

	(1) 1990	(2) 1995	(3) 2007	(4) 2012
All	3.82	4.01	3.93	3.86
Top third	3.83	4.26	4.13	4.02
Bottom third	3.80	3.80	3.71	3.69
Top minus bottom	0.03	0.46	0.42	0.33

Source: World Values Survey.

Table A3.13. Mean Life Satisfaction by Birth Cohort, 1990-2012 (scale 1-10)

Cohort	(1) 1990	(2) 2001	(3) 2012
1936-45	7.43	6.84	7.18
1946-60	7.40	6.38	6.76
1961-65	6.78	6.53	6.79

Source: World Values Survey.

Table A3.14. Mean Subjective Well-Being by Urban-Rural Residence, 2003-2015^a

Year	(1) Gallup (0-10)		(2)		(3)		(4)	
	Urban		Rural		Urban		Rural	
	Y	MA	Y	MA	Y	MA	Y	MA
2003					3.28			
2004								
2005					3.45	3.41	3.36	
2006	4.80		4.41		3.50	3.58	3.40	3.45
2007	5.12	5.00	4.70	4.58				
2008	5.09	4.97	4.64	4.56	3.79	3.70	3.58	3.56
2009	4.70	4.90	4.34	4.47				
2010	4.90	5.01	4.44	4.51	3.82	3.82	3.71	3.72
2011	5.42	5.30	4.75	4.67	3.85	3.83	3.86	3.77
2012	5.58	5.51	4.81	4.86	3.81	3.79	3.73	3.77
2013	5.54	5.47	5.02	4.99	3.72		3.71	
2014	5.28	5.53	5.13	5.04				
2015	5.76		4.98					

Legend: Y= yearly

MA = Three item moving average, centered

Sources: Gallup, See Table A1. CGSS (<http://www.chinagss.org/index.php?r=index/index&hl=en>).

a. For specific questions and response options, see Technical Box 1

Table A3.15. Mean Subjective Well-Being, Urban and Rural *Hukou* Holders in Urban Areas, 2003-2013^a

Year	(1) CGSS (1-5)		(2)	
	UH		RH	
	Y	MA	Y	MA
2003	3.28		3.19	
2004				
2005	3.45	3.41	3.44	
2006	3.50	3.58	3.43	3.55
2007				
2008	3.79	3.70	3.79	3.67
2009				
2010	3.82	3.82	3.78	3.80
2011	3.85	3.83	3.82	3.78
2012	3.81	3.79	3.74	3.75
2013	3.72		3.70	

Legend: UH = Urban *hukou* holders in urban areasRH = Rural *hukou* holders in urban areas

Y= yearly

MA = Three item moving average, centered

Source: CGSS (<http://www.chinagss.org/index.php?r=index/index&hl=en>).

a. For specific questions and response options, see Technical Box 1