

Appendix for the details of statistical test results
Statistical Package used:Stata/SE 11.1

1. ANOVA result with dependent variable: current level of happiness, independent variables: sexes, ages, and survey methods(including interaction terms)

variables q1: current level of happiness

q21:sexes(1 male, 2 female)

age:ages(10s, 20s, 30s, 40s, 50s, 60s)

survey: survey methods(1direct-visit and self-completion, 2online)

. anova q1 q21 age survey q21##age##survey

Number of obs = 15566 R-squared = 0.0488
Root MSE = 2.1426 Adj R-squared = 0.0474

Source	Partial SS	df	MS	F	Prob > F
Model	3659.75334	23	159.119711	34.66	0.0000
q21	686.837041	1	686.837041	149.61	0.0000
age	256.919801	5	51.3839602	11.19	0.0000
survey	1218.47157	1	1218.47157	265.42	0.0000
q21#age	207.313902	5	41.4627803	9.03	0.0000
q21#survey	.822474512	1	.822474512	0.18	0.6721
age#survey	551.236533	5	110.247307	24.02	0.0000
q21#age#survey	46.2113676	5	9.24227351	2.01	0.0734
Residual	71349.0546	15542	4.59072543		
Total	75008.8079	15565	4.81906893		

2. Result of analyses with dependent variable: current level of happiness, independent variables: ages, employment status, household income and sexes.

variables q1: current level of happiness

age :ages(10s, 20s, 30s, 40s, 50s, 60s)

qza1_X:employment status (X=1 unemployed, 2housewives, husbands, 3students, 4those not in the labor force, 5agriculture and forestry, 6fishery, 7mining, 8constructions, 9manufacturing, 10electricity, gas, heat supply and water, 11Information and communications, 12transport , 13wholesale and retail trade, 14 Finance and insurance , 15real estate, 16 Accommodations, eating and drinking services , 17Medical, health care and welfare, 18Education, learning support , 19Compound services , 20Services, not elsewhere classified, 21Government, except elsewhere classified ,22Industries unable to be classified)

qe2: household income(income tax included) (1:less than 1million yen、 2:less than 2 million yen 3:less than 3 million yen 4:less than 4 million yen、 5:less than 5 million yen, 6: less than 6 million yen 7: less than 7 million yen、 8: less than 8 million yen、 9: less than 9 million yen 10: less than 10 million yen, 11: less than 11 million yen, 12: less than 15 million yen 13: less than 20 million yen, 14 : more than 20 million yen

q21: sexes (1:male,2:female)

(1) Anova result using online survey data without 1,502 respondents who cannot be classified(no interactional terms, no qza1_13)

anova q1 age qza1_1 qza1_2 qza1_3 qza1_4 qza1_5 qza1_6 qza1_7 qza1_8 qza1_9
qza1_10 qza1_11 qza1_12 qza1_14 qza1_15 qza1_16 qza1_17 qza1_18 qza1_19 qza1_20
qza1_21 qza1_22 qe2 q21

		Number of obs = 8606		R-squared = 0.0742	
		Root MSE = 2.14796		Adj R-squared = 0.0699	
Source	Partial SS	df	MS	F	Prob > F
Model	3169.24231	40	79.2310578	17.17	0.0000
age	497.222604	5	99.4445208	21.55	0.0000
qza1_1	115.823972	1	115.823972	25.10	0.0000
qza1_2	116.328583	1	116.328583	25.21	0.0000
qza1_3	4.7380027	1	4.7380027	1.03	0.3109
qza1_4	11.0717965	1	11.0717965	2.40	0.1214
qza1_5	11.1576627	1	11.1576627	2.42	0.1200
qza1_6	3.3071489	1	3.3071489	0.72	0.3972
qza1_7	6.65916572	1	6.65916572	1.44	0.2296
qza1_8	13.9330316	1	13.9330316	3.02	0.0823
qza1_9	.083012681	1	.083012681	0.02	0.8933
qza1_10	1.38883436	1	1.38883436	0.30	0.5833
qza1_11	8.01200409	1	8.01200409	1.74	0.1876
qza1_12	.574609916	1	.574609916	0.12	0.7242
qza1_14	7.16599227	1	7.16599227	1.55	0.2127
qza1_15	2.71566857	1	2.71566857	0.59	0.4430
qza1_16	4.27641166	1	4.27641166	0.93	0.3357
qza1_17	5.35416461	1	5.35416461	1.16	0.2814
qza1_18	35.2076301	1	35.2076301	7.63	0.0057
qza1_19	.000219831	1	.000219831	0.00	0.9945
qza1_20	8.64504725	1	8.64504725	1.87	0.1711
qza1_21	14.7458232	1	14.7458232	3.20	0.0739
qza1_22	.036003994	1	.036003994	0.01	0.9296
qe2	1318.45626	13	101.419712	21.98	0.0000
q21	272.237736	1	272.237736	59.01	0.0000
Residual	39516.7112	8565	4.61374328		
Total	42685.9535	8605	4.9605989		

(2) multiple regression analysis result(no qza1_13)

regress q1 age qza1_1 qza1_2 qza1_3 qza1_4 qza1_5 qza1_6 qza1_7 qza1_8 qza1_9
qza1_10 qza1_11 qza1_12 qza1_14 qza1_15 qza1_16 qza1_17 qza1_18 qza1_19 qza1_20
qza1_21 qza1_22 qe2 q21

Source	SS	df	MS	Number of obs = 8606
Model	2803.42014	24	116.809172	F(24, 8581) = 25.13
Residual	39882.5334	8581	4.64777222	Prob > F = 0.0000
				R-squared = 0.0657
				Adj R-squared = 0.0631

Total	42685.9535	8605	4.9605989		Root MSE	= 2.1559
q1	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
age	.0149382	.0018623	8.02	0.000	.0112876	.0185888
qza1_1	-1.035541	.1981323	-5.23	0.000	-1.423928	-.6471541
qza1_2	.5725059	.0992428	5.77	0.000	.377966	.7670457
qza1_3	.4293106	.1890638	2.27	0.023	.0587002	.7999211
qza1_4	.3338235	.1124848	2.97	0.003	.1133263	.5543208
qza1_5	-.3391189	.2138601	-1.59	0.113	-.7583361	.0800982
qza1_6	.7370207	.9661582	0.76	0.446	-1.156882	2.630923
qza1_7	1.038243	.9662484	1.07	0.283	-.8558366	2.932322
qza1_8	-.1864905	.1062149	-1.76	0.079	-.3946973	.0217163
qza1_9	.006606	.0874212	0.08	0.940	-.1647607	.1779726
qza1_10	-.2131026	.3861089	-0.55	0.581	-.9699688	.5437637
qza1_11	-.1980114	.16839	-1.18	0.240	-.5280964	.1320735
qza1_12	-.0521845	.1278752	-0.41	0.683	-.3028507	.1984817
qza1_14	.2149193	.1698231	1.27	0.206	-.1179747	.5478134
qza1_15	-.1385355	.2358004	-0.59	0.557	-.6007611	.32369
qza1_16	-.111995	.1294692	-0.87	0.387	-.3657859	.1417958
qza1_17	.1106894	.1061522	1.04	0.297	-.0973945	.3187733
qza1_18	.3595691	.134728	2.67	0.008	.0954699	.6236683
qza1_19	.0503012	.2997421	0.17	0.867	-.5372655	.6378678
qza1_20	.1390737	.0915484	1.52	0.129	-.0403832	.3185306
qza1_21	.2452309	.1510026	1.62	0.104	-.0507705	.5412324
qza1_22	.0073345	.1980867	0.04	0.970	-.3809631	.3956321
qe2	.1216427	.0080765	15.06	0.000	.1058109	.1374746
q21	.3885671	.0527144	7.37	0.000	.2852342	.4919001
_cons	3.865664	.1434969	26.94	0.000	3.584376	4.146953

3. ANOVA result with dependent variable: current level of happiness, independent variables: level of happiness in the future, sexes, ages, and survey methods(including interaction terms)

variables q1: current level of happiness

q2: current level of happiness

q21:sexes(1 male, 2 female)

age:ages(10s, 20s, 30s, 40s, 50s, 60s)

survey: survey methods(1direct-visit and self-completion, 2online)

anova q1 q2 q21 age survey q2#q21 q2#age q2#survey q21#age q21#survey age#survey

Number of obs = 13727 R-squared = 0.6255
Root MSE = 1.33105 Adj R-squared = 0.6228

Source	Partial SS	df	MS	F	Prob > F
Model	40327.3031	98	411.503093	232.27	0.0000
q2	24400.8545	10	2440.08545	1377.26	0.0000
q21	11.3149859	1	11.3149859	6.39	0.0115
age	68.2109988	5	13.6421998	7.70	0.0000

survey		124.013079	1	124.013079	70.00	0.0000
q2#q21		17.2390018	10	1.72390018	0.97	0.4645
q2#age		194.631107	50	3.89262214	2.20	0.0000
q2#survey		61.5867291	10	6.15867291	3.48	0.0001
q21#age		46.4700617	5	9.29401234	5.25	0.0001
q21#survey		1.56279687	1	1.56279687	0.88	0.3476
age#survey		44.7304735	5	8.94609469	5.05	0.0001
Residual		24144.6354	13628	1.77169324		
-----+-----						
Total		64471.9385	13726	4.69706677		

4. Multiple regression result with dependent variable: current level of happiness, independent variables: difference between perceived level of other family member's happiness and current level of happiness, sexes, ages, square of ages, self-reported health and survey methods

variables q1: current level of happiness

gap perceived level of happiness of other family members-current level of happiness

age:ages(10s, 20s, 30s, 40s, 50s, 60s)

q21:sexes(1 male, 2 female)

survey: survey methods(1direct-visit and self-completion, 2online)

(1) multiple regression

regress q1 gap age q21 survey

Source		SS	df	MS	Number of obs =	13727
-----+-----						
Model		14801.8269	4	3700.45671	F(4, 13722) =	1022.30
Residual		49670.1117	13722	3.61974287	Prob > F	= 0.0000
-----+-----						
Total		64471.9385	13726	4.69706677	R-squared	= 0.2296
					Adj R-squared	= 0.2294
					Root MSE	= 1.9026

q1		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
-----+-----						
gap		-.6977117	.0118304	-58.98	0.000	-.7209009 -.6745224
age		.0067392	.0010501	6.42	0.000	.0046809 .0087976
q21		.4685918	.0325409	14.40	0.000	.4048073 .5323764
survey		-.4634132	.0348559	-13.30	0.000	-.5317355 -.3950909
_cons		6.20664	.0961424	64.56	0.000	6.018188 6.395093
-----+-----						

(2) GMM(gap is the instrument estimated by ages, square of ages, self-reported health, interdependent happiness scale, social support scale)

variables ages^2:age*age

q20: self-reported health (1: I am totally healthy, 2: I am healthy, 3: I am neither healthy nor ill, 4: I am not healthy, 5: I am not healthy at all)

ihs: interdependent happiness scale(average of answers in question 7 of the online survey(question 6 of direct-visit and question survey), the higher, the happier)

support: social support index(average of answers in question 19 of the online survey(question 16 of direct-visit and question survey), the higher, the stronger support)

ivregress gmm q1 age q21 survey (gap = age age2 q20 ihs support)

Instrumental variables (GMM) regression	Number of obs = 13665
	Wald chi2(4) = 368.42
	Prob > chi2 = 0.0000
	R-squared = .
GMM weight matrix: Robust	Root MSE = 7.7684

	q1	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
gap		-6.183149	.3385125	-18.27	0.000	-6.846621	-5.519677
age		-.0134755	.0046236	-2.91	0.004	-.0225376	-.0044135
q21		.2402544	.1335556	1.80	0.072	-.0215097	.5020186
survey		.4638295	.1522388	3.05	0.002	.1654469	.7622121
_cons		6.769235	.4037275	16.77	0.000	5.977944	7.560527

Instrumented: gap

Instruments: age q21 survey age2 q20 ihs support

5. ANOVA result with dependent variable: current level of happiness, independent variables: desired level of happiness, sexes, ages, and survey methods(including interaction terms)

variables q1: current level of happiness

q3: desired level of happiness

q21:sexes(1 male, 2 female)

age:ages(10s, 20s, 30s, 40s, 50s, 60s)

survey: survey methods(1direct-visit and self-completion, 2online)

anova q1 q3 q21 age survey q3#q21 q3#age q3#survey q21#age q21#survey age#survey q3#q21#age q3#q21#survey q21#age#survey

Number of obs = 15560	R-squared = 0.2715
Root MSE = 1.88331	Adj R-squared = 0.2639

Source	Partial SS	df	MS	F	Prob > F
Model	20355.5654	162	125.651638	35.43	0.0000
q3	9032.95933	10	903.295933	254.68	0.0000
q21	8.22082171	1	8.22082171	2.32	0.1279
age	89.7491151	5	17.949823	5.06	0.0001
survey	116.263464	1	116.263464	32.78	0.0000
q3#q21	75.7196351	10	7.57196351	2.13	0.0188
q3#age	509.391179	50	10.1878236	2.87	0.0000
q3#survey	118.074852	10	11.8074852	3.33	0.0002
q21#age	29.7041693	5	5.94083385	1.67	0.1368
q21#survey	2.8317e-06	1	2.8317e-06	0.00	0.9993

age#survey	151.721259	5	30.3442518	8.56	0.0000
q3#q21#age	211.65368	49	4.31946286	1.22	0.1417
q3#q21#survey	27.9391117	10	2.79391117	0.79	0.6408
q21#age#survey	44.061229	5	8.8122458	2.48	0.0295
Residual	54610.7862	15397	3.54684589		
-----+					
Total	74966.3516	15559	4.81819857		

6. Multiple regression result with dependent variable: current level of happiness, independent variables: difference between desired level of happiness and current level of happiness, sexes, ages, square of ages, self-reported health and survey methods

variables q1: current level of happiness

gapd: desired level of happiness -current level of happiness

age: ages(10s, 20s, 30s, 40s, 50s, 60s)

ages2: age*age

q20: self-reported health (1: I am totally healthy, 2: I am healthy, 3: I am neither healthy nor ill, 4: I am not healthy, 5: I am not healthy at all)

q21: sexes(1 male, 2 female)

survey: survey methods(1direct-visit and self-completion, 2online)

ihs : interdependent happiness scale(average of answers in question 7 of the online survey(question 6 of direct-visit and question survey), the higher, the happier)

support: social support index(average of answers in question 19 of the online survey(question 16 of direct-visit and question survey), the higher, the stronger support)

(1) regression analysis

regress q1 gapd age q21 survey

Source	SS	df	MS	Number of obs =	15560
-----+					
Model	29715.1246	4	7428.78116	F(4, 15555) =	2553.63
Residual	45251.227	15555	2.90911135	Prob > F =	0.0000
-----+					
Total	74966.3516	15559	4.81819857	R-squared =	0.3964
				Adj R-squared =	0.3962
				Root MSE =	1.7056

q1	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
-----+						
gapd	-.619505	.006401	-96.78	0.000	-.6320517	-.6069583
age	.0067865	.0008864	7.66	0.000	.005049	.008524
q21	.4900451	.027398	17.89	0.000	.4363419	.5437483
survey	-.2471193	.029365	-8.42	0.000	-.3046782	-.1895605
_cons	6.226717	.0810548	76.82	0.000	6.06784	6.385594

(2) GMM(gapd is the instrument estimated by ages, square of ages, self-reported health, interdependent happiness scale, social support scale)

. ivregress gmm q1 age q21 survey (gapd=age age2 q20 q21 survey ihs support)

Instrumental variables (GMM) regression

Number of obs = 15487
Wald chi2(4) = 2212.04
Prob > chi2 = 0.0000
R-squared = .
Root MSE = 3.1479

GMM weight matrix: Robust

		Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
q1							
gapd		-1.856472	.0406351	-45.69	0.000	-1.936115	-1.776829
age		.0045877	.001624	2.82	0.005	.0014048	.0077706
q21		.3888253	.0503406	7.72	0.000	.2901595	.4874911
survey		.3551868	.0548762	6.47	0.000	.2476314	.4627422
_cons		6.72366	.1501357	44.78	0.000	6.429399	7.01792

Instrumented: gapd

Instruments: age q21 survey age2 q20 ihs support

7. ANOVA result with dependent variable: level of happiness in the future, independent variables: sexes, ages, and survey methods(including interaction terms)

variables q4: level of happiness in the future

age:ages(10s, 20s, 30s, 40s, 50s, 60s)

q21:sexes(1 male, 2 female)

survey: survey methods(1direct-visit and self-completion, 2online)

anova q4 q21 age survey q21##age##survey

Number of obs = 15565 R-squared = 0.0386
Root MSE = 2.05044 Adj R-squared = 0.0371

Source	Partial SS	df	MS	F	Prob > F
Model	2620.93889	23	113.953865	27.10	0.0000
q21	97.2232747	1	97.2232747	23.12	0.0000
age	2183.97597	5	436.795194	103.89	0.0000
survey	1.26267509	1	1.26267509	0.30	0.5837
q21#age	107.02674	5	21.405348	5.09	0.0001
q21#survey	8.18340214	1	8.18340214	1.95	0.1630
age#survey	251.42127	5	50.284254	11.96	0.0000
q21#age#survey	55.5218254	5	11.1043651	2.64	0.0216
Residual	65338.8538	15541	4.2042889		
Total	67959.7927	15564	4.36647345		

8. Multiple regression result with dependent variable: current level of happiness, independent variables: level of happiness in the future, sexes, ages, square of ages, self-reported health and survey methods

variables :q1: current level of happiness
 gapd: desired level of happiness -current level of happiness
 age: ages(10s, 20s, 30s, 40s, 50s, 60s)
 ages2:age*age
 q20: self-reported health (1: I am totally healthy, 2: I am healthy, 3: I am
 neither healthy nor ill, 4: I am not healthy, 5: I am not healthy at all)
 q21: sexes(1 male, 2 female)
 survey: survey methods(1direct-visit and self-completion, 2online)
 ihs : interdependent happiness scale(average of answers in question 7 of the
 online survey(question 6 of direct-visit and question survey), the higher,
 the happier)
 support: social support index(average of answers in question 19 of the online
 survey(question 16 of direct-visit and question survey), the higher, the
 stronger support)

(1) regression analysis

. regress q1 q4 age q21 survey

Source	SS	df	MS	Number of obs = 15561		
Model	9615.12428	4	2403.78107	F(4, 15556)	=	571.94
Residual	65379.9191	15556	4.20287472	Prob > F	=	0.0000
				R-squared	=	0.1282
				Adj R-squared	=	0.1280
Total	74995.0434	15560	4.81973286	Root MSE	=	2.0501

q1	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
q4	.3290719	.007987	41.20	0.000	.3134166	.3447273
age	.0141756	.0010801	13.12	0.000	.0120585	.0162927
q21	.4761241	.0329716	14.44	0.000	.411496	.5407522
survey	-.5633091	.0351159	-16.04	0.000	-.6321403	-.4944779
_cons	5.608398	.0979048	57.28	0.000	5.416494	5.800303

(2) GMM(q4 is the instrument estimated by ages, square of ages, self-reported health, interdependent happiness scale, social support scale)

. ivregress gmm q1 age q21 survey (q4=age age2 q20 q21 survey ihs support)

Instrumental variables (GMM) regression	Number of obs = 15489
	Wald chi2(4) = 1563.04
	Prob > chi2 = 0.0000
	R-squared = .
GMM weight matrix: Robust	Root MSE = 4.1441

q1	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
q4	2.078648	.0542125	38.34	0.000	1.972393	2.184902
age	.0531578	.0024985	21.28	0.000	.0482608	.0580547
q21	.0697329	.0671723	1.04	0.299	-.0619225	.2013883

survey	-.6820189	.0715198	-9.54	0.000	-.822195	-.5418427
_cons	3.484906	.214618	16.24	0.000	3.064263	3.90555

Instrumented: q4

Instruments: age q21 survey age2 q20 ihs support

9. t test on current level of happiness and life satisfaction between survey methods.

variables gaplife1: life satisfaction – current level of happiness in direct-visit and question survey.

gaplife2: life satisfaction – current level of happiness in online survey.

Two-sample t test with equal variances

Variable	Obs	Mean	Std. Err.	Std. Dev.	[95% Conf. Interval]	
+						
gaplife1	5089	.7604637	.0215592	1.537976	.7181984	.8027291
gaplife2	10469	.399274	.0151722	1.552391	.3695336	.4290145
+						
combined	15558	.5174187	.0124819	1.556891	.4929527	.5418847
+						
diff		.3611897	.026448		.3093486	.4130308

diff = mean(gaplife1) - mean(gaplife2)	t = 13.6566
Ho: diff = 0	degrees of freedom = 15556

Ha: diff < 0	Ha: diff != 0	Ha: diff > 0
Pr(T < t) = 1.0000	Pr(T > t) = 0.0000	Pr(T > t) = 0.0000

10. ANOVA and regression analysis results with dependent variable: interdependent happiness scale, independent variables: ages, sexes, and survey methods.

variables: ihs : interdependent happiness scale(average of answers in question 7 of the online survey(question 6 of direct-visit and question survey), the higher, the happier)

age: ages(10s, 20s, 30s, 40s, 50s, 60s)

ages^2: age*age

q21: sexes(1 male, 2 female)

survey: survey methods(1direct-visit and self-completion, 2online)

(1) ANOVA

anova ihs q21 age survey q21##age##survey

Number of obs =	15524	R-squared =	0.0634
Root MSE =	1.94527	Adj R-squared =	0.0621

Source	Partial SS	df	MS	F	Prob > F
+					
Model	3973.60111	23	172.765266	45.66	0.0000
q21	471.805434	1	471.805434	124.68	0.0000
age	1571.67316	5	314.334631	83.07	0.0000

survey	319.584945	1	319.584945	84.46	0.0000
q21#age	215.633042	5	43.1266085	11.40	0.0000
q21#survey	.927128176	1	.927128176	0.25	0.6206
age#survey	314.59005	5	62.9180101	16.63	0.0000
q21#age#survey	17.7574067	5	3.55148133	0.94	0.4546
Residual	58653.2023	15500	3.78407757		
Total	62626.8035	15523	4.03445233		

(2)multiple regression

. regress ihs q21 age survey

Source	SS	df	MS	Number of obs =	15524
Model	2638.09817	3	879.366056	F(3, 15520) =	227.51
Residual	59988.7053	15520	3.86525163	Prob > F =	0.0000
Total	62626.8035	15523	4.03445233	R-squared =	0.0421
				Adj R-squared =	0.0419
				Root MSE =	1.966

ihs	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
q21	.5116248	.0316096	16.19	0.000	.4496663 .5735833
age	.0194024	.0010232	18.96	0.000	.0173967 .021408
survey	-.2203341	.0337505	-6.53	0.000	-.2864891 -.1541791
_cons	4.124459	.0935586	44.08	0.000	3.941073 4.307844

11. ANOVA and multiple regression results with dependent variable: affect experienced yesterday (positive and negative), independent variables: age and sexes.

variables: oecd_posi : positive affect(average of happiness and content in question 8 of online survey)
 oecd_neg : negative affect(average of sorrow and anger in question 8 of online survey)
 age: ages(10s, 20s, 30s, 40s, 50s, 60s)
 ages2:age*age
 q21: sexes(1 male, 2 female)

(1) ANOVA

anova oecd_posi q21 age q21#age

	Number of obs =	10469	R-squared =	0.0657	
	Root MSE =	2.32892	Adj R-squared =	0.0647	
Source	Partial SS	df	MS	F	Prob > F
Model	3986.36689	11	362.39699	66.82	0.0000
q21	1214.81495	1	1214.81495	223.98	0.0000
age	2113.11835	5	422.62367	77.92	0.0000
q21#age	171.411941	5	34.2823882	6.32	0.0000

Residual		56717.2212	10457	5.42385208
-----+				
Total		60703.5881	10468	5.79896714

. anova oecd_neg q21 age q21#age

Number of obs = 10469 R-squared = 0.0171
Root MSE = 2.39662 Adj R-squared = 0.0160

Source		Partial SS	df	MS	F	Prob > F
-----+						
Model		1042.12377	11	94.7385248	16.49	0.0000
q21		18.9410729	1	18.9410729	3.30	0.0694
age		805.503118	5	161.100624	28.05	0.0000
q21#age		161.489974	5	32.2979948	5.62	0.0000
Residual		60062.91	10457	5.74379937		
-----+						
Total		61105.0338	10468	5.83731695		

(2)multiple regressions

regress oecd_posi q21 age age2

Source		SS	df	MS	Number of obs = 10469
-----+					
Model		3740.258	3	1246.75267	F(3, 10465) = 229.05
Residual		56963.3301	10465	5.44322313	Prob > F = 0.0000
-----+					
Total		60703.5881	10468	5.79896714	R-squared = 0.0616
					Adj R-squared = 0.0613
					Root MSE = 2.3331

oecd_posi		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
-----+						
q21		.797203	.0457047	17.44	0.000	.7076132 .8867929
age		-.0823704	.0094904	-8.68	0.000	-.1009734 -.0637673
age2		.0011326	.0001	11.32	0.000	.0009365 .0013286
_cons		5.414084	.2206234	24.54	0.000	4.98162 5.846548

. regress oecd_neg q21 age age2

Source		SS	df	MS	Number of obs = 10469
-----+					
Model		772.498469	3	257.49949	F(3, 10465) = 44.66
Residual		60332.5353	10465	5.76517299	Prob > F = 0.0000
-----+					
Total		61105.0338	10468	5.83731695	R-squared = 0.0126
					Adj R-squared = 0.0124
					Root MSE = 2.4011

oecd_neg		Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
-----+						
q21		-.162067	.0470369	-3.45	0.001	-.2542683 -.0698657

age	.0316068	.0097671	3.24	0.001	.0124615	.0507521
age2	-.0004989	.0001029	-4.85	0.000	-.0007007	-.0002972
_cons	3.415616	.2270543	15.04	0.000	2.970547	3.860686

12. Factor analysis on various affects

Factor analysis/correlation	Number of obs =	15316
Method: principal factors	Retained factors =	10
Rotation: orthogonal varimax (Kaiser off)	Number of params =	165

Factor	Variance	Difference	Proportion	Cumulative
Factor1	4.02094	0.16501	0.3748	0.3748
Factor2	3.85593	2.16831	0.3594	0.7342
Factor3	1.68762	0.27762	0.1573	0.8915
Factor4	1.41000	0.79341	0.1314	1.0229
Factor5	0.61659	0.49204	0.0575	1.0804
Factor6	0.12456	0.01154	0.0116	1.0920
Factor7	0.11302	0.00853	0.0105	1.1025
Factor8	0.10448	0.01214	0.0097	1.1122
Factor9	0.09234	0.07903	0.0086	1.1208
Factor10	0.01331	.	0.0012	1.1221

LR test: independent vs. saturated: $\chi^2(210) = 1.7e+05$ Prob> $\chi^2 = 0.0000$

Factor loading of the largest two factors

	variables	factor1	factor2
Positive	Proudness	-0.0058	0.3718
	Calm	-0.1207	0.6785
	Sympathy	0.0003	0.7826
	Generosity	-0.0231	0.7297
	Peacefulness	-0.179	0.6502
	Kindness	-0.0342	0.8133
	Intimacy	-0.0551	0.7533
	Fulfillment	-0.1473	0.4526
	Satisfaction	-0.1504	0.4352
Negative	Indebtness	0.6963	-0.0294
	Hopeless	0.7574	-0.1317
	Sadness	0.7133	-0.0596
	Stress	0.5265	-0.078
	Fear	0.6103	-0.0761
	Anxiety	0.5768	-0.012
	Shame	0.5624	-0.061
	Anger	0.4592	-0.098
	Guilt	0.586	-0.0672
	Ego	0.3952	-0.0094
	Jealousy	0.417	-0.0677
	Frustration	0.4182	-0.1009

13. ANOVA and regression analysis with dependent variable: affect (positive and negative), independent variable: ages and sexes.

variables affectposi: positive affect(average of positive affects in question 9 of online survey(question 7 in direct-visit and question survey))
 affectnega: negative affect(average of negative affects in question 9 of online survey(question 7 in direct-visit and question survey))
 age: ages(10s, 20s, 30s, 40s, 50s, 60s)
 ages2: age*age
 q21: sexes(1 male, 2 female)

(1)ANOVA

anova affectposi q21 age survey q21##age##survey

		Number of obs = 15413		R-squared = 0.0513	
		Root MSE = .599554		Adj R-squared = 0.0498	
Source	Partial SS	df	MS	F	Prob > F
Model	298.897163	23	12.9955288	36.15	0.0000
q21	74.4657889	1	74.4657889	207.16	0.0000
age	45.8246369	5	9.16492738	25.50	0.0000
survey	55.7122377	1	55.7122377	154.99	0.0000
q21#age	4.55653354	5	.911306709	2.54	0.0267
q21#survey	.180224538	1	.180224538	0.50	0.4789
age#survey	27.0183498	5	5.40366996	15.03	0.0000
q21#age#survey	3.69849497	5	.739698994	2.06	0.0675
Residual	5531.80916	15389	.359465148		
Total	5830.70632	15412	.378322497		

. anova affectnega q21 age survey q21##age##survey

		Number of obs = 15427		R-squared = 0.0634	
		Root MSE = .586873		Adj R-squared = 0.0620	
Source	Partial SS	df	MS	F	Prob > F
Model	359.295885	23	15.6215602	45.36	0.0000
q21	.008033388	1	.008033388	0.02	0.8786
age	229.091306	5	45.8182612	133.03	0.0000
survey	.003513685	1	.003513685	0.01	0.9195
q21#age	18.2766453	5	3.65532906	10.61	0.0000
q21#survey	.000656874	1	.000656874	0.00	0.9652
age#survey	18.9656549	5	3.79313098	11.01	0.0000
q21#age#survey	.864749488	5	.172949898	0.50	0.7749
Residual	5305.09359	15403	.344419502		
Total	5664.38948	15426	.367197555		

(2) multiple regression
regress affectposi q21 age survey

Source	SS	df	MS	Number of obs =	15413
Model	219.250426	3	73.0834753	F(3, 15409) =	200.69
Residual	5611.4559	15409	.364167428	Prob > F =	0.0000
				R-squared =	0.0376
				Adj R-squared =	0.0374
Total	5830.70632	15412	.378322497	Root MSE =	.60346

affectposi	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
q21	.1852613	.0097374	19.03	0.000	.1661749	.2043477
age	.0028897	.0003154	9.16	0.000	.0022715	.0035079
survey	-.1190145	.0104349	-11.41	0.000	-.1394682	-.0985609
_cons	1.524137	.0288476	52.83	0.000	1.467592	1.580681

.
. regress affectnega q21 age survey

Source	SS	df	MS	Number of obs =	15427
Model	284.102171	3	94.7007236	F(3, 15423) =	271.47
Residual	5380.28731	15423	.348848298	Prob > F =	0.0000
				R-squared =	0.0502
				Adj R-squared =	0.0500
Total	5664.38948	15426	.367197555	Root MSE =	.59063

affectnega	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
q21	-.0293234	.0095258	-3.08	0.002	-.0479951	-.0106517
age	-.0087531	.0003084	-28.38	0.000	-.0093577	-.0081485
survey	-.0271149	.0102026	-2.66	0.008	-.0471132	-.0071167
_cons	1.721405	.0281818	61.08	0.000	1.666165	1.776645

14. Factor analysis on various happiness, eudaimonia and affects

variables: current level of happiness(0-10)
life-satisfaction (0-10)
interdependent happiness scale(0-10)
positive affects of past a few weeks(0-3)
negative affects of past a few weeks(0-3)
positive affects of yesterday(0-10)
negative affects of yesterday(0-10)
In general, I feel very positive about myself(0-10)
I am always optimistic about my future(0-10)
I am free to decide for myself how to live my life(0-10)
When things go wrong in my life it generally takes me a long time to get

You felt lonely during the past week (0-10)).

15. ANOVA result with dependent variable: current level of happiness, independent variables: trust in people, ages and sexes.

variables q1: current level of happiness

q17_internet : trust in people(1 Most people can be trusted, 2 Cannot be too careful)

age: ages(10s, 20s, 30s, 40s, 50s, 60s)

q21: sexes(1 male, 2 female)

anova q1 q17_internet q21 age q17_internet##q21##age

		Number of obs = 10469		R-squared = 0.0896	
		Root MSE = 2.13261		Adj R-squared = 0.0876	
Source	Partial SS	df	MS	F	Prob > F
Model	4676.99645	23	203.347672	44.71	0.0000
q17_inter~t	2454.99445	1	2454.99445	539.79	0.0000
q21	417.119671	1	417.119671	91.71	0.0000
age	337.204637	5	67.4409273	14.83	0.0000
q17_inter~t#q21	1.87940161	1	1.87940161	0.41	0.5203
q17_inter~t#age	13.3847965	5	2.67695929	0.59	0.7088
q21#age	157.332005	5	31.466401	6.92	0.0000
q17_inter~t#q21#age	10.6897481	5	2.13794962	0.47	0.7988
Residual	47503.9916	10445	4.5480126		
Total	52180.9881	10468	4.98480971		

16. ANOVA result with dependent variable: social support scale, independent variables: survey methods, ages and sexes.

variables support

support: social support index(average of answers in question 19 of the online survey(question 16 of direct-visit and question survey), the higher, the stronger support)

survey: survey methods(1direct-visit and self-completion, 2online)

age: ages(10s, 20s, 30s, 40s, 50s, 60s)

q21: sexes(1 male, 2 female)

anova support survey q21 age survey##q21##age

		Number of obs = 15544		R-squared = 0.0689	
		Root MSE = .820128		Adj R-squared = 0.0675	
Source	Partial SS	df	MS	F	Prob > F
Model	772.095501	23	33.5693696	49.91	0.0000
survey	192.071463	1	192.071463	285.56	0.0000
q21	313.813255	1	313.813255	466.56	0.0000
age	21.3313088	5	4.26626176	6.34	0.0000
survey#q21	.166009625	1	.166009625	0.25	0.6193

survey#age		107.731748	5	21.5463495	32.03	0.0000
q21#age		19.3394007	5	3.86788015	5.75	0.0000
survey#q21#age		4.240508	5	.8481016	1.26	0.2778
Residual		10438.9177	15520	.672610678		
-----+						
Total		11211.0132	15543	.721290177		

17. ANOVA result with dependent variable: self-reported health, independent variables: survey methods, ages and sexes.

variablesq20: self-reported health (1: I am totally healthy, 2: I am healthy, 3: I am neither healthy nor ill, 4: I am not healthy, 5: I am not healthy at all)
survey: survey methods(1direct-visit and self-completion, 2online)
age: ages(10s, 20s, 30s, 40s, 50s, 60s)
q21: sexes(1 male, 2 female)

anova q20 survey q21 age survey##q21##age

Number of obs = 15566 R-squared = 0.0347
Root MSE = 1.07394 Adj R-squared = 0.0332

Source		Partial SS	df	MS	F	Prob > F
-----+						
Model		643.672278	23	27.9857512	24.26	0.0000
survey		168.369638	1	168.369638	145.98	0.0000
q21		31.9282167	1	31.9282167	27.68	0.0000
age		430.670857	5	86.1341715	74.68	0.0000
survey#q21		.76548147	1	.76548147	0.66	0.4153
survey#age		98.2277067	5	19.6455413	17.03	0.0000
q21#age		15.5303479	5	3.10606958	2.69	0.0194
survey#q21#age		2.50103932	5	.500207864	0.43	0.8254
Residual		17925.4348	15542	1.15335444		
-----+						
Total		18569.107	15565	1.19300399		