

# Swiss-SEP 2.0 index

## Report 1.09 - data analysis

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### Contents

<b>1 PCA on n'hood aggregated characteristics</b>	<b>2</b>
<b>2 Building construction period</b>	<b>3</b>
<b>3 Hybrid version of SEP</b>	<b>4</b>
3.1 Index deciles . . . . .	4
3.2 Quantiles . . . . .	4
3.3 Bland Altman plots of diffs . . . . .	6
<b>4 Maps</b>	<b>8</b>
<b>5 Validation - SHP data</b>	<b>9</b>
5.1 Income graph - original . . . . .	9
5.2 Income graph - new indices . . . . .	9
5.3 Financial variables table - original . . . . .	10
5.4 Financial variables table - 1.0 . . . . .	11
5.5 Financial variables table - 2.0 . . . . .	16
5.6 Financial variables table - 3.0 . . . . .	20
<b>6 Validation - SNC mortality</b>	<b>24</b>
6.1 All cause mortality - original . . . . .	24
6.2 All cause mortality - new indices . . . . .	24
6.3 All cause mortality - three indices, stratified by age . . . . .	26
6.4 Cause specific mortality - original . . . . .	27
6.5 Cause specific mortality - 1.0 . . . . .	28
6.6 Cause specific mortality - 2.0 results . . . . .	29
6.7 Cause specific mortality - 3.0 results . . . . .	30

# 1 PCA on n'hood aggregated characteristics

Principal components/correlation  
 Number of obs = 1,527,173  
 Number of comp. = 4  
 Trace = 4  
 Rho = 1.0000  
 Rotation: (unrotated = principal)

Component	Eigenvalue	Difference	Proportion	Cumulative
Comp1	1.95642	.776499	0.4891	0.4891
Comp2	1.17992	.731361	0.2950	0.7841
Comp3	.448564	.0334764	0.1121	0.8962
Comp4	.415087	.	0.1038	1.0000

Principal components (eigenvectors)

Variable	Comp1	Comp2	Comp3	Comp4	Unexplained
ocu1p	0.6054	-0.1324	0.4427	0.6481	0
edu1p	0.5902	0.2424	0.3022	-0.7082	0
ppr1	0.2401	0.7990	-0.4817	0.2680	0
rent	-0.4770	0.5341	0.6933	0.0812	0

(score assumed)

(3 components skipped)

Scoring coefficients

sum of squares(column-loading) = 1

Variable	Comp1	Comp2	Comp3	Comp4
ocu1p	0.6054	-0.1324	0.4427	0.6481
edu1p	0.5902	0.2424	0.3022	-0.7082
ppr1	0.2401	0.7990	-0.4817	0.2680
rent	-0.4770	0.5341	0.6933	0.0812

## 2 Building construction period

Construction period of the building is retrieved from STATPOP 2018 dataset. Detailed typology is recoded to binary indicator flagging buildings constructed on or after 2001. Buildings with missing information about age are treated as 'old' ones.

Building period (binary)	Freq.	Percent	Cum.
Before 2000	1,330,347	86.35	86.35
After 2000	210,237	13.65	100.00
Total	1,540,584	100.00	

### 3 Hybrid version of SEP

This solution is mixing versions 1.0 & 2.0. First the new buildings have value of index 1.0 assigned using the closest (linear distance) neighbour.

Then, construction period of the building is retrieved from STATPOP 2018 dataset and then buildings built before year 2000 have the values of 1.0 index assigned and buildings constructed after 2000 have new values assigned. Buildings without the defined period of construction keep values 1.0 also.

#### 3.1 Index deciles

(SSEP 3.0 - user dataset of index and XY coordinates)			
Summary for variables: ssep3 by categories of: ssep3_d (Swiss-SEP 3.0 - deciles)			
ssep3_d	min	mean	max
1	0.00	45.06	50.89
2	43.96	52.57	55.45
3	49.12	56.34	58.69
4	52.84	59.36	61.49
5	56.14	62.10	64.14
6	59.25	64.77	66.84
7	62.27	67.62	69.76
8	65.54	70.80	73.20
9	69.37	74.74	77.63
10	74.31	81.29	100.00
Total	0.00	63.51	100.00

#### 3.2 Quantiles

Note that the original quantiles of second version :

Swiss-SEP 2.0 - deciles	Freq.	Percent	Cum.
1	152,718	10.00	10.00
2	152,717	10.00	20.00
3	152,718	10.00	30.00
4	152,739	10.00	40.00
5	152,695	10.00	50.00
6	152,717	10.00	60.00
7	152,718	10.00	70.00
8	152,721	10.00	80.00
9	152,722	10.00	90.00
10	152,708	10.00	100.00
Total	1,527,173	100.00	

... are tad 'broken' after replacements:

Swiss-SEP 3.0 - deciles	Freq.	Percent	Cum.
1	147,337	9.65	9.65
2	151,604	9.93	19.57
3	152,918	10.01	29.59
4	153,411	10.05	39.63
5	154,628	10.13	49.76
6	155,152	10.16	59.92
7	154,724	10.13	70.05
8	154,696	10.13	80.18
9	153,528	10.05	90.23
10	149,175	9.77	100.00
Total	1,527,173	100.00	

Some transitions happened:

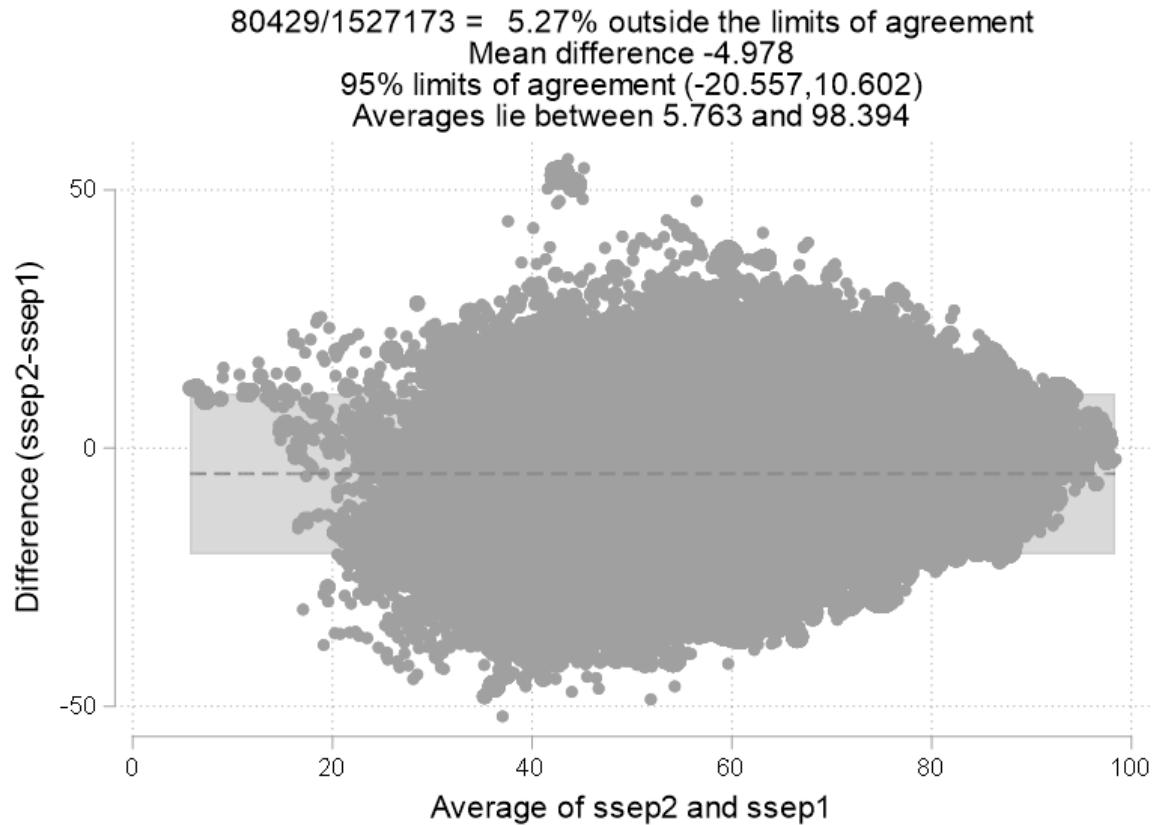
Swiss-SEP 2.0 - deciles		Swiss-SEP 3.0 - deciles								Total
		1	2	3	4	5	6	7	8	
1	74,091	33,147	19,522	12,165	6,909	3,951	1,844	825	152,718	
2	30,694	48,148	24,954	19,420	13,175	8,565	4,838	2,085	152,717	
3	18,942	23,896	44,110	21,395	17,299	12,666	8,156	4,195	152,718	
4	10,866	18,284	21,707	41,798	20,038	16,822	11,965	7,284	152,739	
5	6,605	12,416	16,774	19,635	43,099	19,342	16,594	11,374	152,695	
6	3,157	7,985	11,906	16,115	19,297	44,873	20,648	16,209	152,717	
7	1,630	4,484	7,451	11,952	16,638	19,973	46,640	22,680	152,718	
8	872	2,194	4,475	7,060	10,740	15,503	21,356	51,037	152,721	
9	352	758	1,538	2,944	5,740	9,894	15,701	25,715	152,722	
10	128	292	481	927	1,693	3,563	6,982	13,292	152,708	
Total	147,337	151,604	152,918	153,411	154,628	155,152	154,724	154,696	1,527,173	

Swiss-SEP 2.0 - deciles		Swiss-SEP 3.0 - deciles								Total	
		9	10								
1	245	19	152,718								
2	683	155	152,717								
3	1,764	295	152,718								
4	3,360	615	152,739								
5	5,646	1,210	152,695								
6	9,900	2,627	152,717								
7	16,147	5,123	152,718								
8	26,624	12,860	152,721								
9	59,045	31,035	152,722								
10	30,114	95,236	152,708								
Total	153,528	149,175	1,527,173								

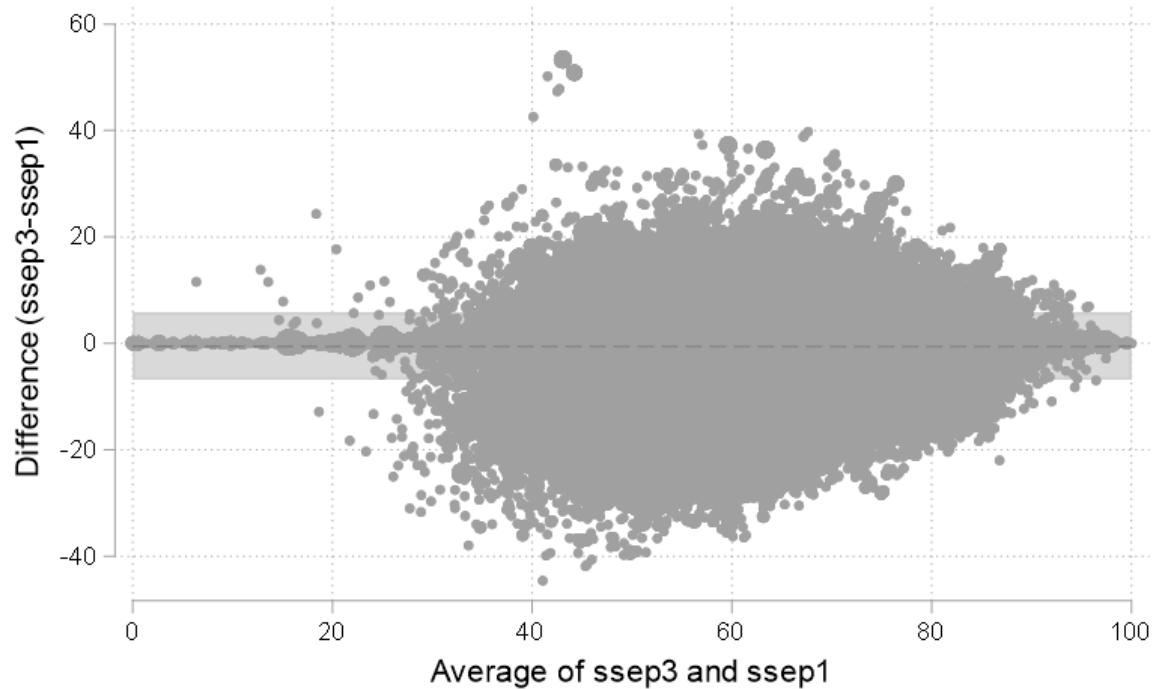
### 3.3 Bland Altman plots of diffs

#### 3.3.1 SEP2 vs. SEP1

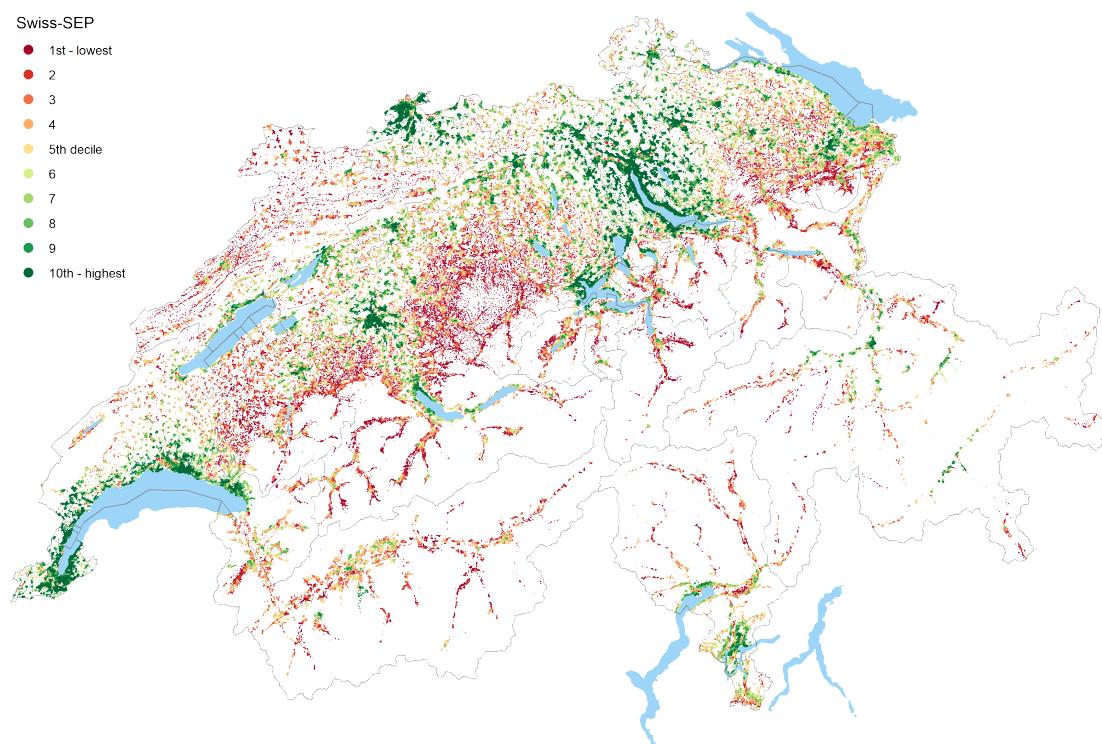
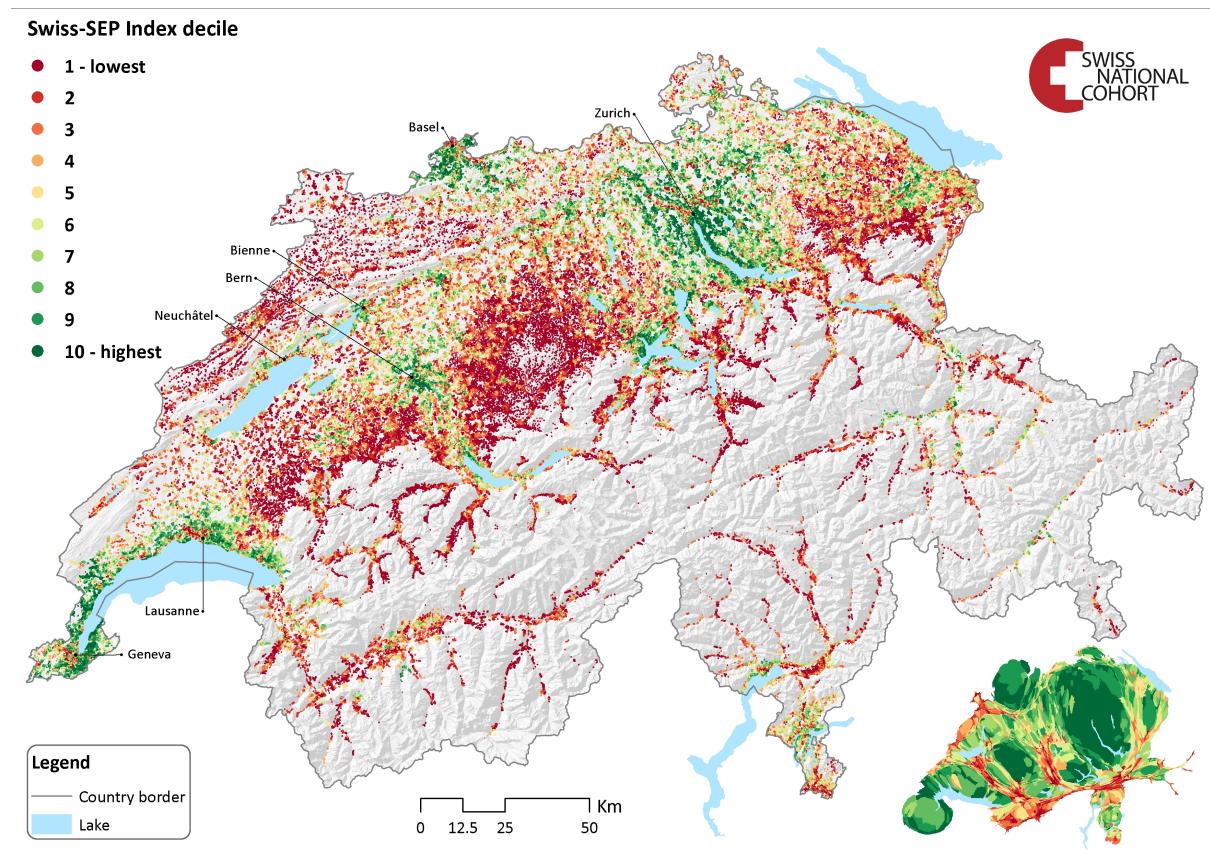


### 3.3.2 SEP3 vs. SEP1

92944/1527173 = 6.09% outside the limits of agreement  
Mean difference -0.561  
95% limits of agreement (-6.874, 5.751)  
Averages lie between 0.000 and 100.000

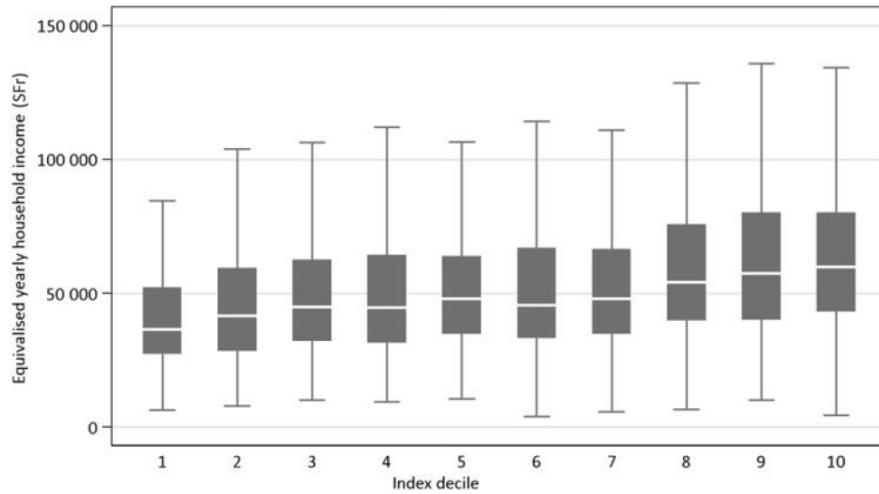


## 4 Maps

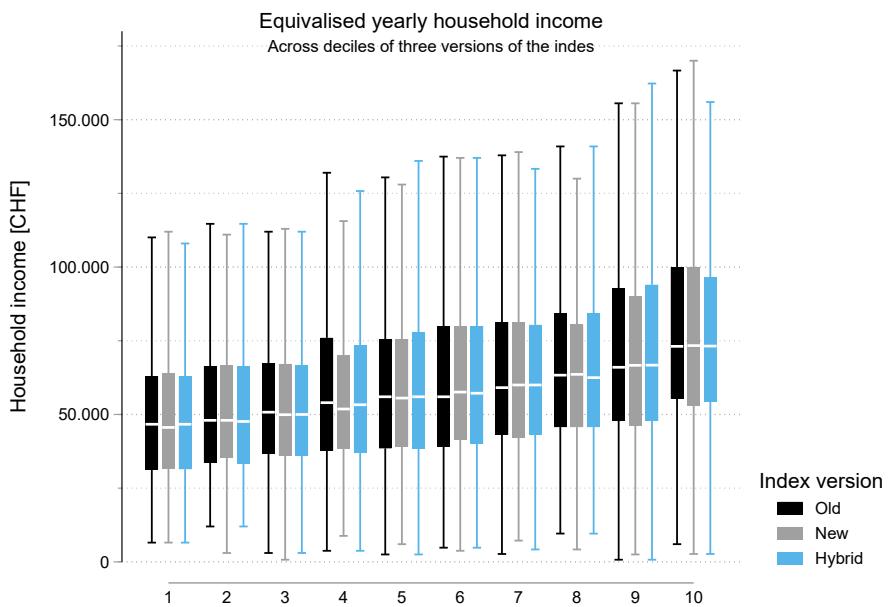


## 5 Validation - SHP data

### 5.1 Income graph - original



### 5.2 Income graph - new indices



### 5.3 Financial variables table - original

Characteristic	Index decile			Total N (%)	p Value
	1 N (%)	5 N (%)	10 N (%)		
Number of households	437 (100.0)	447 (100.0)	426 (100.0)	4460 (100.0)	—
Mean yearly equivalised* household net income in SFr (SD)	42 329 (21 253)	54 785 (33 488)	72 074 (56 796)	55 372 (38 781)	<0.0001
Saving at least 100 SFr/month					
No answer/does not know	4 (0.9)	5 (1.1)	6 (1.4)	54 (1.2)	<0.0001
Yes	329 (75.3)	366 (81.9)	363 (85.2)	3629 (81.4)	
No	104 (23.8)	76 (17.0)	57 (13.4)	777 (17.4)	
Reason why not saving at least 100 SFr/month					
Inapplicable	333 (76.2)	371 (83.0)	369 (86.6)	3683 (82.6)	<0.0001
Because you cannot afford it	88 (20.1)	66 (14.8)	47 (11.0)	642 (14.4)	
For another reason	16 (3.7)	10 (2.2)	10 (2.3)	135 (3.0)	
Voluntary private pension scheme					
No answer/does not know	9 (2.1)	8 (1.8)	4 (0.9)	67 (1.5)	<0.0001
Yes	210 (48.1)	266 (59.5)	266 (62.4)	2581 (57.9)	
No	218 (49.9)	173 (38.7)	156 (36.6)	1812 (40.6)	
Reason why no voluntary private pension scheme					
Inapplicable	219 (50.1)	274 (61.3)	270 (63.4)	2648 (59.4)	<0.0001
No answer/does not know	1 (0.2)	0 (0.0)	2 (0.5)	25 (0.6)	
Because you cannot afford it	81 (18.5)	53 (11.9)	30 (7.0)	553 (12.4)	
For another reason	136 (31.1)	120 (26.8)	124 (29.1)	1234 (27.7)	
Reception of financial help					
No answer/does not know	1 (0.2)	5 (1.1)	1 (0.2)	23 (0.5)	0.002
Yes	102 (23.3)	75 (16.8)	56 (13.1)	765 (17.2)	
No	334 (76.4)	367 (82.1)	369 (86.6)	3672 (82.3)	
Assessment of household income and expenses					
No answer/does not know	2 (0.5)	3 (0.7)	7 (1.6)	38 (0.9)	<0.0001
Your household can save money	189 (43.2)	233 (52.1)	239 (56.1)	2262 (50.7)	
Your household spends what it earns	212 (48.5)	170 (38.0)	152 (35.7)	1821 (40.8)	
Your household eats into its assets and savings	27 (6.2)	39 (8.7)	23 (5.4)	296 (6.6)	
Your household gets into debt	7 (1.6)	2 (0.4)	5 (1.2)	43 (1.0)	
Financial situation manageable, mean (SD)†	6.6 (2.6)	7.5 (2.3)	8.0 (2.1)	7.3 (2.3)	<0.0001

## 5.4 Financial variables table - 1.0

Swiss-SEP 1.0 - deciles	mean(i13eqon)
1	50,686
5	61,177
10	85,368
Total	65,335

Swiss-SEP 1.0 - deciles	mean(h13i51)
1	7
5	7
10	8
Total	7

(running tabulate on estimation sample)

Number of strata = 1  
 Number of PSUs = 2,303

Number of obs = 2,303  
 Population size = 2,343,6978  
 Design df = 2,302

Savings min. 500 SFr monthly	Swiss-SEP 1.0 - deciles			
	1	5	10	Total
no answe	22.92 2.959	19.97 2.442	17.41 2.319	60.31 2.573
yes	356.2 45.97	482.3 58.97	535.1 71.25	1374 58.61
no	395.7 51.07	315.6 38.59	198.5 26.43	909.8 38.82
Total	774.8 100	817.9 100	751 100	2344 100

Key: weighted count  
 column percentage

Pearson:

Uncorrected chi2(4) = 100.2160  
 Design-based F(3.99, 9175.15) = 18.4581 P = 0.0000

(running tabulate on estimation sample)

Number of strata = 1  
 Number of PSUs = 2,303

Number of obs = 2,303  
 Population size = 2,343,6978  
 Design df = 2,302

Reason why no savings min. 500 SFr monthly	Swiss-SEP 1.0 - deciles			
	1	5	10	Total
inapplic	379.1 48.93	502.3 61.41	552.5 73.57	1434 61.18
no answe	2.482 .3203	0 0	0 0	2.482 .1059
no answe	0	.178	0	.178

	0	.0218	0	.0076
because	331.9	239.8	146.3	718
	42.84	29.32	19.48	30.63
for anot	61.29	75.65	52.21	189.1
	7.911	9.249	6.952	8.07
Total	774.8	817.9	751	2344
	100	100	100	100

Key: weighted count  
column percentage

Pearson:

Uncorrected chi2(8) = 112.4932  
Design-based F(6.72, 15476.96) = 10.7742 P = 0.0000

Savings into 3rd pillar	Swiss-SEP 1.0 - deciles			Total
	1	5	10	
does not know	18 2.42	8 0.97	8 1.10	34 1.48
yes	379 50.94	500 60.31	448 61.37	1,327 57.62
no	347 46.64	321 38.72	274 37.53	942 40.90
Total	744 100.00	829 100.00	730 100.00	2,303 100.00

(running tabulate on estimation sample)

Number of strata	=	1	Number of obs	=	2,303
Number of PSUs	=	2,303	Population size	=	2,343.6978
			Design df	=	2,302

Savings into 3rd pillar	Swiss-SEP 1.0 - deciles			
	1	5	10	Total
does not	20.06 2.589	10.51 1.286	9.274 1.235	39.85 1.7
yes	372.5 48.07	493 60.27	469.2 62.47	1335 56.94
no	382.3 49.34	314.4 38.44	272.5 36.29	969.2 41.36
Total	774.8 100	817.9 100	751 100	2344 100

Key: weighted count  
column percentage

Pearson:

Uncorrected chi2(4)	=	39.2960
Design-based F(3.97, 9148.38)=		7.2269
		P = 0.0000

Reasons why no savings into 3rd pillar	Swiss-SEP 1.0 - deciles				Total
	1	5	10		
inapplicable	397 53.36	508 61.28	456 62.47		1,361 59.10
no answer / doesn't k	9 1.21	3 0.36	1 0.14		13 0.56
because you cannot af	134 18.01	84 10.13	41 5.62		259 11.25
for another reason	204 27.42	234 28.23	232 31.78		670 29.09
Total	744 100.00	829 100.00	730 100.00		2,303 100.00

(running tabulate on estimation sample)

Number of strata	=	1	Number of obs	=	2,303
Number of PSUs	=	2,303	Population size	=	2,343.6978
			Design df	=	2,302

Reasons why no savings into 3rd pillar	Swiss-SEP 1.0 - deciles				Total
	1	5	10		
inapplic	392.5 50.66	503.5 61.56	478.4 63.71	1374 58.64	

no answe	12.5	2.29	1.126	15.92
	1.613	.28	.15	.6791
because	157	84.69	42.19	283.9
	20.27	10.35	5.618	12.11
for anot	212.8	227.5	229.2	669.4
	27.46	27.81	30.52	28.56
Total	774.8	817.9	751	2344
	100	100	100	100

Key: weighted count  
column percentage

Pearson:

Uncorrected chi2(6) = 98.3777  
Design-based F(5.96, 13716.23) = 13.2482 P = 0.0000

(running tabulate on estimation sample)

Number of strata = 1  
 Number of PSUs = 2,303

Number of obs = 2,303  
 Population size = 2,343.6978  
 Design df = 2,302

Financial help: health insurance	Swiss-SEP 1.0 - deciles			
	1	5	10	Total
inaplica	8.841 1.141	7.444 .9101	4.72 .6285	21.01 .8962
yes	211.1 27.25	172 21.03	100.6 13.39	483.7 20.64
no	554.8 71.61	638.5 78.06	645.7 85.98	1839 78.47
Total	774.8 100	817.9 100	751 100	2344 100

Key: weighted count  
 column percentage

Pearson:

Uncorrected chi2(4) = 45.9477  
 Design-based F(3.91, 8991.39) = 8.3715 P = 0.0000

(running tabulate on estimation sample)

Number of strata = 1  
 Number of PSUs = 2,303

Number of obs = 2,303  
 Population size = 2,343.6978  
 Design df = 2,302

Income: Assessmen t of income and expenses	Swiss-SEP 1.0 - deciles			
	1	5	10	Total
inaplica	8.465 1.093	11.05 1.351	9.192 1.224	28.71 1.225
your hou	371.9 47.99	458.3 56.03	466.7 62.15	1297 55.33
your hou	302.2 39	271.2 33.15	200.5 26.7	773.8 33.02
your hou	71.24 9.195	56.12 6.861	68.24 9.087	195.6 8.346
your hou	21.06 2.718	21.33 2.608	6.335 .8436	48.73 2.079
Total	774.8 100	817.9 100	751 100	2344 100

Key: weighted count  
 column percentage

Pearson:

Uncorrected chi2(8) = 42.8296  
 Design-based F(7.87, 18106.59) = 3.8207 P = 0.0002

## 5.5 Financial variables table - 2.0

Swiss-SEP 2.0 - deciles	mean(i13eqon)
1	50,634
5	62,526
10	86,535
Total	66,721

Swiss-SEP 2.0 - deciles	mean(h13i51)
1	7
5	7
10	8
Total	7

(running tabulate on estimation sample)

Number of strata = 1  
 Number of PSUs = 2,462

Number of obs = 2,462  
 Population size = 2,489.8813  
 Design df = 2,461

Savings min. 500 SFrs monthly	Swiss-SEP 2.0 - deciles			
	1	5	10	Total
no answe	28.72 3.377	10.5 1.34	22.4 2.618	61.62 2.475
yes	385.6 45.34	429 54.72	584.3 68.3	1399 56.18
no	436.1 51.28	344.5 43.94	248.8 29.08	1029 41.34
Total	850.4 100	784 100	855.5 100	2490 100

Key: weighted count  
 column percentage

Pearson:

Uncorrected chi2(4) = 98.9597  
 Design-based F(3.97, 9764.93) = 19.2013 P = 0.0000

(running tabulate on estimation sample)

Number of strata = 1  
 Number of PSUs = 2,462

Number of obs = 2,462  
 Population size = 2,489.8813  
 Design df = 2,461

Reason why no savings min. 500 Sfrs monthly	Swiss-SEP 2.0 - deciles			
	1	5	10	Total
inapplic	414.3 48.72	439.5 56.06	606.7 70.92	1461 58.66
no answe	0 0	.9084 .1159	0 0	.9084 .0365
no answe	0	1.042	0	1.042

	0	.1329	0	.0419
because	353.3	272	185.7	810.9
	41.54	34.69	21.71	32.57
for anot	82.83	70.56	63.1	216.5
	9.74	9	7.376	8.695
Total	850.4	784	855.5	2490
	100	100	100	100

Key: weighted count  
column percentage

Pearson:

Uncorrected chi2(8) = 96.2503  
Design-based F(6.86, 16883.74) = 11.2097 P = 0.0000

(running tabulate on estimation sample)

Number of strata = 1  
 Number of PSUs = 2,462

Number of obs = 2,462  
 Population size = 2,489.8813  
 Design df = 2,461

Savings into 3rd pillar	Swiss-SEP 2.0 - deciles			
	1	5	10	Total
does not	28.31 3.33	10.19 1.3	15.46 1.807	53.97 2.167
yes	404.8 47.6	471.6 60.15	532.6 62.26	1409 56.59
no	417.3 49.07	302.2 38.55	307.4 35.93	1027 41.24
Total	850.4 100	784 100	855.5 100	2490 100

Key: weighted count  
 column percentage

Pearson:

Uncorrected chi2(4) = 46.6136  
 Design-based F(3.89, 9569.78)= 7.7240 P = 0.0000

(running tabulate on estimation sample)

Number of strata = 1  
 Number of PSUs = 2,462

Number of obs = 2,462  
 Population size = 2,489.8813  
 Design df = 2,461

Reasons why no savings into 3rd pillar	Swiss-SEP 2.0 - deciles			
	1	5	10	Total
inapplic	433.1 50.93	481.8 61.45	548.1 64.07	1463 58.76
no answe	10.02 1.178	3.208 .4092	2.883 .337	16.11 .647
because	154.3 18.14	86.97 11.09	59 6.896	300.2 12.06
for anot	253 29.75	212 27.04	245.5 28.7	710.5 28.54
Total	850.4 100	784 100	855.5 100	2490 100

Key: weighted count  
 column percentage

Pearson:

Uncorrected chi2(6) = 65.5004  
 Design-based F(5.85, 14402.96)= 8.6626 P = 0.0000

(running tabulate on estimation sample)

Number of strata = 1  
Number of PSUs = 2,462

Number of obs = 2,462  
Population size = 2,489.8813  
Design df = 2,461

Financial help: health insurance	Swiss-SEP 2.0 - deciles			
	1	5	10	Total
inaplica	6.669 .7842	2.915 .3718	8.635 1.009	18.22 .7317
yes	222.7 26.18	151.4 19.31	102.5 11.98	476.6 19.14
no	621.1 73.03	629.7 80.32	744.3 87.01	1995 80.13
Total	850.4 100	784 100	855.5 100	2490 100

Key: weighted count  
column percentage

Pearson:

Uncorrected chi2(4) = 57.0005  
Design-based F(3.91, 9620.56) = 10.6407 P = 0.0000

(running tabulate on estimation sample)

Number of strata = 1  
Number of PSUs = 2,462

Number of obs = 2,462  
Population size = 2,489.8813  
Design df = 2,461

Income: Assessmen t of income and expenses	Swiss-SEP 2.0 - deciles			
	1	5	10	Total
inaplica	7.249 .8524	6.803 .8678	9.672 1.131	23.72 .9529
your hou	396.8 46.66	402.9 51.39	528.2 61.75	1328 53.33
your hou	349.2 41.06	286 36.47	239.2 27.97	874.4 35.12
your hou	69.9 8.22	74.79 9.54	72.41 8.465	217.1 8.72
your hou	27.28 3.207	13.54 1.727	5.913 .6912	46.73 1.877
Total	850.4 100	784 100	855.5 100	2490 100

Key: weighted count  
column percentage

Pearson:

Uncorrected chi2(8) = 55.6459  
Design-based F(7.53, 18521.34) = 4.5232 P = 0.0000

## 5.6 Financial variables table - 3.0

Swiss-SEP 3.0 - deciles	mean(i13eqon)
1	50,709
5	62,431
10	84,555
Total	65,650

Swiss-SEP 3.0 - deciles	mean(h13i51)
1	7
5	7
10	8
Total	7

(running tabulate on estimation sample)

Number of strata = 1  
 Number of PSUs = 2,278

Number of obs = 2,278  
 Population size = 2,312,065  
 Design df = 2,277

Savings min. 500 SFrs monthly	Swiss-SEP 3.0 - deciles			
	1	5	10	Total
no answe	24 3.102	14.89 1.914	18.11 2.381	56.99 2.465
yes	355.3 45.93	454.9 58.49	538.9 70.84	1349 58.35
no	394.2 50.97	308 39.6	203.7 26.78	906 39.18
Total	773.5 100	777.8 100	760.7 100	2312 100

Key: weighted count  
 column percentage

Pearson:

Uncorrected chi2(4) = 98.8712  
 Design-based F(3.96, 9024.80) = 18.9466 P = 0.0000

(running tabulate on estimation sample)

Number of strata = 1  
 Number of PSUs = 2,278

Number of obs = 2,278  
 Population size = 2,312,065  
 Design df = 2,277

Reason why no savings min. 500 Sfrs monthly	Swiss-SEP 3.0 - deciles			
	1	5	10	Total
inapplic	379.3 49.03	469.8 60.4	557 73.22	1406 60.82
no answe	2.482 .3208	0 0	0 0	2.482 .1073
because	328.3	238.8	149.6	716.7

	42.44	30.71	19.67	31
for anot	63.46	69.18	54.12	186.8
	8.203	8.894	7.114	8.077

Total	773.5	777.8	760.7	2312
	100	100	100	100

Key: weighted count  
column percentage

Pearson:

Uncorrected chi2(6) = 106.0252  
Design-based F(5.55, 12642.75) = 11.8128 P = 0.0000

(running tabulate on estimation sample)

Number of strata = 1  
 Number of PSUs = 2,278

Number of obs = 2,278  
 Population size = 2,312.065  
 Design df = 2,277

Savings into 3rd pillar	Swiss-SEP 3.0 - deciles			
	1	5	10	Total
does not	23.46 3.033	8.227 1.058	10.06 1.322	41.75 1.806
yes	367.4 47.5	471.3 60.59	478.8 62.94	1318 56.98
no	382.7 49.47	298.3 38.35	271.9 35.74	952.8 41.21
Total	773.5 100	777.8 100	760.7 100	2312 100

Key: weighted count  
 column percentage

Pearson:

Uncorrected chi2(4) = 47.7417  
 Design-based F(3.95, 8995.39) = 8.6295 P = 0.0000

(running tabulate on estimation sample)

Number of strata = 1  
 Number of PSUs = 2,278

Number of obs = 2,278  
 Population size = 2,312.065  
 Design df = 2,277

Reasons why no savings into 3rd pillar	Swiss-SEP 3.0 - deciles			
	1	5	10	Total
inapplic	390.9 50.53	479.5 61.65	488.9 64.26	1359 58.79
no answe	12.5 1.616	3.332 .4284	1.822 .2396	17.66 .7636
because	162.2 20.97	79.25 10.19	44.32 5.826	285.8 12.36
for anot	208 26.89	215.7 27.73	225.7 29.67	649.4 28.09
Total	773.5 100	777.8 100	760.7 100	2312 100

Key: weighted count  
 column percentage

Pearson:

Uncorrected chi2(6) = 100.4128  
 Design-based F(5.92, 13489.04) = 13.5486 P = 0.0000

(running tabulate on estimation sample)

Number of strata = 1  
 Number of PSUs = 2,278

Number of obs = 2,278  
 Population size = 2,312.065  
 Design df = 2,277

Financial help: health insurance	Swiss-SEP 3.0 - deciles			
	1	5	10	Total
inaplica	8.841 1.143	5.729 .7366	4.72 .6204	19.29 .8343
yes	207.9 26.88	163.3 21	99.98 13.14	471.2 20.38
no	556.8 71.98	608.7 78.27	656 86.24	1822 78.79
Total	773.5 100	777.8 100	760.7 100	2312 100

Key: weighted count  
 column percentage

Pearson:

Uncorrected chi2(4) = 46.3566  
 Design-based F(3.90, 8884.24) = 8.4657 P = 0.0000

(running tabulate on estimation sample)

Number of strata = 1  
 Number of PSUs = 2,278

Number of obs = 2,278  
 Population size = 2,312.065  
 Design df = 2,277

Income: Assessment of income and expenses	Swiss-SEP 3.0 - deciles			
	1	5	10	Total
inaplica	9.365 1.211	9.037 1.162	9.977 1.311	28.38 1.227
your hou	362.6 46.87	441.4 56.75	466.7 61.34	1271 54.96
your hou	309.7 40.03	250.8 32.25	210.3 27.65	770.9 33.34
your hou	70.86 9.16	54.74 7.038	67.42 8.863	193 8.349
your hou	21.06 2.723	21.73 2.794	6.335 .8328	49.13 2.125
Total	773.5 100	777.8 100	760.7 100	2312 100

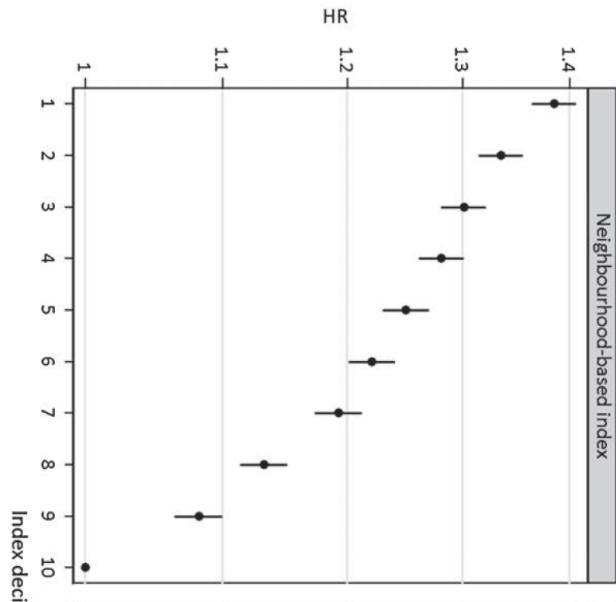
Key: weighted count  
 column percentage

Pearson:

Uncorrected chi2(8) = 44.1537  
 Design-based F(7.84, 17859.83) = 4.0568 P = 0.0001

## 6 Validation - SNC mortality

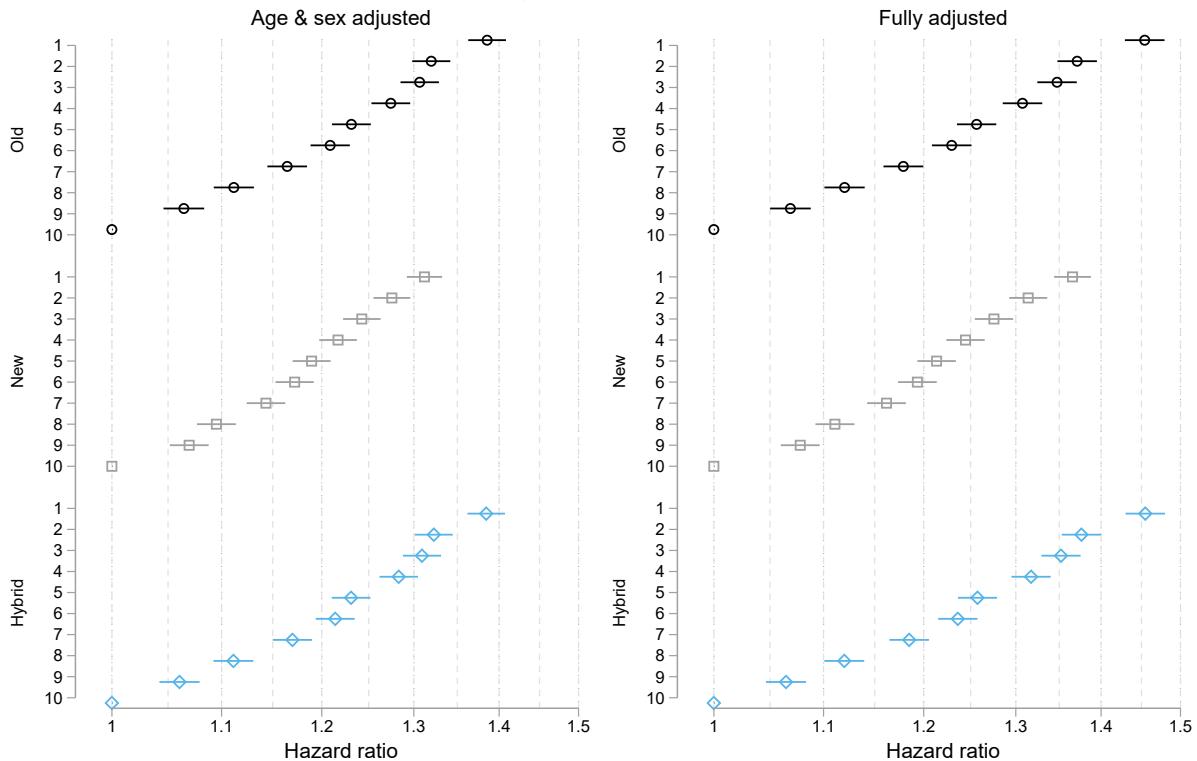
### 6.1 All cause mortality - original



Note: Calculations from 'old' SNC data from the **2001 - 2008 period**, as described in original paper!

### 6.2 All cause mortality - new indices

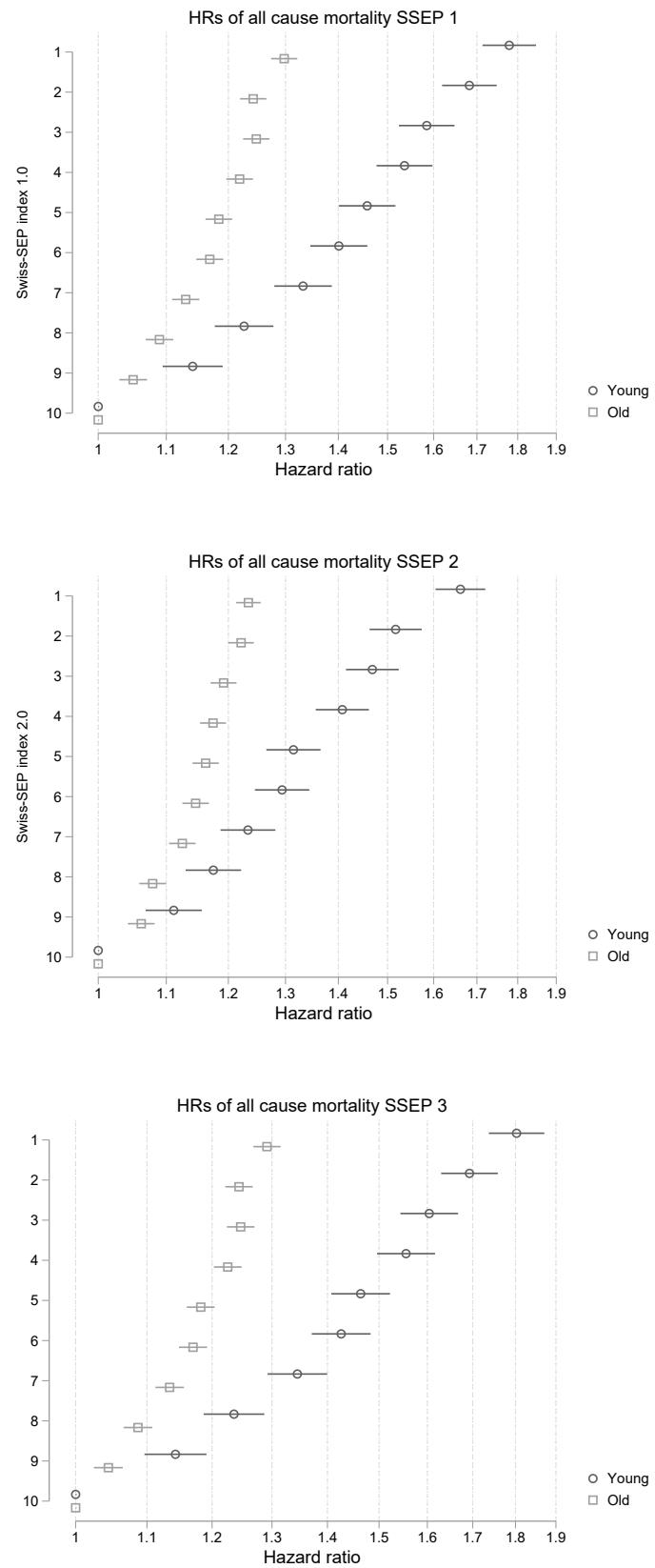
Hazard ratios of all cause mortality across deciles of three versions of the indices



Note: Results from Cox models. Calculations from 'new' SNC data from the **2012 - 2018 period!** 'Age & sex' - adjusted for age (via `stset`) and sex (as in original figure above); 'Adjusted' - additionally adjusted

for civil status, nationality, level of urbanization and language region. This is not the smae adjustment as in  
adjsudsted models in original papers since we are missing some crucial variables.

### 6.3 All cause mortality - three indices, stratified by age



#### 6.4 Cause specific mortality - original

Cause	Age and sex adjusted
	HR (95% CI)
All-causes	1.38 (1.36 to 1.41)
Lung cancer	1.83 (1.71 to 1.95)
Breast cancer	0.93 (0.85 to 1.02)
Prostate cancer	1.17 (1.07 to 1.28)
Cardiovascular diseases	1.48 (1.44 to 1.51)
Myocardial infarction	1.68 (1.57 to 1.80)
Stroke	1.28 (1.20 to 1.36)
Respiratory diseases	1.99 (1.87 to 2.12)
Traffic accidents	2.42 (1.94 to 3.01)
Suicide	0.86 (0.78 to 0.95)

## 6.5 Cause specific mortality - 1.0

	Age & sex HR	95% CI	Adjusted HR	95% CI
Lung cancer	1.93 (1.79, 2.08)		2.00 (1.84, 2.16)	
Breast can-r	1.09 (0.97, 1.22)		1.13 (1.00, 1.28)	
Prostate c-r	1.15 (1.03, 1.29)		1.18 (1.05, 1.33)	
Cardiovasc-r	1.49 (1.44, 1.54)		1.56 (1.51, 1.61)	
Myocardial-n	1.64 (1.48, 1.80)		1.79 (1.62, 1.99)	
Stroke	1.25 (1.14, 1.36)		1.29 (1.18, 1.42)	
Respiratory	1.81 (1.68, 1.94)		1.78 (1.65, 1.92)	
Traffic ac-s	1.80 (1.36, 2.39)		1.47 (1.09, 1.97)	
Suicide	1.32 (1.14, 1.51)		1.38 (1.19, 1.59)	

Note for both tables: HRs for the 10th (lowest SEP) decile compared to 1st (highest SEP). Breast and prostate cancer: for men and women respectively.

## 6.6 Cause specific mortality - 2.0 results

	Age & sex HR	95% CI	Adjusted HR	95% CI
Lung cancer	1.79 (1.67, 1.92)		1.84 (1.71, 1.98)	
Breast can-r	1.01 (0.91, 1.13)		1.05 (0.94, 1.17)	
Prostate c-r	1.13 (1.02, 1.26)		1.14 (1.02, 1.27)	
Cardiovasc-r	1.38 (1.34, 1.43)		1.44 (1.39, 1.48)	
Myocardial-n	1.53 (1.40, 1.67)		1.67 (1.52, 1.83)	
Stroke	1.25 (1.15, 1.35)		1.28 (1.18, 1.40)	
Respiratory	1.63 (1.53, 1.74)		1.60 (1.49, 1.72)	
Traffic ac-s	2.13 (1.59, 2.86)		1.80 (1.33, 2.43)	
Suicide	1.31 (1.15, 1.49)		1.37 (1.20, 1.57)	

Note for both tables: HRs for the 10th (lowest SEP) decile compared to 1st (highest SEP). Breast and prostate cancer: for men and women respectively.

## 6.7 Cause specific mortality - 3.0 results

	Age & sex HR	95% CI	Adjusted HR	95% CI
Lung cancer	1.93 (1.79, 2.08)		2.01 (1.85, 2.17)	
Breast can-r	1.08 (0.97, 1.22)		1.13 (1.00, 1.27)	
Prostate c-r	1.17 (1.04, 1.30)		1.19 (1.06, 1.34)	
Cardiovasc-r	1.49 (1.44, 1.54)		1.56 (1.51, 1.61)	
Myocardial-n	1.62 (1.47, 1.79)		1.78 (1.61, 1.97)	
Stroke	1.24 (1.14, 1.35)		1.28 (1.17, 1.41)	
Respiratory	1.83 (1.71, 1.97)		1.81 (1.68, 1.96)	
Traffic ac-s	2.05 (1.54, 2.73)		1.69 (1.25, 2.29)	
Suicide	1.34 (1.16, 1.54)		1.41 (1.22, 1.62)	

Note for both tables: HRs for the 10th (lowest SEP) decile compared to 1st (highest SEP). Breast and prostate cancer: for men and women respectively.