

SUPPLEMENTAL MATERIALS

ASCE Natural Hazards Review

Changes in Social Capital during the COVID-19 Pandemic: Empirical Evidence from Singapore and Switzerland

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Table S1. Changes in horizontal and vertical social capital main indicators during the pandemic (between June 2020 and July 2021) in Singapore (n=3774) and Switzerland (n=4115) respectively.

Social capital indicators	Mean scores (SD)		Mean difference ^a [95% CI]	p-value ^b
	Survey 1	Survey 2		
Singapore				
Horizontal social capital	2.76 (0.63)	2.96 (0.69)	0.20* [0.16, 0.24]	<0.001
Social cohesion	3.38 (0.63)	3.56 (0.63)	0.18* [0.14, 0.22]	<0.001
Social network	2.54 (0.69)	2.78 (0.72)	0.24* [0.20, 0.29]	<0.001
Social support	2.38 (0.84)	2.55 (0.84)	0.17* [0.12, 0.23]	<0.001
Vertical social capital	3.48 (0.71)	3.66 (0.69)	0.18* [0.13, 0.22]	<0.001
Ties with government leaders	3.63 (0.73)	3.88 (0.71)	0.25* [0.20, 0.29]	<0.001
Ties with local leaders	3.33 (0.79)	3.44 (0.81)	0.11* [0.06, 0.16]	<0.001
Switzerland				
Horizontal social capital	2.77 (0.55)	3.01 (0.57)	0.24* [0.21, 0.28]	<0.001
Social cohesion	3.42 (0.63)	3.69 (0.60)	0.27* [0.23, 0.31]	<0.001 ^c
Social network	2.70 (0.66)	2.91 (0.67)	0.21* [0.17, 0.25]	<0.001
Social support	2.20 (0.75)	2.45 (0.78)	0.25* [0.20, 0.30]	<0.001 ^c
Vertical social capital	3.46 (0.65)	3.48 (0.68)	0.02 [-0.02, 0.06]	0.44
Ties with government leaders	3.60 (0.75)	3.62 (0.78)	0.02 [-0.03, 0.06]	0.55
Ties with local leaders	3.32 (0.76)	3.34 (0.79)	0.02 [-0.03, 0.07]	0.47

Note: SD = standard deviation; CI = confidence interval. Sample sizes were as follows for each wave of survey in Singapore (survey 1, n=1520; survey 2, n=2254) and Switzerland (survey 1, n=1565; survey 2, n=2550) respectively.

^aMean difference refers to the mean score in survey 2 minus the mean score in survey 1.

^bp-value from student's t-test (if samples had equal variances) unless otherwise stated.

^cp-value from Welch-t-test (if samples had unequal variances).

*Statistical significance of p<0.05.

Table S2. Changes in horizontal and vertical social capital main indicators during the pandemic (between June 2020 and July 2021) in Singapore (n=2742) and Switzerland (n=2505) respectively by collectivistic orientation levels.

Social capital indicators	Mean scores (SD)		p-interaction ^c
	Low collectivistic orientation ^b	High collectivistic orientation ^b	
Singapore			
Horizontal social capital			0.85
Survey 1	2.24 (0.78)	2.84 (0.62)	
Survey 2	2.52 (0.63)	3.10 (0.64)	
Change between waves ^d [95% CI]	0.28* [0.10, 0.45]	0.26* [0.21, 0.31]	
Vertical social capital			<0.001
Survey 1	2.48 (0.81)	3.62 (0.66)	
Survey 2	3.14 (0.75)	3.84 (0.65)	
Change between waves ^d [95% CI]	0.66* [0.47, 0.84]	0.22* [0.18, 0.28]	
Switzerland			
Horizontal social capital			0.17
Survey 1	2.56 (0.52)	2.94 (0.56)	
Survey 2	2.75 (0.52)	3.20 (0.60)	
Change between waves ^d [95% CI]	0.19* [0.12, 0.26]	0.26* [0.20, 0.32]	
Vertical social capital			0.16
Survey 1	3.24 (0.66)	3.62 (0.64)	
Survey 2	3.22 (0.67)	3.68 (0.68)	
Change between waves ^d [95% CI]	-0.02 [-0.10, 0.06]	0.06 [-0.01, 0.13]	

Note: SD = standard deviation; CI = confidence interval. Sample sizes were as follows for each wave of survey in Singapore (low collectivistic orientation, n=262; high collectivistic orientation, n=2480) and Switzerland (low collectivistic orientation, n=1067; high collectivistic orientation, n=1438) respectively.

^aCollectivistic orientation defined as “work for the common good” and “stand together for our nation”.

^bHigh or low collectivistic orientation refers to respondents with mean scores of ≥ 4 or < 3 respectively. Respondents with mean scores of ≥ 3 to < 4 were excluded from analyses.

^cp-value to indicate the significance of interaction term between collectivistic orientation and time of survey (independent variables) on social capital indicator (dependent variable) from two-way ANOVA.

^dChanges in horizontal social capital or vertical social capital are based on comparisons of differences in means between waves (survey 2 minus survey 1) for each level of collectivistic orientation using independent two-sample t-tests. A positive value in the point estimate indicates an increase in social capital over time, whereas a negative value indicates a decrease in social capital over time.

*Statistical significance of $p < 0.05$.

Table S3. Changes in horizontal and vertical social capital (SC) during the pandemic (between June 2020 and July 2021) in Singapore (n=3774) by age groups and in Switzerland (n=4115) by primarily spoken national language groups.

Demographic groups	Changes between waves ^a (95% CI)	
	Horizontal SC	Vertical SC
Singapore		
Age groups (years)		
20-29 (n=836)	0.19* (0.07, 0.31)	0.17* (0.04, 0.30)
30-39 (n=1008)	0.29* (0.18, 0.39)	0.21* (0.09, 0.33)
40-49 (n=833)	0.12* (0.01, 0.23)	0.07 (-0.06, 0.19)
50-59 (n=724)	0.09 (-0.03, 0.21)	0.17* (0.04, 0.31)
≥60 (n=373)	0.34* (0.17, 0.51)	0.37* (0.19, 0.56)
Switzerland		
Primarily spoken national language groups		
German (n=2813)	0.23* (0.18, 0.29)	-0.01 (-0.08, 0.05)
French (n=1074)	0.26* (0.18, 0.34)	0.03 (-0.06, 0.13)
Italian (n=228)	0.31* (0.13, 0.50)	0.26* (0.05, 0.48)

Note: CI = Confidence interval.

^aChanges in horizontal social capital or vertical social capital are based on comparisons of differences in means between waves (survey 2 minus survey 1) for each level of age group (or each level of primarily spoken national language group) using independent two-sample t-tests. A positive value in the point estimate indicates an increase in social capital over time, whereas a negative value indicates a decrease in social capital over time.

*Statistical significance of p<0.05.