

Contextual Effects of Bridging Social Capital on Subjective Well-being

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Abstract: This paper investigates the statistical relationship between social capital and subjective well-being. Social capital is conceptually divided into four categories, i.e., bonding civic engagement, bridging civic engagement, bonding trust, and bridging trust. Web-survey data conducted in Japan in February 2015 is used ($N = 11,814$). The OLS regression for female sample shows that both of bonding and bridging trust have significantly positive effects on subjective well-being. On the other hand, the OLS regression for male sample indicates that there are significantly negative interaction effects between bridging and bonding social capital on subjective well-being. These findings suggest that at least in the male, bridging social capital facilitates subjective well-being not in anytime but only when one is poor in bonding social capital, in other words, he is isolated from their neighboring community.

Keywords: Subjective well-being, Happiness, Social capital, Civic engagement, Trust

1 . Introduction

The recent decade has witnessed the rapid spread of research on subjective well-being, or happiness, in a wide variety of disciplines such as psychology (e.g. Kahneman et al. 2004), economics (e.g. Frey and Stutzer 2002; Graham 2009), and sociology (e.g. Ishida et al. 2014). These studies have empirically explored diverse causal conditions affecting one's subjective well-being based on questionnaire surveys all around the world. These conditions include personality factors such as extroversion, as well as socio-demographic factors such as age, gender, marital status, employment, and income (Frey and Stutzer 2002).

Among these factors, social capital is one of the latest foci of happiness studies (e.g. Han et al. 2013, Andrés and von Berlepsch 2014, Matsushima and Matsunaga 2015). The findings from empirical studies on the relation between social capital and subjective well-being are, however, not necessarily consistent with each other. One reason would be the institutional and cultural diversity of countries these research has analyzed such as Europe, South Korea, and

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Japan. But more important cause for this inconsistency would be the ambiguity of definitions and measures of social capital.

Though there are a variety of definitions on social capital in many fields, R. Putnam's one would be the most popular: "Social capital here refers to features of social organization, such as trust, norms (of reciprocity), and networks (of civic engagement), that can improve the efficiency of society by facilitating coordinated actions." (Putnam 1993: 167). This definition consists of three different features of a society, and it is not so clear how these three features relate with each other. In addition to that, these features were measured by a lot of ways in the literature. For example, civic engagement was measured by one's membership to a group or by one's actual participation in the activities of a group.

One of the important theoretical cores of social capital as a social theory is the distinction between bonding and bridging social capital. This distinction was also introduced by Putnam. Whereas bonding social capital is "inward looking and tend to reinforce exclusive identities and homogenous groups," bridging social capital is "outward looking and encompass people across diverse social enclaves" (Putnam 2000: 22). Putnam and other researchers on social capital theory tend to evaluate bridging social capital more positively than bonding social capital based on the reason that the former is more familiar to a civil and democratic society with horizontal voluntary networks. However, since the empirical literature on the relation between social capital and subjective well-being did not distinguish these two types of social capital explicitly, we are so far not clear which of bonding or bridging social capital would be preferable for individual well-being.

Therefore the research question of this paper is which of bonding or bridging social capital promote subjective well-being at the individual level.

We focus on two features of social capital by Putnam, i.e., civic engagement and trust. Norms of reciprocity is omitted in this study because this feature is not so easy to measure in a questionnaire survey and because it is difficult to theoretically distinguish "bonding norms" from "bridging norms." In addition, we differentiate bonding type and bridging type of civic engagement and trust respectively. To sum up, we use the following four measures regarding social capital in the multivariate analyses; Bonding Engagement, Bridging Engagement, Bonding Trust, and Bridging Trust.

In exploring the causal effects of social capital on subjective well-being, we especially pay attention to the contextual effects between bonding and bridging social capital. This is because the sociological literature on social capital theory often suggested that bridging social capital is helpful for one's status attainment in individualized and market-oriented societies but it is not necessary efficient in traditional and closed societies (e.g. Yamagishi and Yamagishi 1994, Macy and Sato 2002). Thus in the following multivariate analyses, we use interaction terms between bonding and bridging social capital.

2 . Method

We employ OLS regression analyses of social capital to subjective well-being, using a

nationwide web-survey data set collected in Japan.

2-1. Data

The data were derived from a web survey conducted in Japan in February 2015 by the Center for Social Well-being Studies at Senshu University. The respondents aged from 20 to 69 were randomly chosen from the pre-registered monitors of a survey agent (Nikkei Research Inc.). They were randomly selected from 240 stratified categories filled with numbers which were proportional to the national distribution with regard to age, gender, city size, and region (see Table 1). Therefore we can regard this sample as approximately a nationally representative one. The effective responses were 11,814.

Table 1 Proportions of demographic indicators for the sample and the latest census

Stratification	Category	The sample	2010 census
Age	20-29	16.3%	16.5%
	30-39	22.0%	21.8%
	40-49	20.0%	20.2%
	50-59	19.5%	19.6%
	60-69	22.1%	21.9%
Gender	Male	50.0%	49.9%
	Female	50.0%	50.1%
City size	Ordinance-designated cities	29.1%	28.7%
	Large cities (200,000-)	24.9%	24.8%
	Small cities (-200,000)	37.7%	37.7%
	Towns and villages	8.3%	8.9%
Region	Hokkaido and Tohoku	11.3%	11.3%
	Kanto	34.5%	34.6%
	Chubu	16.8%	18.1%
	Kinki	18.0%	16.4%
	Chugoku and Shikoku	8.6%	8.6%
	Kyushu	10.8%	11.0%

2-2. Measures

The dependent variable of this research is subjective well-being. In this study, we measure it by subjective happiness. The independent variables are four types of social capital measures described above. Some socio-demographic characteristics usually used in the literature on subjective well-being are used as covariates.

Subjective well-being (Happiness). Previous studies on subjective well-being have employed a few measures as representing subjective well-being, such as subjective happiness, life

satisfaction, and Cantril's ladder-of-life question (Cantril 1976). In this paper, we use subjective happiness ("How happy are you currently?"), because it used to be the most popular measure in this field. The variable is measured in eleven-point scale from (0) "very unhappy" to (10) "very happy."

Bonding civic engagement. In this study, we measure bonding civic engagement by the frequency of respondent's participation in his/her neighborhood-association activities, such as attending to the meetings, participating in crime and/or disaster management activities. This is because in Japanese society each community usually has a neighborhood association (*jichikai* or *chonaikai* in Japanese), and many sociological studies have regarded it as a typical social organization of bonding type in Japan. The frequency of participation is rated by five-point scale from (1) "Have never done" to (5) "Once a week."

Bridging civic engagement. According to Putnam (2000), bridging social networks mean horizontal and voluntary civil association. Thus we measure bridging civic engagement by the frequency of respondent's participation in such activities as sports, hobbies, and leisure in his/her neighborhood but not hosted by neighborhood associations. Same as above, the frequency of participation is measured in five-point scale from (1) "Have never done" to (5) "Once a week."

Bonding trust. We regard one's trust for his/her neighbors as an indicator of bonding-type trust. Five-point scale from (1) "Cannot trust at all" to (5) "Can trust a lot" is employed.

Bridging trust. We use so called general trust as a measure of bridging-type trust. The question is "To what degree do you feel you can trust or not trust most people." Same as above, five-point scale from (1) "Cannot trust at all" to (5) "Can trust a lot" is used.

Covariates. Age, educational attainments (years), marital status, city size, types of housing, employment status, and household income are controlled in the multivariate analyses.

Table 2 shows descriptive statistics of the above variables both for the male sample and for the female sample.

Table 2 Descriptive statistics of variables in analyses

	Male (<i>N</i> = 4,590)		Female (<i>N</i> = 4,246)		Range
	M	D	M	D	
Happiness	6.13	2.25	6.63	2.14	0-10
Bonding Engagement	1.97	1.04	1.90	0.98	1-5
Bridging Engagement	2.30	1.35	2.23	1.43	1-5
Bonding Trust	2.87	0.80	2.79	0.75	1-5
Bridging Trust	2.75	0.74	2.72	0.69	1-5
Age	45.6	13.4	45.1	13.6	20-69
Education years	15.1	2.18	14.4	1.87	9-21
Household income (10,000 Yen)	672	418	622	385	25-2,250
Marital status					
Not married (ref.)	36%		31%		
Married	64%		69%		
City size					
Town and village (ref.)	9%		8%		
Small city	38%		38%		
Large city	25%		26%		
Ordinance-designated city	29%		28%		
Housing					
Rented (ref.)	31%		30%		
Own	69%		70%		
Employment					
Regular (ref.)	62%		23%		
Temporary	12%		28%		
Self employed	11%		7%		
Unemployed	15%		42%		

3 . Results

We employ OLS regressions with happiness as dependent variable and with social capital as independent variables.

Regarding social capital, we use four variables explained above: (1) Bonding Engagement (BoE), (2) Bridging Engagement (BrE), (3) Bonding Trust (BoT), and (4) Bridging Trust (BrT). In addition, for considering contextual effects between bonding and bridging social capital, we include four interaction terms between them: (1) Interaction between Bonding Engagement and Bridging Engagement (BoE x BrE), (2) Bonding Engagement and Bridging Trust (BoE x BrT), (3) Bonding Trust and Bridging Engagement (BoT x BrE), and (4) Bonding Trust and Bridging Trust (BoT x BrT).

The analyses are conducted separately for the male sample and for the female sample,

because the literature on happiness has suggested that the causal conditions usually differ in both gender (e.g. Frey and Stutzer 2002). Table 3 shows the result of OLS regressions for both genders.

Table 3 OLS regressions of happiness with interaction between bonding and bridging social capital

	Male			Female		
	B		SE	B		SE
Bonding Engagement (BoE)	.397	**	.128	.072		.147
Bridging Engagement (BrE)	.099		.092	.078		.094
Bonding Trust (BoT)	.749	***	.123	.607	***	.142
Bridging Trust (BrT)	.758	***	.125	.477	***	.144
BoE x BrE	-.011		.021	.005		.023
BoE x BrT	-.111	**	.040	-.032		.048
BoT x BrE	-.001		.030	-.005		.031
BoT x BrT	-.114	**	.038	-.063		.047
Age	-.008	**	.003	-.006	*	.003
Education year	.039	**	.014	.003		.017
Marital Status (Married)	1.415	***	.074	.808	***	.076
City size						
Small city	.113		.113	.078		.118
Large city	-.005		.119	-.059		.123
Ordinance-designated city	.194		.118	-.138		.123
Housing (Own)	.000		.072	-.005		.075
Employment						
Temporary	-.016		.099	-.227	*	.091
Self employed	.045		.101	-.081		.138
Unemployed	.195	*	.093	.064		.089
Household income (10,000 Yen)	.001	***	.000	.001	***	.000
(Intercept)	.806	*	.387	3.279	***	.448
<i>N</i>	4,590			4,246		
Adj. R ²	.203			.122		

DV: Happiness. * <.05, ** <.01, *** <.001.

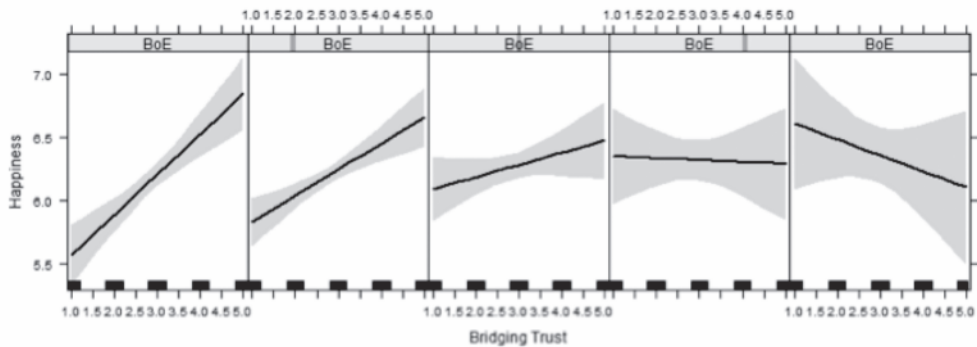
3-1. Male

Firstly, let us confirm the male result. With regard to the covariates, Income, Marriage, and Education have significantly positive effects on Happiness, whereas Age has a significantly negative effect. The former results are consistent with previous studies, but the latter is opposite to them. This would require further examinations but it should be our future task.

For social capital, we can see significantly *negative* interactions between Bonding Engagement and Bridging Trust (BoE x BrT), and between Bonding Trust and Bridging Trust (BoT x BrT).

Figure 1 displays the effect of the former interaction, namely between Bonding Engagement and Bridging Trust (BoE x BrT). The panels placed horizontally represent the level of Bonding Engagement of respondents. The left most panel shows the relation between Bridging Trust (=horizontal axis) and Happiness (=vertical axis) when the level of Bonding Engagement is the lowest. The level of Bonding Engagement gradually increases toward right panels.

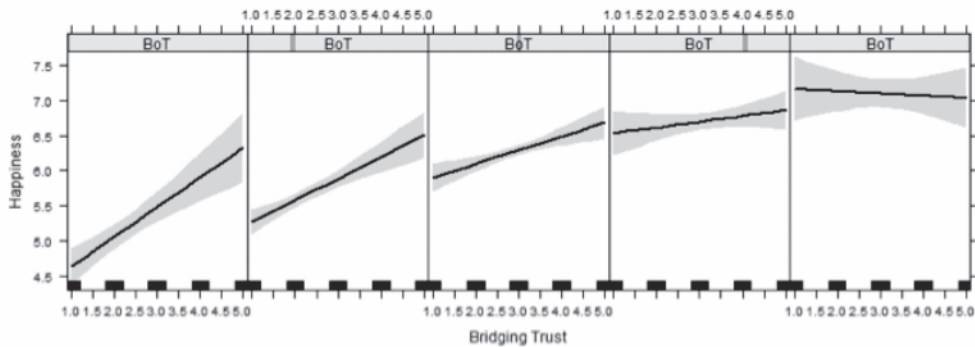
We can notice that Bridging Trust has a significantly positive effect on Happiness only when Bonding Engagement is relatively low. Stated in another way, Bridging Trust (=general trust) has no significant effect on Happiness for respondents with high levels of Bonding Engagement (=participation in activities of neighborhood association).



Panels represent the levels of Bonding Engagement. Left is lower and right is higher.
Horizontal axis of each panel represents the level of Bridging Trust.
Shading area in each plot shows the 95% confidence interval of the regression line.

Figure 1 Interaction between Bonding Engagement (BoE) and Bridging Trust (BrT)

Figure 2 shows the interaction effects between Bonding Trust and Bridging Trust (BoT x BrT). This time, each panel represents the level of Bonding Trust of the respondents. We can confirm again that Bridging Trust has a significantly positive effect on Happiness only when Bonding Trust is relatively low. In other words, Bridging Trust (=general trust) has no significant effect on Happiness for respondents with high level of Bonding Trust (=trust for one's neighbors).



Panels represent the levels of Bonding Trust. Left is lower and right is higher.
Horizontal axis of each panel represents the level of Bridging Trust.
Shading area in each plot shows the 95% confidence interval of the regression line.

Figure 2 Interaction between Bonding Trust (BoE) and Bridging Trust (BrT)

In summary, bridging social capital certainly promotes happiness as the literature showed (e.g. Frey 2008). However, at least for our male sample, it is valid only for those with poor bonding social capital, namely for those who do not so much participate in their neighborhood activities neither trust their neighbors. These findings suggest that there is a condition under which having bridging social capital is important for happiness. We will discuss it later.

3-2. Female

Secondly, let us check the female result (in Table 3 before). For covariates, Income and Marriage have significantly positive effects on Happiness, and Age has a significantly negative effect as in the male sample. However, Education has no significant effect on Happiness in our female sample.

With regard to social capital, contrary to the male sample, we can find no significant interaction effects among social capital measures. For main effects, Trusts (both Bonding and Bridging) have significantly positive effects on Happiness, whereas Engagements (both Bonding and Bridging) have no significant effects on Happiness.

These findings suggest that the female has no contextual effects between bonding and bridging social capitals, and both of bonding and bridging trust positively contribute to their happiness.

4 . Discussion

We have the following two findings from Japanese national-representative data. (1) For men, bridging social capital improves their subjective well-being only when they are poor in bonding social capital. In other words, for those who have rich bonding social capital, bridging social capital has no significant effect on their subjective well-being. (2) For women, no such contextual effects of bonding and bridging social capital are observed. Instead, trust promotes subjective well-being regardless of bonding or bridging, and civic engagement has no significant effect on well-being regardless of bonding or bridging.

The former finding, namely for men, are very interesting and important for our research question. Being different from popular discourses on bridging social capital or civic engagement, this type of social capital is useful for one's subjective well-being only when he does not involved in neighborhood associations and thus does not trust his neighbors so much. We can rephrase this situation with that he is isolated from his community, or with that he is cut off from his neighbors.

As most social theories suggest, modernization brings individualization in general. Investing in bridging social capital would be a way to adapt to this liberated but riskful society. However, people living in a traditional society with close relationship among their neighborhood would not necessarily require bridging social capital. To verify this hypothesis using other East and South-East Asian countries will be our future task.

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