TRUST WITHIN A COMMUNITY IS A DOUBLE-EDGED SWORD: 
TRUST HAS A POSITIVE INDIVIDUAL-LEVEL EFFECT AND 
A NEGATIVE CONTEXTUAL EFFECT ON SUBJECTIVE WELL-BEING

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Previous studies have found that trust has a positive effect on subjective well-being. However, when trust is accumulated within a community, it can create expectations of trustworthiness and consequently be transformed into shared social norms. We hypothesized that trust toward community members (i.e., community trust) would have a positive effect on well-being at the individual level. Further, we anticipated that it would have a negative contextual effect on subjective well-being at the community level, because it constrains individual freedom by constructing shared norms within a community. We mailed our survey to each household across 105 randomly-sampled communities in the Yasu River watershed in Shiga prefecture, Japan. We conducted multilevel analyses using the survey data (Nindividual = 3,116, Ncommunity = 99). As predicted, the results showed that community trust had a positive effect on subjective well-being at the individual level and a negative contextual effect at the community level. This suggests that living in a community where residents trust each other may dampen one’s subjective well-being. Implications for studies on happiness and social dynamics are discussed.

Key words: trust, assurance, multilevel analysis, community, subjective well-being

INTRODUCTION

Effects of Trust on Subjective Well-Being

Trust has been found to be one of the strongest predictors of subjective well-being, even after controlling for other confounding factors such as age, financial status, and physical health (Barefoot et al., 1998; DeNeve & Cooper, 1998; Hyyppa & Maki, 2001). It also functions as an individual resource (Lin, 2002: 29) due to interwoven expectation of safety between individuals that help decrease anxiety and mitigate depression (Schneider, Konijn, Righetti, & Rusbult, 2011).

In addition to these individual-level effects, trust is also continually accumulated at

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the social level (Björnskov, 2007; Putnam, 1993) as a macro system; thus, trust is an
important source of subjective well-being (Björnskov, 2008; Helliwell, 2003; Helliwell &
Putnam, 2004; Helliwell & Wang, 2011; Portela, Neira, & del Mar Salinas-Jiménez,
2013; Sarracino, 2010; Snelgrove, Pikhart, & Stafford, 2009). It establishes cooperation
and coordination among people (Fukuyama, 1995), develops a shared willingness and
expectations to work toward the common good (Sampson, Raudenbush, & Earls, 1997),
and serves as the basis for financial transactions (Helliwell & Putnam, 1995; Knack &
Keefer, 1997; Zak & Knack, 2001); these in turn lead to the increased subjective well-
being of members of a given society.

Community Trust

As mentioned in the preceding section, previous studies have found that trust has
positive effects on subjective well-being. However, trust also has the potential to exert a
negative influence on subjective well-being, especially when accumulated within a
community.

Having trust towards community members (i.e., community trust) is likely to
increase subjective well-being as it enables individuals to establish reciprocal
relationships (Fukushima, Yoshikawa, Ichida, Saizen, & Kobayashi, 2009; Schneider et
al., 2011). However, at the same time, mutual trust may entail a rigid social norm that
requires obligatory contributions toward the community, when a majority of community
residents place a high level of trust in each other. More specifically, when compared to
those who live in a community where residents do not trust each other, individuals who
live in a community where residents trust other residents and expect them to behave
trustworthily are more likely to feel obligated to behave in a trustworthy way in order to
avoid social exclusion. As such, community trust can reinforce the expectations and
obligations of trustworthy behaviors among its members, at the community level.
Although obligatory cooperation among members benefits the society as a whole, it can
also entail the cost of sacrificing individual freedom of choice.¹

These constraints are compatible with the concept of assurance that has been
proposed by Yamagishi and Yamagishi (1994). Assurance is an incentive structure that
surrounds interpersonal relationships; it provides incentives for cooperation (rather than
free-ride) and consequently guarantees mutual collaboration among community
members.² Yamagishi supposed that assurance is based on a mutual monitoring and
sanctioning system that exists between community members (e.g., Yamagishi, 1986,
1988a, 1988b). In a society where such an incentive structure exists, people do not
violate social norms as it may result in punishment from other members (e.g., ostracism
from the community). Although trust and assurance are supposed to be incompatible
(i.e., assurance constrains the construction of trust; see Yamagishi, 2003), they might be

¹ According to Portes (1998), the “dark side” of trust entails the following negative consequences that are
related to social capital: 1) exclusion of outsiders, 2) excess demands placed on group members; 3)
restriction of individual freedom; and 4) downward-leveling norms that force individuals to not exceed the
average.

² In a society where assurance is widespread, people do not need to personally judge the others’
trustworthiness because cooperation among members is already assured in such an environment.
two sides of the same coin: when trust is accumulated within a community, members develop stable relationships that are characterized by mutual reciprocity.

In contrast to trust between community members, trust toward generalized others (i.e., general trust) is less likely to result in the expectation of reciprocity norms among specific members (e.g., punishing members who do not cooperate). If a community has a high level of trust toward generalized others, members do not have to rely on other community members; instead, they can create their own wide open-cooperation networks with those who are not members of the community. Thus, we predicted that general trust will not exert a negative influence on subjective well-being at the community level. In fact, consistent with the findings of previous studies (Granovetter, 1973; Lin, 2002), general trust is predicted to have positive effects on subjective well-being as an individual resource.

The Present Research

In general, it has been suggested that, although community trust is beneficial to individuals (e.g., Fukushima et al., 2009), it can transform into shared social norms (i.e., members expecting mutual cooperation), when it is accumulated at the community level; this in turn constrains individual freedom and decreases their subjective well-being. In other words, community trust is likely to have a different effect on subjective well-being, at an individual and community level. Moreover, it has been hypothesized that individual trust can change to assurance, which also constrains individual freedom when it is accumulated within a community.

Therefore, the present study tested the hypothesis that community trust will increase subjective well-being at the individual level but decrease subjective well-being at the community level. General trust was also predicted to have a positive effect at the individual level and a non-significant effect at the community level. We conducted a large-scale social survey that targeted multiple communities in Japan to examine the individual- and community-level effects of trust using multilevel analyses.

METHODS

Sample and Sampling Technique

The sample of the present study comprised residents who were living in six cities3 across the Yasu River watershed in Shiga prefecture, Japan (Fig. 1). We mailed our survey questionnaire to each household across the 105 randomly-sampled communities4 within the catchment area, using the Japanese postal delivery service; the survey was conducted in 2016. We asked one person from each household who had a strong relationship with the local community to answer the questionnaire. Survey questionnaires from 3,116 households that represented 99 communities5 were completed and returned. Among the sampled communities, the average population size of communities was 928.1 and the average number of households was 327.26. The response rate varied across communities ($M = 0.10, SD = 0.05, \text{Min.} = 0.01, \text{Max.} = 0.23$). The study received approval from the Institutional Review Board at Kyoto University. The questionnaire

3 Yasu city, Ritto city, Koka city, Konan city, Moriyama city, and Kusatsu city.
4 Aza, cho, and chomoku are the basic social units within which people interact with each other; these have been considered to be the smallest social units by the Population Census of Japan.
included a statement of consent, and return of the completed questionnaire was considered as providing consent to participate. All information provided by participants was anonymous, except for the name of their community, which had been printed on the questionnaires prior to distribution.

Measures

To measure community trust, we used the following item: “I trust people who live in my community.” We measured general trust using the following item “I trust other people, even if I don’t know anything about them.” Participants provided their responses to both items on a 5-point Likert rating scale (i.e., 1 = strongly disagree, 5 = strongly agree). We calculated community-level trust by averaging the individual-level trust scores.

With regard to subjective well-being, we asked participants to respond to a single item on an 11-point rating scale; the item and its instruction were as follows: “How would you rate your current level of happiness? Please select a number, with 0 being very unhappy and 10 being very happy.” This item has been found to be a reliable measure of subjective well-being in previous studies (e.g., Abdel-Khalek, 2006)

Additionally, we gathered the following demographic data as individual-level covariates: gender, age,

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5 Some participants chose the same response option for several consecutive items (i.e., all items in the same section) even when the items covered diverse questions. To eliminate poor-quality responses, we removed 101 participants that entailed this response pattern in more than half the matrix sections across the original 3,217 participants (see Wilson, O’Brien, & Sesma, 2009, for a similar procedure).

6 We accessed information from the 2010 dataset of the Population Census of Japan.

7 It has been reported that the item of trust toward generalized others (e.g., “would you say that most people can be trusted or that you can’t be too careful in life?”) makes participants assume that they evaluate trustworthiness of people whom they know personally (Hooghe, Reesken, Stolle, & Trappers, 2009). Therefore, we measured trust toward generalized others by an item of trust toward strangers in order to differentiate it from trust toward community residents.
years of residence in the current community, household size, marital status, educational level, and equivalent income. The descriptive statistics for these variables are shown in Table 1. In addition to individual demographic information, we also obtained community-level data, namely, population density and proportion of farmers (from the 2010 dataset of the Population Census of Japan) because they have been shown to be significant predictors of subjective well-being. The average population density and the proportion of farmers in the sampled communities were 3,507 individuals per square kilometer and 3.8%, respectively. Correlations between the items that were used in the questionnaire are shown in Table 2.

**Analyses**

We conducted multilevel regression analysis to examine the multilevel effects of trust on subjective well-being. For this purpose, version 2.30 of the MLwiN statistical software was used. Quasi-likelihood estimation was used as an estimation method. Individual-level variables and community-level variables were centered around the grand mean. The grand mean-based centering of the variables, at both the individual and community level, allows community-level effects to correspond to contextual effects. These contextual effects reflect a community-level process (i.e., community members mutually trust one another) that is above and beyond individual-level processes (i.e., individuals trust other community members). Our primary objective was to examine whether community trust has a positive individual-level effect and a

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8. Abdel-Khalek (2006) found that the temporal stability of this item was high ($r = 0.86$). They also showed that the item was significantly correlated with other subjective well-being items that measure mental health ($r = 0.70$), positive affect ($r = 0.34$), and negative affect ($r = -0.49$).

9. Equivalent income, which reflects the income that is necessary for one person to acquire the same level of economic utility, was calculated by dividing the household income by the square root of the household size.

10. Our survey questionnaire included other items, but we have presented only those items that were relevant to the theme of the current study.

11. The mean community trust and general trust scores evidenced a difference of approximately one point; this suggested that we could successfully divide the two trust items.

12. Winters and Li (2017) showed the adverse effects of county population density on life satisfaction. Farmers’ ratio was also found to rooted in the Japanese value for interdependence (Uchida et al., 2019); this might be related to the sense of assurance within the Japanese social system and the social norms that are based on mutual trust within this community.
<table>
<thead>
<tr>
<th>Variable</th>
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<tr>
<td>1 Subjective well-being</td>
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<td>.26***</td>
<td>.11***</td>
<td>.06**</td>
<td>-.06***</td>
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<td>.18***</td>
<td>.11***</td>
<td>.17***</td>
<td></td>
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<tr>
<td>2 Community trust</td>
<td>.19</td>
<td>---</td>
<td>.35***</td>
<td>-.08***</td>
<td>.20***</td>
<td>.19***</td>
<td>.06**</td>
<td>.07***</td>
<td>-.03</td>
<td>-.01</td>
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<td>3 General trust</td>
<td>-.08</td>
<td>.33***</td>
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<td>-.11***</td>
<td>.16***</td>
<td>.12***</td>
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<td>-.03</td>
<td>-.02</td>
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<tr>
<td>4 Gender (0 = male, 1 = female)</td>
<td>.13</td>
<td>-.33***</td>
<td>-.47***</td>
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<td>-.26***</td>
<td>-.28***</td>
<td>-.07***</td>
<td>-.18***</td>
<td>.06**</td>
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<td>5 Age</td>
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<td>.27**</td>
<td>.49***</td>
<td>-.54***</td>
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<td>.47***</td>
<td>-.12***</td>
<td>-.05**</td>
<td>.37***</td>
<td>.27***</td>
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<tr>
<td>6 Years of residence</td>
<td>-.29**</td>
<td>.36***</td>
<td>.38***</td>
<td>-.57***</td>
<td>.59***</td>
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<td>.11***</td>
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<td>(0 = less than 40 years, 1 = 40 years or more)</td>
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<td>7 Household size</td>
<td>-.19</td>
<td>.18</td>
<td>.25*</td>
<td>-.38***</td>
<td>.08</td>
<td>.53***</td>
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<td>.35***</td>
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<tr>
<td>8 Marital status (0 = unmarried, 1 = married)</td>
<td>.31**</td>
<td>.37***</td>
<td>.09</td>
<td>-.34***</td>
<td>-.08</td>
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<td>.08***</td>
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<td>Educational level</td>
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<tr>
<td>(0 = high school or below, 1 = above high school)</td>
<td>.24*</td>
<td>-.19</td>
<td>-.33***</td>
<td>.35***</td>
<td>-.62***</td>
<td>-.48***</td>
<td>-.20*</td>
<td>.16</td>
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<td>.22***</td>
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<tr>
<td>9 Equivalent income class (in million yen increments)</td>
<td>.28**</td>
<td>.33***</td>
<td>-.21*</td>
<td>.28**</td>
<td>-.55***</td>
<td>-.39***</td>
<td>-.15</td>
<td>-.10</td>
<td>.22*</td>
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<tr>
<td>10 Population density</td>
<td>.22*</td>
<td>-.19</td>
<td>-.10</td>
<td>.25*</td>
<td>-.35***</td>
<td>-.56**</td>
<td>-.39***</td>
<td>-.02</td>
<td>.53***</td>
<td>.27***</td>
<td>---</td>
</tr>
<tr>
<td>11 Farmers ratio</td>
<td>-.23*</td>
<td>.19</td>
<td>.05</td>
<td>.27**</td>
<td>.20*</td>
<td>.46***</td>
<td>.54***</td>
<td>.20*</td>
<td>-.27**</td>
<td>-.24**</td>
<td>-.42***</td>
</tr>
</tbody>
</table>

Note. The results above the diagonal show individual-level correlations and the results below the diagonal show community-level correlations. *p < .05, **p < .01, ***p < .00
negative community-level (i.e., contextual) effect on subjective well-being.

**Results**

First, we entered individual-level predictors into the regression model to examine whether the expected positive effects of community trust and general trust on subjective well-being were significant at an individual-level (Model 1). Basic demographic factors such as gender, age, years of residence in the community, household size, marital status, educational level, and equivalent income, were included as covariates. Consistent with the hypothesis and previous findings that have been conducted in Japan (e.g., Fukushima et al., 2009), our analysis showed that both community trust \( b = 0.54, p < .001 \) and general trust \( b = 0.08, p = 0.05 \) had positive effects on subjective well-being at an individual level (Table 3).

Subsequently, we included community-level predictors into Model 1 to examine the predicted positive effect of community trust on subjective well-being at an individual level and the negative contextual effect of community trust on subjective well-being at a

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Model 1</th>
<th>Model 2</th>
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<tbody>
<tr>
<td></td>
<td>( b )</td>
<td>( p )</td>
</tr>
<tr>
<td><strong>Individual-level predictors (level 1)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (0 = male, 1 = female)</td>
<td>0.36&lt;.001</td>
<td>0.35&lt;.001</td>
</tr>
<tr>
<td>Age class (in 10 year increments)</td>
<td>–0.02 .588</td>
<td>–0.01 .638</td>
</tr>
<tr>
<td>Years of residence (0 = less than 40 years, 1 = 40 years or more)</td>
<td>–0.02 .775</td>
<td>0.03 .686</td>
</tr>
<tr>
<td>Household size</td>
<td>0.03 .193</td>
<td>0.04 .100</td>
</tr>
<tr>
<td>Marital status (0 = unmarried, 1 = married)</td>
<td>0.81&lt;.001</td>
<td>0.81&lt;.001</td>
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<tr>
<td>Educational level (0 = high school or below, 1 = above high school)</td>
<td>0.22 .005</td>
<td>0.19 .012</td>
</tr>
<tr>
<td>Equivalent income (million yen)</td>
<td>0.13&lt;.001</td>
<td>0.13&lt;.001</td>
</tr>
<tr>
<td>Community trust (5-point Likert rating scale)</td>
<td>0.52&lt;.001</td>
<td>0.54&lt;.001</td>
</tr>
<tr>
<td>General trust (5-point Likert rating scale)</td>
<td>0.08 .045</td>
<td>0.08 .049</td>
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<tr>
<td><strong>Community-level predictors (level 2)</strong></td>
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<td></td>
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<tr>
<td>Population density (1000 residents/km²)</td>
<td>0.01 .405</td>
<td></td>
</tr>
<tr>
<td>Farmers’ ratio</td>
<td>–1.39 .102</td>
<td></td>
</tr>
<tr>
<td>Community trust</td>
<td></td>
<td>–0.45 .049</td>
</tr>
<tr>
<td>General trust</td>
<td>0.04 .886</td>
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</tbody>
</table>

*Note. Effects with \( p < .05 \) are presented in boldface.*
community level (Model 2). As shown in Table 3, the results of the regression analysis showed that, in addition to the positive individual-level effects of trust, community trust had a negative contextual effect on subjective well-being at a community level ($b = -0.45$, $p = .049$); this finding is consistent with our predictions. In other words, community trust constrains individuals by requiring them to adopt shared social norms, when it is accumulated at a community level\textsuperscript{14}.

**DISCUSSION**

The present study empirically demonstrated the dual implications that trust has on local communities in Japan. Our findings supported the hypothesis that individual-level community trust has a positive effect on subjective well-being; further, the contextual effect at a community level was negative. This suggests that individual-level trust can transform into social norms that serve as a shared expectation system, when it is accumulated at the community level; this in turn constrains individual freedom and decreases the subjective well-being of community residents.

The main results of the present study (Table 3) revealed that community trust had a negative contextual effect on subjective well-being; however, simple correlation analysis (Table 2) showed a positive correlation between community trust and subjective well-being. The latter finding can be attributed to the fact that simple correlation at the community level cannot exclude individual-level correlation, that is the positive correlation between community trust and subjective well-being at the community level can be explained using the individual-level correlation\textsuperscript{15}. On the other hand, the negative contextual effect of community trust reflects community-level effect after controlling for individual-level effect. Therefore, these results were found to be qualitatively different. Further, single correlation between community trust and subjective well-being at the community level cannot control for the effects of other variables (e.g., household size, marital status), at both the individual and community levels; therefore, the interpretation of these results should be rendered with caution.

Yamagishi (2003) suggested that the Japanese society cannot help but change from an assurance-based society that is centered within a specific community, to a trust-based society that is open toward generalized others. Further, he also suggested a negative correlation between assurance (and assurance- and commitment-based relationships) and general trust (Yamagishi, 2003, 1998/2011; Yamagishi & Yamagishi, 1994). However, the correlation between community trust and general trust was found to be positive, both at the individual and community levels in Japan (Fukushima, Yoshikawa, Saizen, & Kobayashi, 2011). In the present study, the results of the correlation analysis also

\textsuperscript{13} Although there appears to be a correlation between community trust and subjective well-being at the community level, this correlation can be explained using individual-level correlations. To avoid this misinterpretation, we focused on the results of the contextual effects.

\textsuperscript{14} Note that the sum of the contextual and individual effects (i.e., between-community effect) of community trust was not significant ($b = -0.04$, $p = 0.870$).

\textsuperscript{15} This possibility of misreading results is called “atomistic fallacy” (Macintyre, 2000).
revealed positive correlations between community trust and general trust at the individual and community levels.

The Japanese society has evidenced a change from community-based relationships to more open and mobile relationships (due to the increase in migration from rural to urban areas\textsuperscript{16}); nevertheless, related adverse effects (e.g., an increase in the number of people who are not in education, employment, or training [NEET]. Hikikomori (i.e., socially withdrawn or isolated), and single older adults) have also been observed (Uchida & Norasakkunkit, 2015). Therefore, instead of transforming wholly from community-based relationships to open relationships that are oriented toward generalized others, both forms of relationships should be harmoniously established.

The present study has a few noteworthy limitations. First, there was a sampling bias in our survey due to the low response rate. In addition, many older adults participated in the survey (i.e., 66.4% of our participants were older adults). Further, we found that our main results did not change despite significant interactions between age and response rate\textsuperscript{17}. Therefore, future research should use samples that entail a greater representation of young participants who have relatively weaker relationships with community residents; future studies must also adopt strategies that are likely to increase the response rates in each community. Second, because the target sample of the present study was a large population of primarily older adults, we used a short easy-to-answer survey that consists of only a few items for each concept. Therefore, future studies should use psychological scales that consist of multiple items in each concept and also utilize behavioral and cognitive experimental methods to examine the validity of our results. Finally, the results of our study are limited to the local communities in Japan, where stable relationships that are based on mutual reciprocity are well established. Indeed, residential mobility is relatively low in Japan (Oishi, Lun, & Sherman, 2007); relational stability that is based on low residential mobility could enable individual and community trust to function as shared social norms at the community level. Therefore, it is necessary to examine whether the results of the present study are restricted to local communities or are generalizable to broader social contexts.

REFERENCES


\textsuperscript{16} The data provided by the Statistics Bureau, Ministry of Internal Affairs and Communications of Japan (2018), indicates a continuous increase in the migration of rural residents to metropolitan areas.

\textsuperscript{17} We conducted additional analysis in which we added interaction terms between trust (i.e., general and community trust at the individual and community levels), age, and response rate. Results revealed that the effects of trust did not significantly change as a function of age or response rate.
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