

Japanese People's Attitudes toward the Government after the Great East Japan Earthquake: Who Rely on the Government?

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1. Introduction

It has often been observed that orderly behavior is a prominent feature of Japanese society, and that the Japanese people value high levels of cooperation. These traits may reflect a characteristic quality of the Japanese, who are relatively unwilling to make decisions by majority vote and tend to prefer building consensus or reaching unanimous agreements.

After the Great East Japan Earthquake on March 11, 2011, the Japanese people's orderly behavior was readily apparent in the affected area, as residents unable to obtain food waited patiently in line to receive rations. The Japanese attitude of keeping order rather than scrambling to grab the required supplies was highly praised around the world. Furthermore, there was no panic, even after the accident at the Fukushima Daiichi nuclear power plant. When a Korean reporter wrote an article highlighting this calm behavior,¹ many Japanese must have wondered why the reporter found it unusual.

Yamagishi (1998, 1999) has sought to analyze this characteristic Japanese behavior by employing Putnam's (1993) concept of social capital, which divided "trust," as an expectation about another person's intentions, into "safety" and "trust (in the narrow sense)." The difference between the two rests on whether social uncertainty is present; trust (in the narrow sense) is required if social uncertainty exists, but safety is involved if social uncertainty does not exist. According to Yamagishi's analysis, the orderly behavior of the Japanese results

¹ *Chosun Ilbo Shimbum* (online Japanese version), December 22, 2013.

from the existence of a safe society, and people might employ another approach when social uncertainty is high.

Yamagishi's analysis is based on a psychosocial approach. However, there also exists a significant body of research on Japanese cooperativeness based on public choice theory, which is referred to as "commons research." Ostrom (1990) indicated that it is necessary for institutions and norms to be formed voluntarily in order to avoid the "tragedy of the commons"; she described Japanese mechanisms such as "forest owned in common" and "common land" as detailed examples of ways to avoid this "tragedy."

However, it is difficult to apply these findings to the cooperative behavior of the Japanese in the context of the 2011 earthquake and nuclear disaster that powerfully disturbed Japan's image as a safe society. Furthermore, commons research does not discuss responses to unexpected disasters (Kira and Kawamura 2014). Therefore, we need further information to explain how and why the Japanese continue to practice cooperation when a natural disaster occurs.

The above-referenced article written by a Korean reporter provides some clues to a possible answer. This reporter observed that the Japanese people appeared to confidently rely on their government, although the government's response to the nuclear accident was inadequate. Drawing on this observation, we propose that *confidence in the government* is a key explanatory concept typifying the Japanese.

Immediately after the earthquake, although it would have been expected for some people to embark on a desperate search for required supplies, the affected residents waited patiently in line. One resident commented, "I can get supplies if I line up here." His remark demonstrated a high level of confidence that the government could be relied on to deliver assistance. Building on this example, in this paper we consider whether the Japanese people's orderly behavior in the wake of the Great East Japan Earthquake was a result of their confidence in their

government.

Since Putnam's (1993) discussion of social capital, there have been numerous debates about confidence in social institutions, as well as experimental studies of areas affected by natural disasters (Aldrich 2012; Page et al. 2014). However, there has been little research on voters' confidence in and evaluation of their government following a disaster. Samuels's (2013) study on political influence after the Great East Japan Earthquake is a rare exception. Samuels interviewed politicians and public officials and investigated the government's response after the earthquake; however, his study focused on the Japanese elite and contains minimal information on the cooperative behavior of affected residents.

Understanding residents' opinions is indispensable while investigating their confidence in the government. Interviews and surveys are both appropriate methods for assessing residents' opinions. However, most academic investigations of the Great East Japan Earthquake and its aftermath have involved interviews (Tanaka et al. 2013; Takaura et al. 2013; Gill et al. 2013) rather than surveys (Kawamura 2013; Ikeda 2016). There are few surveys because it is difficult to construct a suitable sampling frame and because Japanese researchers have had little capacity to conduct scientifically reliable surveys of the affected population. Interviews are a useful mechanism of recording the actual voices of affected residents, but interview data do not reliably indicate overall social trends.

In this paper, we use survey data rather than interview data to investigate the overall opinions of residents in the affected area. Fortunately, we have statistical data² from the "Opinion Survey of Residents of the Four Prefectures Affected by

² Basic information about this survey is as follows.

Population: residents of the four prefectures affected by the earthquake who were over twenty years of age at the time; sample size: 4,000 (1,000 from each prefecture); survey period: May to August 2014; method: mail survey; number of responses: 1,715 (43.2% response rate); person responsible for the survey project: Kazunori Kawamura, Associate Professor, Graduate School of Information Sciences, Tohoku University.

the Earthquake (Iwate, Miyagi, Fukushima, and Ibaraki),” conducted by the Japan Society for the Promotion of Science (JSPS). This was one of the largest academic surveys administered in the area affected by the Great East Japan Earthquake, and the data are particularly useful because they permit comparisons between prefectures.

Table 1 shows the respondents’ answers to the question “Do you consider yourself a victim?” for each prefecture. The percentage of persons considering themselves as victims was the largest in Fukushima, the site of the nuclear accident, although even some Fukushima residents did not think of themselves as victims. In Iwate, the prefecture farthest from the Fukushima Daiichi nuclear power plant, the percentage of people who did not consider themselves victims significantly outnumbered those who did.

The following section examines differences in the level of confidence in the government among the affected prefectures.

	Iwate	Miyagi	Fukushima	Ibaraki	all
Yes	29.45%	47.79%	72.35%	50.67%	48.92%
No	58.68%	42.92%	16.20%	38.13%	40.17%
DK	11.87%	9.29%	11.45%	11.20%	10.91%

Table 1. Answers to the question “Do you consider yourself a victim?” by prefecture

2. Evaluation of and Confidence in Government

2.1 Evaluation of the government’s response to the disaster

It has been observed that the mismanagement of the government’s response to the nuclear accident caused many people to criticize the ruling Democratic Party of Japan (DPJ). Do the data indicate that residents negatively evaluated the government’s response to the earthquake?

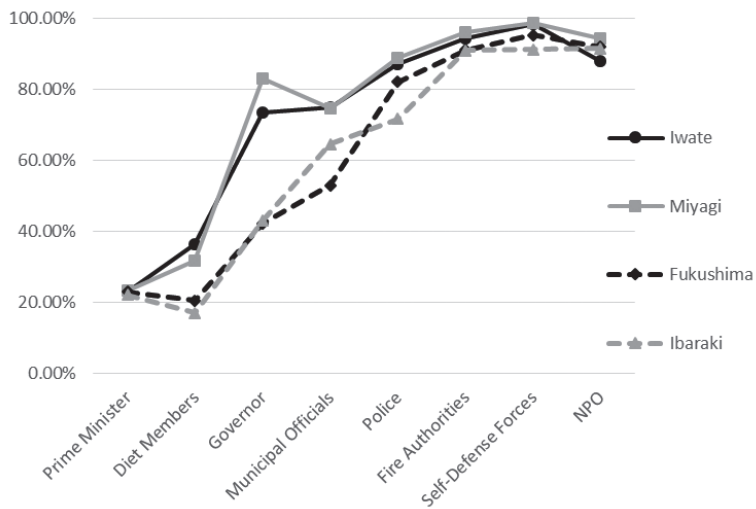
The survey included a question asking respondents to evaluate responses to the earthquake by a series of actors (the prime minister, their Diet member, the Governor, municipal officials, the police, fire authorities, the Self-Defense Forces,

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and non-profit organizations) from immediately after the earthquake until one week later. The question had five possible answers: “evaluate as high,” “evaluate as average,” “evaluate as low,” “unable to evaluate,” and “don’t know (DK).”

	Prime Minister	Diet Members	Governor	Municipal Officials	Police	Fire Authorities	Self-Defense Forces	NPO
high	1.65%	1.92%	16.64%	17.89%	33.05%	49.66%	66.28%	51.41%
average	21.60%	25.83%	46.08%	49.47%	49.87%	43.61%	29.72%	39.82%
low	33.95%	41.52%	24.28%	23.68%	13.23%	5.05%	3.14%	6.61%
unable	42.81%	30.73%	12.99%	8.95%	3.85%	1.68%	0.86%	2.16%

Table 2. Answers to the question “Can you evaluate each actor’s response to the earthquake?”



*NPO: Non-profit Organization

Source: Kawamura and Ito (2016), p327.

Figure 1. Percentage of respondents giving a high or average rating to the response by each of eight actor groups to the earthquake

Table 2 shows residents’ evaluation of each actor’s response to the earthquake, excluding “DK”. The evaluation of politicians, such as the prime

minister and Diet members, was relatively unfavorable, with only about one-quarter of the respondents rating their performance as high or average. In contrast, the evaluation of crisis management entities such as the police, fire authorities, and Self-Defense Forces was extremely high, demonstrating that the actors most closely involved with the residents were viewed very favorably.

Differences in evaluations across prefectures are shown in Figure 1. The graph shows the percentage of respondents giving high or average ratings. Although the residents of Fukushima and Ibaraki gave somewhat lower evaluations than those in the other two prefectures,³ the pattern is the same, in that the national government was rated poorly and crisis response entities most involved with the residents were rated very highly.

2.2 Confidence in the Government

We also investigated whether a similar trend could be observed regarding confidence in the government. The survey asked, “Are the government and public officials reliable?” Specifically, it asked respondents to indicate their confidence in the national, prefectural, and municipal governments, national officials, and local officials. There were five possible answers: “reliable,” “moderately reliable,” “barely reliable,” “unreliable,” and “DK.”

	Government			Public Officials	
	National	Prefectural	Municipal	National	Local
reliable	2.26%	3.37%	4.94%	1.56%	3.79%
moderately reliable	26.77%	45.04%	49.44%	25.81%	49.54%
barely reliable	51.35%	42.95%	37.36%	55.42%	39.16%
unreliable	19.62%	8.64%	8.26%	17.21%	7.51%

Table 3. Answers to the survey question “Are the government and public officials reliable?”

³ We would suggest that the evaluations were lower in Fukushima because the nuclear disaster occurred there and in Ibaraki because it was not categorized as one of the prefectures directly affected by the earthquake.

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National Government	Iwate	Miyagi	Fukushima	Ibaraki
reliable	2.18%	2.35%	1.14%	3.67%
moderately reliable	23.24%	25.88%	23.71%	33.90%
barely reliable	52.06%	51.29%	55.43%	46.61%
unreliable	22.52%	20.47%	19.71%	15.82%

Prefectural Government	Iwate	Miyagi	Fukushima	Ibaraki
reliable	3.87%	4.19%	1.72%	3.61%
moderately reliable	45.76%	56.51%	34.77%	41.57%
barely reliable	42.86%	33.95%	51.72%	44.58%
unreliable	7.51%	5.35%	11.78%	10.24%

Municipal Government	Iwate	Miyagi	Fukushima	Ibaraki
reliable	5.81%	4.83%	3.75%	5.71%
moderately reliable	51.09%	53.33%	40.92%	50.29%
barely reliable	34.87%	36.32%	43.52%	36.29%
unreliable	8.23%	5.52%	11.82%	7.71%

National Officials	Iwate	Miyagi	Fukushima	Ibaraki
reliable	1.04%	1.23%	1.58%	2.76%
moderately reliable	25.59%	24.94%	22.47%	30.37%
barely reliable	55.61%	56.54%	58.54%	51.53%
unreliable	17.75%	17.28%	17.41%	15.34%

Local Officials	Iwate	Miyagi	Fukushima	Ibaraki
reliable	3.50%	3.82%	2.47%	5.31%
moderately reliable	51.00%	54.89%	44.75%	46.02%
barely reliable	38.50%	35.08%	43.83%	41.30%
unreliable	7.00%	6.21%	8.95%	7.37%

Table 4. Answers to the survey question “Are the government and public officials reliable?” by prefecture

Table 3 shows the rate of confidence in government and public officials, excluding “DK”. One-quarter of the respondents assessed the national government and public officials as reliable or moderately reliable, and half of the respondents assessed the local government and public officials similarly, suggesting that the residents of the disaster area had greater confidence in local governments and public officials. This finding is similar to the results described previously.

Differences in confidence levels between prefectures are shown in Table 4. Some minor variations—for example, the proportion of residents assessing the government and public officials as reliable or moderately reliable was higher in Miyagi and lower in Fukushima—were observed but no significant differences were seen across prefectures.

2.3 Discussion

In this section, we analyzed respondents' evaluations of the government's response to the earthquake and their confidence in the government. The results demonstrate that the Japanese people evaluated crisis response services very favorably and expressed more confidence in government and public officials at the local than at the national level. These results from prefecture-level data are consistent with those of Ikeda (2010) and Kawamura (2013, 2014). Local government activities are more visible, therefore residents in the area affected by the earthquake could see the activities of disaster response agencies and the local government more readily. We propose that people maintained social order and did not organize large demonstrations or protests, despite the occurrence of a nuclear accident, because of their high level of confidence in the local government and in crisis responders.

Such a result may be unthinkable in Korea, which has more centralized government structures than Japan. When the Sewol ferry accidentally sunk, many passengers died due to initial response mismanagement. The response to the Fukushima nuclear accident exhibited similar mismanagement, and both accidents prompted a loss of confidence in the respective national governments. Many Koreans condemned President Park Geun-Hye over the Sewol incident, and large demonstrations were organized. Even a year after the accident, demonstrators continued to clash with the police.⁴ The Korean people have a low level of confidence in local government, in contrast to the Japanese, because Korea has centralized government structures. It might be a rational decision for them to protest against their national government when natural disasters occur.

3. Multivariate Analysis

In section 2, we analyzed respondents' performance evaluations and their confidence in the government separately. Whereas the former question asked

⁴ *Yomiuri Shimbun*, April 19, 2015.

respondents to describe their views immediately after the earthquake, the latter question inquired about their confidence at the time of the survey, more than three years later. We thus wished to investigate the possibility of a causal relation between evaluation and confidence: does a respondent who evaluates the government highly therefore have a high level of confidence in the government? In section 3, we focus on this potential causal relationship.

3.1 Principal Component Analysis

Variables denoting evaluation and confidence were needed for the regression analysis. As described in section 2, respondents were asked to evaluate the performance of eight groups of actors and to describe their confidence in three levels of government and two sets of public officials. We extracted the principal components from these questions to create two variables, “evaluation” and “confidence.”

evaluation	1	2	confidence	1
Prime Minister	0.35	0.67	National Government	0.72
Diet Members	0.52	0.65	Prefectural Government	0.86
Governor	0.66	0.39	Municipal Government	0.81
Municipal Officials	0.73	0.11	National Public Officials	0.78
Police	0.78	-0.23	Local Public Officials	0.84
Fire Authorities	0.76	-0.41	Contribution ratio (%)	64.476
Self-Defense Forces	0.70	-0.45		
NPO	0.59	-0.18		
Contribution ratio (%)	42.467	18.607		

Table 5. Principal component analysis (left: evaluation; right: confidence)

Table 5 shows the results of the principal component analyses. Two principal components with a specific value greater than one were extracted from the analyses. The first principal component recorded large positive values in all fields. When the respondent rated all actors highly, the extracted value was also high. The second principal component combined positive values for politicians and negative values for crisis response services. When the actors more closely involved with the residents were rated highly, the extracted value was low. We

labeled the first principal component “evaluation.”

A similar principal component analysis of confidence in the government yielded a principal component with a specific value greater than one. This component indicated that when the respondent rated confidence in all governments highly, the extracted value was also high. We labeled this component “confidence.”

The correlation coefficient between “evaluation” and “confidence” was positive, 0.46 (significant at the .01 level).

3.2 Multiple Regression Analysis

We performed a multiple regression analysis with “evaluation” as the independent variable and “confidence” as the dependent variable. The variables used in the regression analysis are shown in Table 6. The variables other than “evaluation” and “confidence” can be classified into two categories: “extent of damage” and “personal.” “Extent of damage” has four dummy variables, and a larger scores for the dummy variables denotes lower confidence in the government. The survey contained three questions on damage to the home: “the extent of rebuilding needed,” “the need to request a contractor to carry out repairs,” and “the extent of repair work that I carried out myself.” We combined the first two of these as the variable “damage to the home.”

The other category “personal” comprises four variables: sex, education, duration of residence, and generation. Sex is a dummy variable counting a male as one, education is a dummy variable counting a respondent who was attending or had completed college or graduate school as one, and duration of residence is a dummy variable counting a respondent who had lived for more than a decade in the same place as one. With regard to age, Kawamura (2013), who conducted a survey in Sendai city, Miyagi prefecture, found that the relationship between age and evaluation of the government was not linear but U-shaped, because people in their fifties gave poorer evaluations of government’s activities than both younger and older persons.

We investigated whether the JSPS survey data displayed a similar U-shaped relationship between respondents' age and confidence in the government. Figure 2 shows the boxplot of the relationship between age and confidence in the government. The confidence level of people in their forties was relatively low whereas that for people in their twenties and seventies was higher, confirming the presence of a U-shaped relationship. Therefore, we referred to this variable as "generation."

		Obs	Min	Max	Average	Std.Dev
	confidence	1408	-2.343	2.916	0	1
	evaluation	1181	-3.945	2.012	0	1
Extent of Damage	damage to the home	1615	0	1	0.49	0.50
	injured myself	1615	0	1	0.01	0.10
	dead (relatives)	1615	0	1	0.09	0.29
	dead (acquaintances)	1615	0	1	0.18	0.39
Personal	sex	1663	0	1	0.47	0.50
	education	1658	0	1	0.24	0.43
	duration of residence	1554	0	1	0.71	0.45
	generation	1653	1	3	1.71	0.76

Table 6. Summary statistics

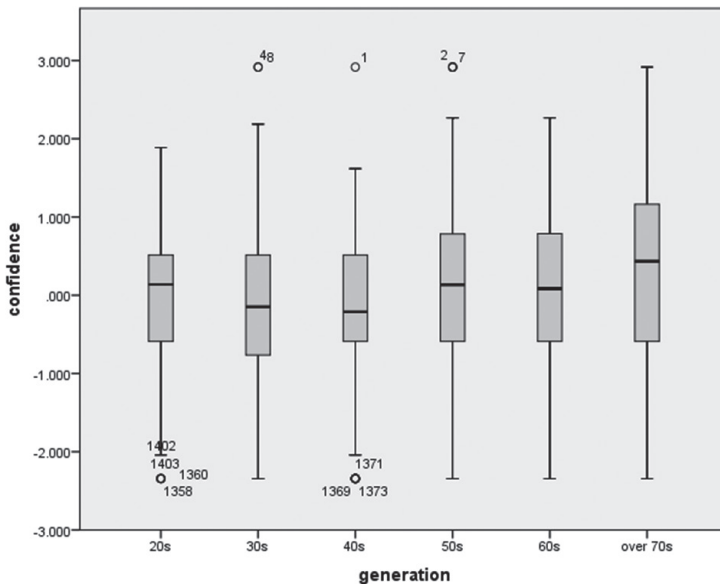


Figure 2. Boxplot showing the relationship between generation and confidence

Regression analysis was initially performed with four dummy variables representing the four prefectures: Iwate dummy, Miyagi dummy, Fukushima dummy, and Ibaraki dummy,⁵ but this resulted in multicollinearity.⁶ Therefore, we performed the analysis first without reference to a prefecture and then, as explained below in section 3.3, reanalyzed the data for each affected prefecture.

The regression analysis is shown in Table 7. When controlling for personal variables, the correlation between “confidence” and “evaluation” was significant at the .01 level, demonstrating that a higher evaluation of government was associated with greater confidence in the government. The personal variable of education was significantly correlated with “confidence” at the .01 level, demonstrating that respondents with higher education were more likely to have confidence in the government. Table 7 indicates, as noted above, that the “generation” variable was U-shaped and lowest for people in their forties. Duration of residence was significant at the .1 level. There was no difference between females and males and no significant correlation between “extent of damage” and “confidence.” In contrast, Kawamura’s analysis of Sendai survey data found a significant correlation between the extent of damage and evaluation. In our analysis, only one variable—having acquaintances who died in the disaster—was significant at the .1 level, and no other damage-related variables were significantly correlated with confidence. The results demonstrate that the extent of damage did not affect confidence in the government among residents in areas affected by the earthquake.

⁵ For example, Iwate dummy is a dummy variable counting a respondent who lived in Iwate as one.

⁶ In the survey, an answer choice of “other” was offered for the question about prefecture. Therefore, we defined “other” as the reference category and created four dummy variables.

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confidence	B	S.E.
constant	0.071	0.104
evaluation	0.471	0.029 ***
damage to the home	0.005	0.058
injured myself	0.085	0.277
dead (relatives)	-0.031	0.101
dead (acquaintances)	-0.146	0.075 *
sex	0.252	0.069 ***
education	0.065	0.059
duration of residence	0.114	0.067 *
generation	-0.146	0.039 ***
R-squared	0.249	
Adj R-squared	0.241	
N	911	

*p<0.1, **p<0.05, ***p<0.01

Table 7. Overall regression

3.3 Regression analysis by area

Figure 3 shows that the distribution of confidence levels differs by area. We performed a multiple regression analysis, dividing the data by prefecture. The other variables used for this analysis were the same as those used in section 3.2.⁷

⁷ The main purpose of section 3.3 is to compare results in four prefectures affected by the earthquake; therefore, respondents indicating “other” as their residence have been excluded from the analysis.

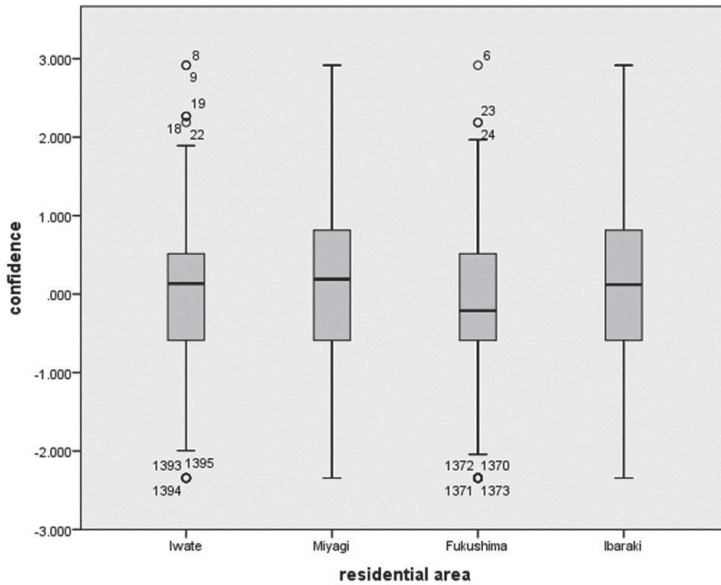


Figure 3. Boxplot showing the relationship between confidence and prefecture

Table 8 shows the results of multiple regression analysis performed using four models, one for each prefecture. All models show that “evaluation” was significantly correlated with “confidence.” In contrast, most of the variables concerned with the extent of damage did not have a significant correlation with “confidence,” as observed for the overall results in section 3.2 above; only the variable “dead acquaintances” in Miyagi was significant at the .01 level.

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	confidence (Iwate)		confidence (Miyagi)	
	B	S.E.	B	S.E.
constant	-0.160	0.191	-0.245	0.187
evaluation	0.492	0.055 ***	0.468	0.062 ***
damage to the home	-0.010	0.119	0.051	0.102
injured myself	0.975	0.868	0.138	0.371
dead (relatives)	0.042	0.164	0.090	0.146
dead (acquaintances)	-0.030	0.126	-0.301	0.110 ***
sex	0.124	0.139	-0.108	0.111
education	0.398	0.111 ***	0.246	0.103 **
duration of residence	0.204	0.120 *	0.158	0.109
generation	-0.101	0.078	0.027	0.067
R-squared	0.290		0.217	
Adj R-squared	0.264		0.190	
N	259		266	

	confidence (Fukushima)		confidence (Ibaraki)	
	B	S.E.	B	S.E.
constant	0.440	0.234 *	0.180	0.284
evaluation	0.475	0.059 ***	0.492	0.077 ***
damage to the home	0.042	0.123	-0.001	0.154
injured myself	0.211	0.611	-0.785	0.715
dead (relatives)	-0.314	0.261	0.712	0.713
dead (acquaintances)	0.014	0.188	0.418	0.700
sex	0.177	0.160	0.057	0.176
education	0.070	0.120	0.271	0.158
duration of residence	0.092	0.154	0.082	0.183
generation	-0.435	0.079 ***	-0.102	0.100
R-squared	0.349		0.251	
Adj R-squared	0.320		0.209	
N	212		169	

*p<0.1, **p<0.05, ***p<0.01

Table 8. Regression by prefecture

Moreover, in Fukushima, the correlation of “confidence” with “generation” was U-shaped and significant at the .01 level, but in the other three prefectures there was no significant correlation between “generation” and confidence in the government.

3.4 Discussion

Two points emerging from the multiple regression analysis merit discussion. First, the variable “dead acquaintances” was significant at the .01 level in Miyagi. We think that this result may be related to the particular dynamics of Sendai city

in Miyagi prefecture; many affected residents moved there as it was a center for post-earthquake restoration and reconstruction. However, many people who were unaffected by the disaster also moved to Sendai to look for work. The subsequent increase in the diversity of the Sendai population may have caused this result.

Second, the fact that the “generation” variable was U-shaped and significant at the .01 level only in Fukushima may be explicable in terms of the residents’ life status. In a previous study, Kawamura (2013) suggested that “generation” was U-shaped because people in their fifties had begun to be conscious of approaching old age, and the earthquake had shattered their plans for the future. This factor may also apply to our results. Many people have been unable to return home since the nuclear accident, and in some cases it remains uncertain whether they will ever be able to return home, so it is natural for them to worry about their future.

Further, we identified two variables as significant at the .01 level or the .1 level in the regression analysis presented in section 3.2. Both these results may have been influenced by the distinctive experiences of Sendai (in Miyagi prefecture) or Fukushima.

It is generally believed that confidence in the government is shaped through a combination of post-event evaluations of actual performance and prior expectations about the system (Akizuki 2010). In other words, it is reasonable to assume that evidence of significant capacity for crisis management, including the government’s ability to prevent disasters, persuaded residents to follow the government’s advice when a natural disaster occurs—in other words, that they could have a high level of confidence in the government. Disaster drills have been held regularly by each community, school, and neighborhood association in Japan on September 1, which is Disaster Preparedness Day. Such disaster drills enable the Japanese people, beginning from their childhood, to accumulate knowledge about disaster prevention and to recognize from experience that the government has made advance preparations to prevent and mitigate disasters so that order can

be maintained in the affected area.

The idea that residents should follow the government's direction when natural disasters occur was demonstrated with regard to the establishment of temporary housing. Kira and Kawamura (2014) identified through surveys that residents' associations were formed in temporary housing in Ishinomaki city, Miyagi prefecture, although the residents did not know each other. Half of the associations were formed through the initiation of people outside temporary housing, such as government workers and volunteers. Commons research, referred to earlier, suggests that residents' associations usually form spontaneously from existing social capital (Kira and Kawamura 2014: 143–144). However, residents' associations in temporary housing in Ishinomaki were formed largely by outsiders, again indicating that high confidence in local government induced people to follow the government's initiation.

In section 3, the existence of a causal relationship between evaluation and confidence in the government was demonstrated through sequential correlations. However, as Akizuki (2010) suggested, the relationship between the two factors is circular, we should therefore remember that high confidence in the government might also lead to a high evaluation of the government. Future research should consider this possibility.

4. Conclusion

In this paper, we have focused on evaluations of and confidence in the government following the Great East Japan Earthquake among residents of Japan's four affected prefectures. The analysis revealed that people gave low post-earthquake ratings for national politicians but high ratings for crisis response services. Confidence in the local governments was higher than in the national government. Both the evaluation of and confidence in the actors most closely connected to affected residents were extremely favorable.

We also considered whether the respondents who evaluated government performance highly had high levels of confidence in the government. We performed multiple regression analysis with two variables, “evaluation” and “confidence,” obtained by principal component analysis. The results revealed that higher evaluations were indeed correlated with higher levels of confidence in the government, even when the data were analyzed by prefecture. Some minor differences were observed among the prefectures, such as the correlation of confidence with extent of damage in Miyagi and with age in Fukushima.

The results suggest that residents of the affected area could continue living in an orderly fashion because their high confidence in the local government led them to agree that they should follow the government’s direction when natural disasters occur and because this approach was supported by the regular disaster drills.

These actions might be unique to Japan, a country that is prone to many disasters. It can be expected that a country where natural disasters are highly likely to occur will spend more time and money preparing for them as compared with other countries. Japan’s practice of holding regular disaster drills has contributed to the widespread confidence and trust that people have in their government and its guidance in times of disaster. In this case, the Japanese people waited patiently in line for supplies because of their confidence that the government was certain to provide the supplies needed. They were also making a rational decision that waiting in a queue was more likely to result in receiving goods or resources than going out to search for supplies on their own.

This rational decision-making is less likely to occur in countries that experience fewer natural disasters, because such countries are less likely to be well prepared in crisis management. Moreover, if those governments were to spend more money on disaster prevention, their citizens might criticize them for wasting money. In fact, when a person was suspected of having the MERS virus in Korea, the Korean government’s mismanagement of its initial response

contributed to the spread of the infection. President Park later commented, “We had a weakness in our initial response.”⁸ Arguably, this poor performance was due to lack of preparation. The impact of the earthquake in Christchurch, New Zealand in 2011 (magnitude 6.3), in which 185 people died, bears similarities to this Korean episode. When Christchurch suffered a major earthquake (magnitude 7.0) in 2010, there were no casualties, although several buildings were severely damaged and roads cracked in several places; on the other hand, the strong aftershocks that occurred about six months later caused many buildings to collapse. The earlier earthquake had weakened the buildings, and many of them were fragile because insufficient money had been spent to bring them up to the standard required to make them sufficiently resistant to earthquakes.

It may not seem rational for countries with fewer natural disasters to spend money to prevent disasters that may never occur. However, as the cases of Korea and New Zealand demonstrate, it is too late once the disaster has occurred. It can be hoped that in the future, Japanese knowledge of disaster prevention will bring major benefits to Southeast Asia and Oceania.

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⁸ *Asahi Shimbun*, June 6, 2015.

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