A Comparative Analysis of Six Areas in Three Southeast Asian Countries

Yuichi MARUMO†

1．Introduction

This paper conducts a statistical analysis of replies to questionnaire surveys carried out in the urban and rural areas of Vietnam, Cambodia and Laos in an attempt to clarify whether or not there is any disparity in social capital between these areas.

2．Overview of the Questionnaire

(1) Questionnaire Survey Method

In Vietnam, the Institute of Sociology in the Vietnamese Academy of Social Sciences was commissioned to carry out the questionnaire survey in the Vi Xuyen district in the city of Nam Dinh in fiscal 2010 to study the urban area and in the village of Giao Thanh, Giao Thuy, Nam Dinh Province in fiscal 2011 to study the rural area. The number of samples was 100 in each area.

In Cambodia, the survey was outsourced to the Cambodia Development Resource Institute. The survey of the urban area was conducted in the city of Siem Reap in fiscal 2011, and that of the rural area was conducted in the village of Ba Baong in Prey Veng Province in fiscal 2011. The number of samples was 200 in each area.

In Laos, the survey was conducted via contract by the Research & Academic Services Office at the National University of Laos. In fiscal 2010, the survey of the urban area was conducted in three villages in the Chantabuly district of the Vientiane Prefecture. In the following fiscal year, the survey of the rural area was conducted in two villages in the Muang Fuang district in Vientiane Province. In each of the areas, the number of samples was 116.

(2) Questions in the Questionnaire

Among the questions pertaining to Social Trust, the following questions utilize a five-point Likert scale.

---

†　Research Fellow, Center for Social Capital Studies, Senshu University

Examples of Questions Pertaining to Social Trust

Q1   People can be trusted
Q2   Meet relatives
Q3   Meet friends & acquaintances
Q4-A   Depth of social relations with neighborhood
Q4-B   Proportion of neighborhood having relations
Q7   Interested in politics

Among the questions on Risk and Social Safety Net, Question 20 contains questions on threats to life, with the use of a five-point Likert scale.

Threats to Life

Q20-1   Unemployment, little income
Q20-2   Illness, injury, etc.
Q20-3   Food shortage
Q20-4   Not having access to water
Q20-5   Poor means of transportation/road conditions, traffic accidents
Q20-6   Natural disasters （Wind and flood damage, earthquake, etc.）
Q20-7   War

Among the questions on Risk and Social Safety Net, Question 21 asks the subjects who and what institutions they rely on with respect to difficulties in everyday life. The major questions included are as follows. They use a four-point Likert scale.

**Questions on Reliance on People and Institutions
with Regard to Difficulties in Everyday Life**

Q21-1   Reliance on city hall, town or village hall, etc.
Q21-2   Reliance on schools or hospitals
Q21-3   Reliance on police or firefighting organizations （police only in Cambodia）
Q21-5   Reliance on political parties or politicians
Q21-6   Reliance on organizations in nearby community
Q21-7   Reliance on volunteers, NPOs or civic groups
Q21-8   Reliance on religious organization
Q21-11   Reliance on people in neighborhood
Q21-12   Reliance on family
Q21-13   Reliance on relatives
Q21-14   Reliance on friends or acquaintances

Among the questions on Risk and Social Safety Net, Question 25 asks the subjects who and what institutions they rely on in the event of disasters. The major questions included are as follows. They use a four-point Likert scale.

Questions on Reliability on People and Institutions
in the Event of Disasters

Q25-1	Reliability on city hall, town or village hall, etc.
Q25-2	Reliability on schools or hospitals
Q25-3	Reliability on police or firefighting organizations (police only in Cambodia)
Q25-5	Reliability on political parties or politicians
Q25-6	Reliability on organizations in nearby community
Q25-7	Reliability on volunteers, NPOs or civic groups
Q25-8	Reliability on religious organizations
Q25-11	Reliability on people in neighborhood
Q25-12	Reliability on family
Q25-13	Reliability on relatives
Q25-14	Reliability on friends or acquaintances

Among the questions on Risk and Social Safety Net, Question 23 is a collection of multiple answer questions on experience of natural disasters, wars, accidents and other events. This question has variants depending on the area where the survey is conducted.

Experience of Natural Disasters, Wars and Accidents

Q23-1	Wind and flood damage (cyclone, flood, etc.)
Q23-2	Natural disaster other than (1) (earthquake, wildfire, etc.)
Q23-3	Drought
Q23-4	Traffic accident
Q23-5	War

Among the questions on Risk and Social Safety Net, Question 27 is a set of multiple answer questions on the mediation institution for disputes over land.

Mediation Institution for Disputes over Land

Q27-1	Public institution such as city hall, town or village hall, etc.
Q27-2	Police
Q27-3	Court
Q27-4	Political party, politician(s), mayor （village chief）

Q27-5   Organizations in nearby community
Q27-6   Religious organizations
Q27-7   NPOs, civic groups, etc.
Q27-8   Neighbors

3 . Analysis of the Survey Results
(1) Comparison in Social Trust

Indexation is an effective approach when analyzing survey results. A score of five points to one was assigned in the order of wealth in social capital to the options on the five-point Likert scale in the questions regarding Social Trust. If all the respondents choose the option to which five points are assigned, the index value will be 5.000. The lower limit will be 1.000. The table below depicts the results of the calculations.[1] A comparison of the major indicators among the six areas in the three countries in which the survey was conducted reveals that the highest score on social trust was noted in the rural area of Vietnam, at 4.130 on average, whereas the lowest score was seen in the urban area of Cambodia, at 3.256 on average.

Comparison of Social Trust

No.	Vietnam urban	Vietnam rural	Cambodia urban	Cambodia rural	Laos urban	Laos rural
Q1	3.680	4.090	2.650	2.915	3.888	3.636
Q2	3.600	4.730	3.665	4.050	3.905	4.017
Q3	3.920	4.110	3.810	4.140	4.017	4.053
Q4-A	4.390	4.430	3.435	3.610	3.957	4.348
Q4-B	4.360	4.770	2.990	3.480	3.974	4.157
Q7	3.390	2.650	2.985	3.175	3.905	3.586
average	3.890	4.130	3.256	3.562	3.941	3.966

(2) Reliance with Regard to Difficulties in Everyday Life

The table shows the reliance on people and institutions with regard to difficulties in everyday life, shown in form of index figures. As a four-point scale was used, the index value will not be any higher than 4.000 or any lower than 1.000.

---

[1]   As the question numbers vary from country to country, this paper refers to those printed on the questionnaire sheet used in Vietnam for convenience.

**Reliance on People and Institutions
with Regards to Difficulties in Everyday Life**

No.	Vietnam urban	Vietnam rural	Cambodia urban	Cambodia rural	Laos urban	Laos rural
Q21-1	2.313	2.622	1.949	2.450	3.534	3.583
Q21-2	2.418	2.583	2.430	2.855	3.257	3.107
Q21-3	2.033	2.260	2.640	2.631	2.877	2.864
Q21-5	2.393	2.619	1.270	1.612	2.774	2.535
Q21-6	2.894	2.794	1.748	2.235	2.922	2.603
Q21-7	1.931	2.591	1.725	1.922	2.705	2.526
Q21-8	1.779	2.298	2.350	2.676	2.786	2.643
Q21-11	3.061	3.230	2.711	2.915	3.123	3.193
Q21-12	3.880	3.850	3.920	3.965	3.746	3.621
Q21-13	3.525	3.640	3.455	3.575	3.635	3.664
Q21-14	3.303	3.360	2.677	2.790	3.292	3.060
average	2.685	2.895	2.443	2.693	3.150	3.036

To carry out an in-depth analysis of the index values shown in this table, calculations of *A minus B* as specified below were performed. Please refer to the reference material at the end of this publication.

No.	Question items
Q21-1	Reliance on city hall, town or village hall, etc. (A)
Q21-5	Reliance on political parties or politicians (B)
A-B	

No.	Question items
Q21-1	Reliance on city hall, town or village hall, etc. (A)
Q21-6	Reliance on organizations in nearby community (B)
A-B	

No.	Vietnam urban	Vietnam rural	Cambodia urban	Cambodia rural	Laos urban	Laos rural
Q21-1	2.313	2.622	1.949	2.450	3.534	3.583
Q21-5	2.393	2.619	1.270	1.612	2.774	2.535
A-B	-0.080	0.004	0.679	0.838	0.760	1.048

No.	Vietnam urban	Vietnam rural	Cambodia urban	Cambodia rural	Laos urban	Laos rural
Q21-1	2.313	2.622	1.949	2.450	3.534	3.583
Q21-6	2.894	2.794	1.748	2.235	2.922	2.603
A-B	-0.581	-0.171	0.201	0.215	0.612	0.980

The values of A-B are close to zero or slightly negative in Vietnam, whereas they are considerably positive in Cambodia and Laos. This suggests that the reliance on A and B varies depending on the country.

Next, Spearman's rank correlation coefficient is calculated with regard to Question 27 on the mediation institution for disputes over land, with the use of software called Excel-Tokei 2010.

Q27.Mediation institution about a dispute over land (Vietnam urban)

Spearman's rank correlation coefficient	1	2	3	4	5	6
1 Public institution such as city hall, town or village hall, etc.						
2 Police	0.031					
3 Court	-0.040	0.484**				
4 Political party, politician(s), mayor (village chief)	0.033	0.078	0.148			
5 Organizations in nearby community	0.033	0.241*	-0.058	-0.020		
6 NPOs, civic groups, etc.	0.023	-0.060	-0.041	-0.014	-0.014	
7 Other	-0.048	-0.026	0.015	-0.055	-0.055	0.260**

Notes: Religious oganizations and Neighbors are excluded as no calculation can be carried out with the constant number (all respondents answering "no") .
n = 100 (*:5% **:1%)

Q27.Mediation institution about a dispute over land (Vietnam rural)

Spearman's rank correlation coefficient	1	2	3	4	5	6	7	8
1 Public institution such as city hall, town or village hall, etc.								
2 Police	-0.136							
3 Court	0.071	0.602**						
4 Political party, politician(s), mayor (village chief)	0.093	0.688**	0.690**					
5 Organizations in nearby community	0.093	0.688**	0.690**	0.942**				
6 Religious organizations	0.031	0.262**	0.098	0.190	0.190			
7 NPOs, civic groups, etc.	0.044	0.377**	0.505**	0.476**	0.476**	-0.044		
8 Neighbors	0.088	0.584**	0.519**	0.700**	0.640**	0.352**	0.400**	
9 Other	-0.229*	-0.154	-0.093	-0.122	-0.122	-0.040	-0.058	-0.115

Note: n = 100 (*:5% **:1%)

Spearman's rank correlation coefficient is a measure of statistical dependence between two variables on an ordinal scale, and it does not require normal distribution. The values of the individual variables are converted into ranks among the samples. They indicate the strength and direction of linear relationships. When the ranks are identical, the coefficient value is +1. When they are inverse, it is -1.

The calculated values of the correlation coefficient for Vietnam suggest that no correlation can be seen between options 1 (public institution – municipal government) and 4 (mayor) or between options 1 (public institution – municipal government) and 5 (nearby community) in both the urban and rural areas. In other words, there is no difference in reliance on options 1 and 4 or on options 1 and 5.

Q27.Mediation institution about a dispute over land (Cambodia urban)

Spearman's rank correlation coefficient	1	2	3	4	5
1 Public institution such as city hall, town or village hall, etc.					
2 Police	0.088				
3 Court	0.175*	0.046			
4 Organizations in nearby community	-0.583**	-0.065	-0.101		
5 NPOs, civic groups, etc.	-0.319**	-0.111	-0.204**	-0.044	
6 Neighbors	0.066	0.445**	0.045	-0.049	-0.084

Notes: Religious oganizations are excluded as no calculation can be carried out with the constant number (all respondents answering "no").
n = 200 (*:5% **:1%)

Q27.Mediation institution about a dispute over land (Cambodia rural)						
Spearman's rank correlation coefficient	1	2	3	4	5	6
1 Public institution such as city hall, town or village hall, etc.						
2 Police	0.033					
3 Court	0.092	0.149*				
4 Organizations in nearby community	-0.704**	-0.046	-0.131			
5 Religious organizations such as a temple or church	-0.705**	-0.023	-0.065	0.496**		
6 NPOs, civic groups, etc.	-0.277**	-0.057	0.016	0.184**	-0.012	
7 Neighbors	0.041	0.109	-0.120	0.043	-0.029	-0.072

Note: n = 200 (*:5% **:1%)

As for Cambodia, the coefficient values show that there is a fairly strong inverse correlation between options 1 (public institution – municipal government) and 4 (nearby community) in the urban and rural areas alike. This means that there is difference in the level of reliance between them. A comparison between Q21-1 and Q21-6 confirms that the index value of Q21-1is larger than that of Q21-6. In this country, people in the urban and rural areas have greater confidence in local governments and other public institutions excluding the police and the court as institutions for mediation on disputes over land than in nearby communities, although the absolute value of the index is small.

Q27.Mediation institution about a dispute over land (Laos urban)								
Spearman's rank correlation coefficient	1	2	3	4	5	6	7	8
1 Public institution such as city hall, town or village hall, etc.								
2 Police	-0.049							
3 Court	0.164	0.250**						
4 Political party, politician(s),mayor (village chief)	-0.536**	0.131	0.143					
5 Organizations in nearby community	-0.191*	0.044	0.098	0.130				
6 Religious organizations such as a temple or church	-0.112	0.181	0.060	0.143	0.301**			
7 NPOs, civic groups, etc.	-0.030	0.173	0.135	0.051	0.068	0.508**		
8 Neighbors	-0.019	0.063	0.060	0.045	0.107	0.365**	0.200*	
9 Other	-0.248**	-0.231**	-0.058	-0.075	-0.082	-0.058	-0.040	-0.131

Note: n = 116 (*:5% **:1%)

Q27.Mediation institution about a dispute over land (Laos rural)						
Spearman's rank correlation coefficient	1	2	3	4	5	6
1 Public institution such as city hall, town or village hall, etc.						
2 Police	-0.008					
3 Court	-0.132	0.058				
4 Political party, politician(s),mayor (village chief)	-0.419**	0.146	0.299**			
5 Organizations in nearby community	-0.182	0.235*	0.512**	0.255**		
6 Religious organizations such as a temple or church	-0.106	0.109	-0.050	-0.078	-0.097	
7 Neighbors	-0.018	0.286**	0.081	-0.067	0.158	0.298**

Notes: NPOs, civic groups, etc. are excluded as no calculation can be carried out with the constant number (all respondents answering "no").
n = 116 (**:1%)

In Laos, the calculation results suggest a fairly strong inverse correlation between options 1 (public institution– municipal government) and 4 (mayor) in both the urban and rural areas. This implies a disparity in reliance between them. The index is larger in Q21-1 than in Q21-5. In Laos, local governments and other public institutions excluding the police and the court are trusted as mediation institutions in both the urban and rural areas.

(3) Experience of Natural Disasters, Wars and Accidents

The tables below show the calculated values in Spearman's rank correlation coefficient in Vietnam on the basis of Question 23.

Q23. Experience of a major natural disaster or war (Vietnam urban)			
Spearman's rank correlation coefficient	1	2	3
1 Wind and flood damage (cyclone, flood, etc.)			
2 Drought	0.341**		
3 War	0.200*	0.153	
4 Traffic accident	0.020	0.106	0.095

Notes: Natural disaster other than (1) (earthquake, etc.) is excluded as no calculation can be carried out
with all respondents answering "no."
n = 100 (*:5% **:1%)

Q23. Experience of a major natural disaster or war (Vietman rural)				
Spearman's rank correlation coefficient	1	2	3	4
1 Wind and flood damage (cyclone, flood, etc.)				
2 Natural disaster other than (1) (earthquake, wildfire, etc.)	0.065			
3 Drought	0.461**	0.123		
4 Traffic accident	0.239*	0.112	0.208*	
5 War	0.122	0.190	0.065	-0.086

Note: n = 100 (*:5% **:1%)

According to the calculated values, those in the Vietnamese urban area with experience of option 1 (wind and flood damage) have experience of option 2 (drought) at a coefficient value of 0.341 (with a 1% significance level). Those with experience of option 1 (wind and flood damage) also have experience of option 3 (war) at a coefficient value of 0.200 (with a 5% significance level).

On the other hand, those in the Vietnamese rural area with experience of option 1 (wind and flood damage) also have experience of option 3 (drought) at a coefficient value of 0.461 (with a 1% significance level) and experience of option 4 (traffic accident) at a coefficient value of 0.239 (with a 5% significance level). Those with experience of option 3 (drought) have experience of option 4 (traffic accident) at a coefficient value of 0.208 (with a 5% significance level).

The tables below show the calculated values in Spearman's rank correlation coefficient in Cambodia with respect to Question 23.

Q23. Experience of a major natural disaster or war (Cambodia urban)					
Spearman's rank correlation coefficient	1	2	3	4	5
1 Wind and flood damage (cyclone, flood, etc.)					
2 Drought	0.218**				
3 Natural disaster other than (1) & (2) above	0.071	0.397**			
4 Traffic accident	-0.145*	-0.023	-0.098		
5 Political turmoil	-0.005	0.067	-0.005	-0.057	
6 War	0.072	-0.088	-0.035	-0.117	0.103

Note: n = 170 to 200 (*:5% **:1%)

	Q23. Experience of a major natural disaster or war (Cambodia rural)					
	Spearman's rank correlation coefficient	1	2	3	4	5
1	Wind and flood damage (cyclone, flood, etc.)					
2	Drought	0.162*				
3	Natural disaster other than (1) & (2) above	0.092	0.177*			
4	Traffic accident	-0.056	-0.121	-0.050		
5	Political turmoil	-0.092	-0.073	-0.080	0.155*	
6	War	-0.065	0.103	-0.091	-0.023	0.180*

Note: n = 171 to 200 (*:5%)

According to the calculated values, those in the Cambodian urban area with experience of option 1 (wind and flood damage) have experience of option 2 (drought) at a coefficient value of 0.218 (with a 1% significance level), and those with experience of option 2 (drought) have experience of option 3 (natural disasters other than wind and flood damage and drought) at a coefficient value of 0.397 (with a 1% significance level). With a coefficient value of -0.145, there is an inverse correlation (with a 5% significance level) between the experience of option 1 (wind and flood damage) and that of option 4 (traffic accident). In other words, those who have experienced more wind or flood damage are less likely to have experienced a traffic accident.

In the Cambodian rural area, those with experience of option 1 (wind and flood damage) have experience of option 2 (drought) at a coefficient value of 0.162 (with a 5% significance level). Those with experience of option 2 (drought) have experience of option 3 (natural disasters other than wind and flood damage and drought) at a coefficient value of 0.177 (with a 5% significance level). Those with experience of option 4 (traffic accident) have experience of option 5 (political turmoil) at a coefficient value of 0.155 (with a 5% significance level). Those with experience of option 5 (political turmoil) have experience of option 6 (war) at a coefficient value of 0.180 (with a 5% significance level). Options 5 (political turmoil) and 6 (war) are statistically significantly extracted. This is possibly due to the Cambodian civil war.

As for Laos, Spearman's rank correlation coefficient is not calculated as the data on Question 23 are dubious.

(4) Factor Analysis and Path Diagrams

Even when the number of samples is small, the causal relationship between factors can be elucidated if it is possible to create a path diagram through an analysis of the covariance structure. A factor analysis was conducted as a prerequisite for this. Excel-Tokei 2010 was used for the factor analysis, and the software that accompanied Takaya Kojima (2003): *Excel de Manabu Kyobunsan Kozo Bunseki to Guraficaru Moderingu* (Learning Covariance Structure Analysis and Graphical Modeling with Excel) published by Ohmsha, Ltd. was used for the covariance structure analysis.

● Vietnam

The table below depicts the results of the factor analysis of data concerning the Vietnamese urban area.[2] Not all the cases were analyzed, but the three-factor structure was adopted in order to enable comparison with other areas. According to the empirical rules, the number of variables observed (i.e. question items) that constitute a factor was capped at 3. The analysis utilized the maximum likelihood method and the oblique promax rotation. The number of samples is 100. As an indicator of internal consistency, Cronbach's alpha stands at a favorable value of 0.811.

Factor analysis (Vietnam urban)

	Factor Name	Question items (observed variable)	Factor 1	Factor 2	Factor 3
			Maximum Likelihood Method, Oblique Promax Rotation		
Factor 1	Threats to life	Not having access to water	1.003	-0.024	0.015
		Threat, natural disasters	0.848	0.092	-0.122
		Threat, food shortage	0.811	-0.061	0.154
Factor 2	Reliability on social institutions in the event of disasters	Reliability on military sector	0.016	1.006	-0.030
		Reliability on police or firefighting organizations	0.034	0.841	-0.024
		Reliability on political parties or politicians	-0.055	0.519	0.206
Factor 3	Reliance on social institutions in the event of difficulties	Reliance on military sector	-0.077	0.086	0.884
		Reliance on police or firefighting organizations	0.062	0.044	0.802
		Reliance on political parties or politicians	0.053	-0.049	0.663
		Interfactor correlation (see Note)	1.000		
			0.248	1.000	
			0.194	0.351	1.000

n = 100, Cronbach's alpha = 0.811

Note: This merely represents the correlation coefficient between factors.
No causal relationship is known as no path diagram can be created.

Factor 1 is comprised of (1) not having access to water, (2) threat of natural disasters and (3) threat of food shortage. Factor 2 consists of (1) reliability on military sector in the event of disasters, (2) reliability on the police or firefighting organizations in the event of disasters and (3) reliability on political parties or politicians in the event of disasters. Factor 3 is made up of (1) reliance on military sector in the event of difficulties, (2) reliance on the police or firefighting organizations in the event of difficulties and (3) reliance on political parties or politicians in the event of difficulties.

Factor 1 is dubbed "threats to life," Factor 2 "reliability on social institutions in the event of disasters" and Factor 3 "reliance on social institutions in the event of difficulties." The correlation between Factors 1 and 2 stood at 0.248, and that between Factors 2 and 3 stood at 0.351. Weak correlations are observed in the two relationships. There is little correlation seen between Factors 1 and 3, with a coefficient value of 0.194.

The characteristics of this area are, firstly, that none of the factors independently include both social institutions trusted in the event of disasters and those trusted in the event of difficulties, and secondly, that the military sector and political parties are included in the social institutions people rely on. Regrettably, it was not possible to draw a path diagram.

---

[2] Reliance on military sector is added on Q21-4 and reliability on military sector as Q25-4.

The table below shows the results of factor analysis for the Vietnamese rural area.[3] The number of samples is 100. Representing internal consistency, Cronbach's alpha stood at a favorable value of 0.810.

Factor analysis (Vietnam rural)

	Factor Name	Question items (observed variable)	Factor 1	Factor 2	Factor 3
		Maximum Likelihood Method, Oblique Promax Rotation			
Factor 1	Reliance on social institutions in the event of difficulties	Reliance on police or firefighting organizations	0.966	-0.033	0.010
		Reliance on military sector	0.908	0.062	-0.041
		Reliance on political parties or politicians	0.779	0.030	0.034
Factor 2	Reliability on friends, neighbors or relatives in the event of disasters	Reliability on friends or acquaintances	-0.002	0.905	0.050
		Reliability on people in neighborhood	0.086	0.847	0.023
		Reliability on relatives	-0.013	0.833	-0.060
Factor 3	Threats to life	Not having access to water	0.080	-0.050	0.850
		Threat, food shortage	-0.168	0.095	0.761
		Poor means of transportation	0.090	-0.035	0.732
		Interfactor Correlation	1.000		
			0.401	1.000	
			0.147	0.314	1.000

n = 100, Cronbach's alpha = 0.810

Factor 1 comprises (1) reliance on the police or firefighting organizations in the event of difficulties, (2) reliance on military sector in the event of difficulties, and (3) reliance on political parties and or politicians in the event of difficulties. Factor 2 consists of (1) reliability on friends or acquaintances in the event of disasters, (2) reliability on people in neighborhood in the event of disasters and (3) reliability on relatives in the event of disasters. Factor 3 is made up of (1) not having access to water, (2) threat of food shortage and (3) poor means of transportation.
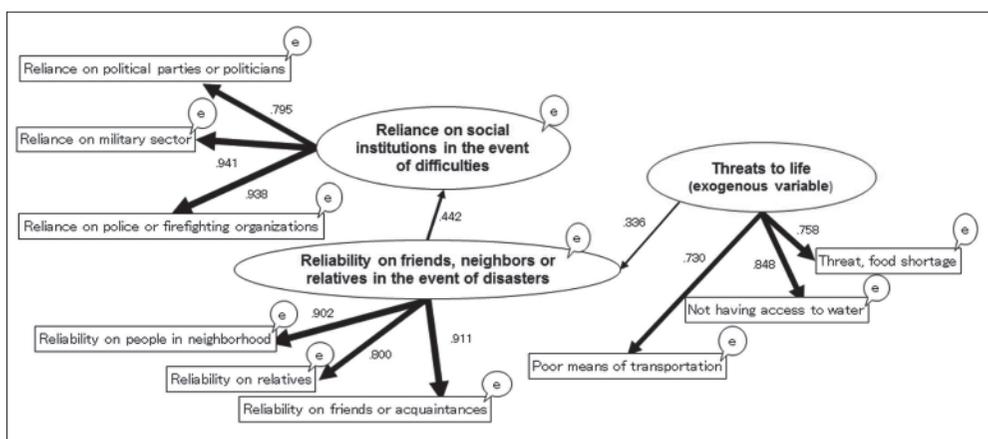
Factor 1 is dubbed "reliance on social institutions in the event of difficulties," Factor 2 "reliability on friends, neighbors or relatives in the event of disasters," and Factor 3 "threats to life." Between Factors 1 and 2, a medium-level correlation is confirmed with a value of 0.401, and between 2 and 3, a weak correlation with a value of 0.314. There is little correlation confirmed between Factors 1 and 3, with a value of 0.147.

The characteristics of this area are, firstly, that none of the factors independently include both social institutions trusted in the event of disasters and those trusted in the event of difficulties, and secondly, that the military sector and political parties are included in the social institutions people count on.

The diagram below is a path diagram drawn on the basis of the factor analysis. All paths are statistically significant. With respect to the indicators of consistency, the GFI stands at 0.921, the AGFI at 0.858 and the RMSEA at 0.068.[4] Given that the number of samples is 100, they have fairly good values.

---

[3] Reliance on military sector is added as Q21-4.

[4] It is generally said that a good model has GFI and AGFI values of 0.9 or more each and limited disparity between the GFI and AGFI values. It also has a RMSEA value of less than 0.005. The range of the RMSEA value from 0.05 (inclusive) to 0.1 (exclusive) is a gray area. With a value of 0.1 or higher, the model is considered unsettled.

In this model, threats to life serve as an exogenous variable. With regard to causal relationships, the threats to life have a minor impact of 0.336 on the reliability on friends, neighbors and relatives in the event of disasters. Reliability on friends, neighbors and relatives in the event of disasters have a medium-level influence of 0.442 on the reliance on social institutions in the event of difficulties. The threats to life have a low-level indirect influence of 0.149 (= 0.336 x 0.442) on the reliance on social institutions in the event of difficulties.

● Cambodia

The table below depicts the results of the factor analysis of data concerning Cambodia's urban area. The number of samples is 200. As an indicator of internal consistency, Cronbach's alpha stands at 0.774.

Factor analysis (Cambodia urban)

|			Maximum Likelihood Method, Oblique Promax Rotation		
	Factor Name	Question items (observed variable)	Factor 1	Factor 2	Factor 3
Factor 1	Reliance or Reliability on neighbors or friends in the event of disasters or difficulties	Reliability on people in neighborhood	0.911	0.023	-0.080
		Reliance on people in neighborhood	0.731	-0.029	0.105
		Reliability on friends or acquaintances	0.572	0.045	0.030
Factor 2	Reliance or Reliability on social institutions in the event of disasters or difficulties	Reliability on organizations in nearby community	-0.028	0.792	-0.078
		Reliability on volunteers, NPOs or civic groups, etc.	0.016	0.729	0.009
		Reliance on religious organizations	0.086	0.506	0.158
Factor 3	Reliance or Reliability on schools or hospitals in the event of disasters or difficulties	Reliance on schools or hospitals	-0.013	-0.002	1.005
		Reliability on schools or hospitals	0.046	0.023	0.616
		Interfactor Correlation	1.000		
			0.410	1.000	
			0.335	0.124	1.000

n = 200, Cronbach's alpha =0.774

Factor 1 consists of (1) reliability on people in the neighborhood in the event of disasters, (2) reliance on people in the neighborhood in the event of difficulties and (3) reliability on friends or acquaintances in the event of disasters. Factor 2 is made up of (1) reliability on

organizations in nearby community in the event of disasters, (2) reliability on volunteers, NPOs and civic groups, etc. in the event of disasters and (3) reliance on religious organizations in the event of difficulties. Factor 3 comprises (1) reliance on schools or hospitals in the event of difficulties and (2) reliability on schools or hospitals in the event of disasters.

Factor 1 is dubbed "reliance or reliability on neighbors or friends in the event of disasters or difficulties," Factor 2 "reliance or reliability on social institutions in the event of disasters or difficulties" and Factor 3 "reliance or reliability on schools or hospitals in the event of disasters or difficulties." There is a medium-level correlation between Factors 1 and 2, with a value of 0.410, and a weak correlation between Factors 1 and 3, with a value of 0.335, whereas little correlation is confirmed between Factors 2 and 3, with a value of 0.124.

The characteristics of this area are, firstly, that social institutions trusted in the event of disasters and those trusted in the event of difficulties are included in a single factor – for example, schools and hospitals are trusted in Factor 3 in the event of disasters and difficulties – and secondly, that threats to life are not extracted as a factor.

A path diagram as shown below has been drawn on the basis of the factor analysis mentioned above. All the paths are statistically significant. As for the indicators of consistency, the GFI stands at 0.953, the AGFI at 0.906 and the RMSEA at 0.078.
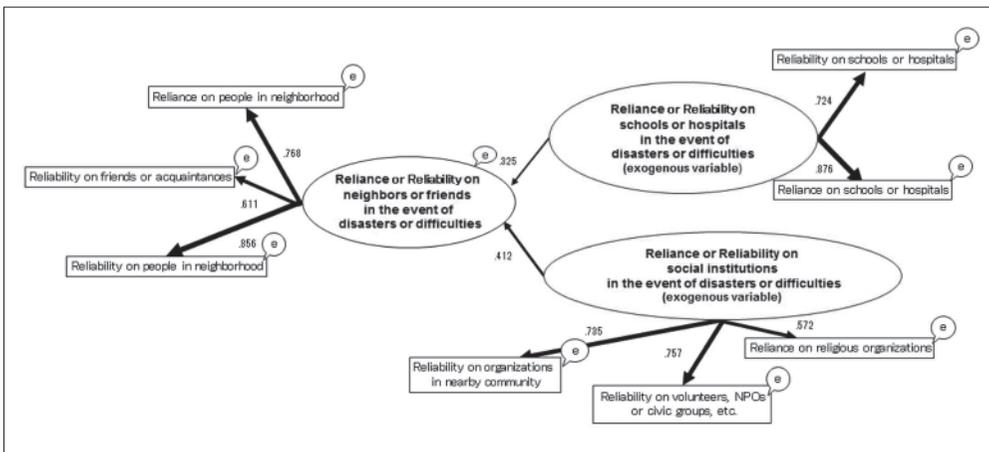
In this model, reliance or reliability on social institutions in the event of disasters or difficulties and reliance or reliability on schools or hospitals in the event of disasters or difficulties are both exogenous variables. With regard to causal relationships, the exogenous variable of reliance or reliability on social institutions in the event of disasters or difficulties has a medium-level impact of 0.412 on the reliance or reliability on neighbors or friends in the event of disasters or difficulties. The other exogenous variable, namely reliance or reliability on schools or hospitals in the event of disasters or difficulties, has a limited impact of 0.325 on the reliance or reliability on neighbors or friends in the event of disasters or difficulties.

The table below demonstrates the factor analysis results for the Cambodian rural area.

The number of samples is 200. The value of Cronbach's alpha at 0.541 suggests poor internal consistency.

Factor analysis (Cambodia rural)

	Factor Name	Question items (observed variable)	Factor 1	Factor 2	Factor 3
		Maximum Likelihood Method, Oblique Promax Rotation			
Factor 1	Reliance or Reliability on neighbors or friends in the event of disasters or difficulties	Reliability on people in neighborhood	0.842	-0.094	0.035
		Reliance on people in neighborhood	0.684	0.001	-0.035
		Reliability on friends or acquaintances	0.569	0.088	0.149
Factor 2	Reliance or Reliability on social institutions in the event of disasters or difficulties	Reliance on volunteers, NPOs or civic groups, etc.	0.029	0.778	-0.039
		Reliability on volunteers, NPOs or civic groups, etc.	0.088	0.768	-0.069
		Reliance on organizations in nearby community	-0.133	0.537	0.125
Factor 3	Reliance or Reliability on schools or hospitals in the event of disasters or difficulties	Reliance on schools or hospitals	-0.027	0.022	1.007
		Reliability on schools or hospitals	0.209	-0.008	0.425
		Interfactor Correlation (see Note)	1.000		
			0.106	1.000	
			0.101	-0.199	1.000

n = 200, Cronbach's alpha = 0.541
Note: This merely represents the correlation coefficient between factors.
No causal relationship is known as no path diagram can be created.

Factor 1 is made up of (1) reliability on people in neighborhood in the event of disasters, (2) reliance on people in neighborhood in the event of difficulties and (3) reliability on friends or acquaintances in the event of disasters. Factor 2 comprises (1) reliance on volunteers, NPOs or civic groups, etc. in the event of difficulties, (2) reliability on volunteers, NPOs and civic groups, etc. in the event of disasters and (3) reliance on organizations in nearby community in the event of difficulties. Factor 3 consists of (1) reliance on schools or hospitals in the event of difficulties and (2) reliability on schools or hospitals in the event of disasters.

Factor 1 is dubbed "reliance or reliability on neighbors or friends in the event of disasters or difficulties," Factor 2 "reliance or reliability on social institutions in the event of disasters or difficulties" and Factor 3 "reliance or reliability on schools or hospitals in the event of disasters or difficulties." The correlation between Factors 1 and 2 stood at 0.106, that between Factors 1 and 3 at 0.101 and that between Factors 2 and 3 at -0.199. There is little correlation in all three relationships.

The characteristics of this area are, firstly, that the factors extracted have much in common with those in Cambodia's urban area, and secondly, that the social institutions trusted in the event of disasters and those trusted in the event of difficulties are included in a single factor – for instance, schools or hospitals are both relied on in the event of disasters and difficulties alike. Thirdly, the factor of threats to life is not extracted. Unfortunately, no path diagram was able to be drawn.

● Laos

The table below represents the results of the factor analysis for the urban area in Laos. The number of samples is 66, and Cronbach's alpha stands at 0.725. The number of samples was originally 116, but a counting irregularity on the part of the National University of Laos

was seen in association with Question 20 on threats to life.

Factor analysis (Laos urban)

Factor Name		Question item (observed variable)	Factor 1	Factor 2	Factor 3
		Maximum Likelihood Method, Oblique Promax Rotation			
Factor 1	Reliability on social institutions in the event of disasters	Reliability on volunteers, NPOs or civic groups, etc.	0.965	0.076	0.046
		Reliability on organizations in nearby community	0.865	0.115	-0.064
		Reliability on political parties or politicians	0.763	-0.231	0.019
Factor 2	Reliance on relatives, family members or municipal governments in the event of difficulties	Reliance on relatives	-0.016	0.993	0.033
		Reliance on family	-0.004	0.910	-0.059
		Reliance on city hall, town or village hall, etc.	-0.008	0.545	0.078
Factor 3	Threats to life	Not having access to water	-0.002	0.014	0.997
		Threat, natural disasters	0.000	0.025	0.793
		Interfactor Correlation (see Note)	1.000		
			0.106	1.000	
			0.133	0.257	1.000

n = 66, Cronbach's alpha = 0.725

Note: This merely represents the correlation coefficient between factors.
    No causal relationship is known as no path diagram can be created.

Factor 1 is comprised of (1) reliability on volunteers, NPOs or civic groups, etc. in the event of disasters, (2) reliability on organizations in nearby community in the event of disasters, and (3) reliability on political parties or politicians in the event of disasters. Factor 2 consists of (1) reliance on relatives in the event of difficulties, (2) reliance on family in the event of difficulties, and (3) reliance on city hall, town or village hall, etc. in the event of difficulties. Factor 3 is made up of (1) not having access to water and (2) threats of natural disasters.

Factor 1 is dubbed "reliability on social institutions in the event of disasters," Factor 2 "reliance on relatives, family members or municipal governments in the event of difficulties" and Factor 3 "threats to life." The correlation between Factors 1 and 2 stands at 0.106, and that between Factors 1 and 3 stands at 0.133. In both relations, there is little correlation observed. The correlation between Factors 2 and 3 is 0.257, which means that a weak correlation is confirmed.

The characteristics of this area are, firstly, that political parties or politicians are included in the social institutions relied on, and secondly, that the reliance on relatives and family members and the reliance on municipal governments are considered analogous. Unfortunately, it is not possible to create a path diagram.

Factor analysis (Laos rural)

Factor Name		Question item (observed variable)	Factor 1	Factor 2	Factor 3
			Maximum Likelihood Method, Oblique Promax Rotation		
Factor 1	Disaster risks and reliability on military sector or police or firefighting organizations	Reliability on military sector	1.045	0.000	-0.119
		Reliability on police or firefighting organizations	0.544	0.151	0.297
		Threat, natural disasters	0.334	0.247	0.073
Factor 2	Reliance on relatives or family members in the event of difficulties	Reliance on relatives	0.057	0.922	0.008
		Reliance on family	0.072	0.712	0.016
Factor 3	Reliability on social institutions in the event of disasters	Reliability on political parties or politicians	0.151	-0.139	0.906
		Reliability on organizations in nearby community	-0.154	0.217	0.642
		Interfactor Correlation (see Note)	1.000		
			0.413	1.000	
			0.429	0.345	1.000

n = 67, Cronbach's alpha = 0.795

Note: This merely represents the correlation coefficient between factors.
       No causal relationship is known as no path diagram can be created.

The table above depicts the results of the factor analysis for the rural area in Laos. The number of samples is 67, and Cronbach's alpha stands at 0.795. The number of samples was originally 116, but a counting irregularity on the part of the National University of Laos was seen in association with Question 20 on threats to life.

Factor 1 is comprised of (1) reliability on military sector in the event of disasters, (2) reliability on the police or firefighting organizations in the event of disasters, and (3) threats of natural disasters. Factor 2 consists of (1) reliance on relatives in the event of difficulties and (2) reliance on family in the event of difficulties. Factor 3 is made up of (1) reliability on political parties or politicians in the event of disasters and (2) reliability on organizations in nearby community in the event of disasters.

Factor 1 is dubbed "disaster risks and reliability on military sector, police or firefighting organizations," Factor 2 "reliance on relatives or family members in the event of difficulties" and Factor 3 " reliability on social institutions in the event of disasters." The correlation between Factors 1 and 2 stands at 0.413, and that between Factors 1 and 3 stands at 0.429. There is medium-level correlation in both of them. There is weak correlation observed between Factors 2 and 3 at the value of 0.345.

The characteristics of the area are, firstly, that the disaster risks and the reliance on military sector or police or firefighting organizations are regarded in the same light, and secondly, that the social institutions trusted include political parties or politicians. Regrettably, no path diagram can be drawn.

4．Conclusion

Given that this was not a nationwide survey of randomly sampled subjects, no definite conclusion can be drawn. There does appear to be a tendency, however, as described below.

Judging from Spearman's rank correlation coefficient, there is a difference in reliance between public institutions such as municipal governments and individual politicians or between public institutions including municipal governments and organizations in nearby community in

the event of disputes over land in Vietnam, Cambodia and Laos. In Vietnam, there is no correlation between the urban and rural areas, and there is hence no disparity in reliance between them. In Cambodia, greater reliance is observed on municipal governments and other public institutions than on organizations in nearby community in both the urban and rural areas. In Laos, municipal governments and other public institutions are more relied upon than individual politicians in both the urban and rural areas.

However, this tendency is possibly confined to mediation institutions for disputes over land, because in Cambodia organizations in nearby community are relied upon in the event of disasters or difficulties in both the urban and rural areas, and are identified as a criterion that constitutes a factor. In Laos, political parties or politicians are relied upon in the event of disasters in the urban and rural areas, and are identified as a criterion that constitutes a factor.

A comparison with questionnaire surveys conducted in Shinjuku-ku, Tokyo[5] reveals that people in Vietnam rely heavily on political parties or politicians. According to the factor analysis of the three-factor structure, the factor extraction is analogous with that of the survey in Shinjuku-ku. In other words, it is possible that institutions relied on in the event of disasters and those relied on in the event of difficulties are not found in any single factor, and that there may be similarities in terms of social capital.

In Cambodia, reliance on municipal governments and organizations in nearby community is poor, particularly in the urban area. The index score is in the range of 1 to 2 (see the foregoing table on Reliance on People and Institutions with Regard to Difficulties in Everyday Life). This is possibly due to the lingering adverse impact of the Khmer Rouge regime. With the exception of this point, there is similarity in the subordinate criteria of factors extracted between the urban and rural areas. To put it briefly, the social capital may be analogous between the urban and rural areas. This could imply that the two areas have not yet been in clearly different phases in the course of their development.

A study on experience of natural disasters, wars and accidents in Vietnam and Cambodia found that the results vary depending on the area. In Cambodia's rural area, options 5 (political turmoil) and 6 (war) are statistically significantly extracted, presumably because of the Cambodian civil war. On the other hand, option 3 (war) is statistically significantly extracted in Vietnamese urban area. This appears to reflect the impact of the Vietnam War.

What is striking with respect to the urban area in Laos is that the reliance on relatives and family members and the reliance on municipal governments are regarded in the same light. For this country, it is regrettable that no close analysis was able to be made on Question 20 about threats to life due to the counting irregularity observed on the part of the National University of Laos.

---

5   The number of samples is 635 for fiscal 2010 and 844 for fiscal 2011. Refer to Nos. 2 and 3 of *Shakai Kankei Shihon Kenkyu Ronshu* (Collection of Papers on Social Capital Studies).

Index Comparison

No.	Question items	scale	Vietnam urban	Vietnam rural	Cambodia urban	Cambodia rural	Laos urban	Laos rural
Q21-1	Reliance on city hall, town or village hall, etc.	4	2.313	2.622	1.949	2.450	3.534	3.583
Q21-2	Reliance on schools or hospitals	4	2.418	2.583	2.430	2.855	3.257	3.107
Q21-3	Reliance on police or firefighting organizations (police only in Cambodia)	4	2.033	2.260	2.640	2.631	2.877	2.864
Q21-5	Reliance on political parties or politicians	4	2.393	2.619	1.270	1.612	2.774	2.535
Q21-6	Reliance on organizations in nearby community	4	2.894	2.794	1.748	2.235	2.922	2.603
Q21-7	Reliance on volunteers, NPOs or civic groups	4	1.931	2.591	1.725	1.922	2.705	2.526
Q21-8	Reliance on religious organizations	4	1.779	2.298	2.350	2.676	2.786	2.643
Q21-11	Reliance on people in neighborhood	4	3.061	3.230	2.711	2.915	3.123	3.193
Q21-12	Reliance on family	4	3.880	3.850	3.920	3.965	3.746	3.621
Q21-13	Reliance on relatives	4	3.525	3.640	3.455	3.575	3.635	3.664
Q21-14	Reliance on friends or acquaintances	4	3.303	3.360	2.677	2.790	3.292	3.060
	average		2.685	2.895	2.443	2.693	3.150	3.036

Comparison Between Six Areas in Three Countries Based on Factor Analysis (Three-Factor Structure)

	Vietnam urban	Vietnam rural	Cambodia urban	Cambodia rural	Laos urban	Laos rural
Factor 1	Threats to life	Reliance on social institutions in the event of difficulties	Reliance or Reliability on neighbors or friends in the event of disasters or difficulties	Reliance or Reliability on neighbors or friends in the event of disasters or difficulties	Reliability on social institutions in the event of disasters	Disaster risks and reliability on military sector or police or firefighting organizations
Factor 2	Reliability on social institutions in the event of disasters	Reliability on friends, neighbors or relatives in the event of disasters	Reliance or Reliability on social institutions in the event of disasters or difficulties (exogenous variable)	Reliance or Reliability on social institutions in the event of disasters or difficulties	Reliance on relatives, family members or municipal governments in the event of difficulties	Reliance on relatives or family members in the event of difficulties
Factor 3	Reliance on social institutions in the event of difficulties	Threats to life (exogenous variable)	Reliance or Reliability on schools or hospitals in the event of disasters or difficulties (exogenous variable)	Reliance or Reliability on schools or hospitals in the event of disasters or difficulties	Threats to life	Reliability on social institutions in the event of disasters
n	100	100	200	200	66	67
Cronbach's alpha (internal consistency)	0.811	0.810	0.774	0.541	0.725	0.795
SEM (path diagram)	No	Yes	Yes	No	No	No
SEM consistency	-	GFI = 0.921 AGFI = 0.858 RMSEA = 0.068	GFI = 0.953 AGFI = 0.906 RMSEA = 0.078	-	-	-
Paths in SEM	-	Statistically significant	Statistically significant	-	-	-
Characteristics	1. Reliability in the event of disasters and reliance in the event of difficulties are separate.→ Possibly close to the model of Shinjuku-ku. 2. Social institutions include the military sector and political parties (significant reliance on them).	1. Reliability in the event of disasters and reliance in the event of difficulties are separate. 2. Social institutions include the military sector and political parties. 3. Reliability on friends, neighbors or relatives in the event of disasters determines reliance on social institutions in the event of difficulties.	1. Reliability in the event of disasters and reliance in the event of difficulties are not separate. (Neighbors, schools or hospitals are relied on in the event of disasters and difficulties alike.) 2. Threats to life are not extracted as a factor.	1. Reliability in the event of disasters and reliance in the event of difficulties are not separate. (Neighbors, schools or hospitals are relied on in the event of disasters and difficulties alike.) 2. The factors extracted are identical with those in the urban area. 3. Internal consistency is poor.	1, Reliance on relatives or family members is regarded in the same light as reliance on municipal governments.	1. Disaster risks are not distinguished from reliability on the military, the police or firefighting organizations.

Note: Factors with the same name have different observed variables or question items as constituents.