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ORGANIZATIONAL ACCOUNTABILITY IN EMERGENCY MANAGEMENT: EXAMINING TYPHOON MORAKOT

This main purpose of this study is to investigate the influence of demographics and the impact of citizen participation in Taiwanese central and local governments' accountability in emergency management operations of Typhoon Morakot. A random-digit-dialing sample of 1,066 citizens of Kaohsiung City and Pingtung County through a computer-assisted telephone interview (CATI) was collected in this study. The Research Center for Public Opinion and Elections of National Taipei University was the associated agency for the computer-assisted telephone interview in this study. The results revealed that citizen power level and tokenism level of citizen participation rated a higher accountability than informing and nonparticipation level. The results also reveal that the citizens who have master's degrees or higher give a better evaluation for governments' accountability compared to the citizens who have degrees lower master's. Taiwanese citizens gave better evaluation of the local government than of the central government. The study also recommends to examine best practices for disaster preparedness efforts in other countries that are routinely threatened by typhoons or hurricanes to identify opportunities for improvement in Taiwan's disaster preparedness and management practices.

Keywords: organizational accountability; emergency management; citizen participation.

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ОРГАНІЗАЦІЙНА ПІДЗВІТНІСТЬ В УПРАВЛІННІ ПРИ НАДЗВИЧАЙНИХ СИТУАЦІЯХ: ВИПАДОК ТАЙФУНУ МОРАКОТ

У статті вивчено вплив демографічних показників і участі громадян у підзвітності центральних і місцевих властей Тайваню в управлінні в надзвичайній ситуації під час тайфуну Моракот. Використано опитування 1066 громадян міста Гаосюн і повіту Піндун, вибраних методом випадково набраних номерів телефонів, інтерв'ю проведено за допомогою комп'ютерної системи телефонних опитувань. Опитування проводилося дослідницьким центром громадської думки і виборів при Національному університеті Тайбея. Результати свідчать, що рівень впливу громадян і рівень формальної підтримки громадської участі визначали точнішу підзвітність, ніж інформування і рівень неучасті. Також результати показали, що громадяни зі ступенем магістра і вище краще оцінювали підзвітність уряду, ніж громадяни з нижчим рівнем освіти. Громадяни Тайваню вище оцінили дії місцевого уряду, ніж центрального. Рекомендовано досліджувати найкращі заходи щодо запобігання катастрофам в інших країнах, які знаходяться в зонах, схильних до тайфунів і ураганів, щоб виявити можливості покращення тайваньських методів запобігання катастрофам і управління в таких ситуаціях.

Ключові слова: організаційна підзвітність; управління в критичних ситуаціях; громадянська участь.

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ОРГАНИЗАЦИОННАЯ ПОДОТЧЁТНОСТЬ В УПРАВЛЕНИИ ПРИ ЧРЕЗВЫЧАЙНЫХ СИТУАЦИЯХ: СЛУЧАЙ ТАЙФУНА МОРАКОТ

В статье изучено влияние демографических показателей и участия граждан в подотчетности центральных и местных властей Тайваня в управлении в критической

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ситуации во время тайфуна Моракот. Использован опрос 1066 граждан города Гаосюн и уезда Пиндун, выбранных методом случайно набираемых номеров телефонов, интервью проведены с помощью компьютерной системы телефонных опросов. Опрос проводился исследовательским центром общественного мнения и выборов при Национальном университете Тайбея. Результаты свидетельствуют, что уровень влияния граждан и уровень формальной поддержки гражданского участия определяли более точную подотчетность, чем информирование и уровень неучастия. Также результаты показали, что граждане со степенью магистра и выше лучше оценивали подотчетность правительства, чем граждане с уровнем образования ниже магистратуры. Граждане Тайваня выше оценили действия местного правительства, чем центрального. В статье рекомендуется исследовать наилучшие меры предотвращения катастроф в других странах, которые находятся в зонах подверженных тайфунам и ураганам, чтобы выявить возможности улучшения тайваньских методов предупреждения катастроф и управления такими ситуациями.

Ключевые слова: организационная подотчётность; управление в критических ситуациях; гражданское участие.

1. Introduction. Typhoons hit Taiwan in summer or fall every year. Typhoon Morakot caused severe damage to the southern part of Taiwan on August 8, 2009 and caused the highest number of deaths since the Chi-Chi earthquake in 1999. According to National Disaster Prevention and Protection Commission (2009), Typhoon Morakot killed over 600 people and the accumulated financial loss was about \$500 mln. Taiwanese president publicly offered his apologies for the lack of adequate responsiveness in the management of the crisis, but both his and the government's popularity continued to decrease rapidly. According to the Global Views Survey Research Center (2009), Taiwanese president's approval rating was 22.9% and disapproval rating was 64.8% in August, 2009. In comparison with July, his approval rating fell 12.6% points and disapproval rating increased 12.5%. 36.9% of the polled had trust Taiwanese president but 47.2% showed distrust. Compared with July, the level of public trust in Taiwanese president dropped 8.3% points while the level of distrust in Taiwanese president soared 8.1%. On the whole, Taiwanese administration used top-down approach for their decision-making in the aftermath of the typhoon. Taiwanese administration operated with a lack of explanation, or justification for their public policy. Keehley and Abercrombie (2008) emphasize, "It is imperative that members of local, national, and local communities hold public and nonprofit executives accountable for their actions in managing their organizations. Why? Because everyone's personal and financial circumstances and physical security may be directly linked to the ability to hold officials accountable for their decisions" (p. 162). Pertinent to this claim, the lack of accountability during the Typhoon Morakot disaster is the key reason for the drop in public approval rating for Taiwanese government. Also, the victims of Typhoon Morakot argue that Taiwanese government showed unresponsiveness in its emergency management policy.

This study seeks to explore how citizens perceived the Taiwanese government's responsiveness in emergency management operations during Typhoon Morakot. The research concerns the idea that if people are taught to perceive themselves as true owners of the government, efforts to improve government efficiency and responsive-

ness might be more successful (Schachter, 1997). In addition, the study examines how citizens perceive governments' accountability depending on the level of government in question. In this case, Taiwanese central government is opposed to Taiwanese local government.

2. Literature review.

2.1 Citizen Participation. Arnstein (1969) offered a typology of citizen participation for the purpose of dispelling rhetoric and disingenuous euphemisms often used in the controversy over citizen participation. He first defines:

Citizen participation is a categorical term for citizen power. It is the redistribution of power that enables the have-nots citizens, presently excluded from the political and economic processes, to be deliberately included in the future. It is the strategy by which the have-nots join the determining how information is shared, goals and policies are set, tax resources are allocated, programs are operated, and benefits like contracts and patronage are parceled out (p. 216).

However, much citizen participation is merely political rhetoric. Addressing this situation, Arnstein (1969) created a ladder that explains the degrees of citizen participation, in which there are 8 rungs (Figure 1).

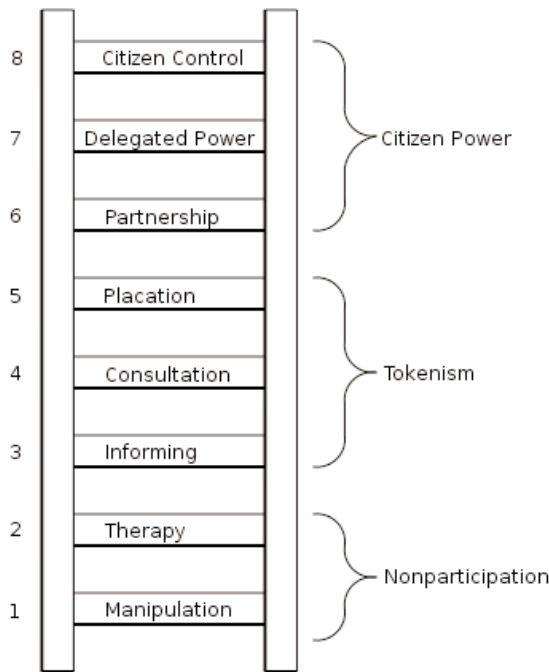


Figure 1. 8 rungs on the ladder of citizen participation. From "A Ladder of Citizen Participation," by S. R. Arnstein, 1969, AIP Journal, 35(4), p. 217.

2.2. Citizen Participation and Accountability. Cornwall and Gaventa (2001) examined current participatory approaches and strategies that seek to bridge the gap between government and citizens. They indicated that many examples exist "where NGOs have sought to intermeditate between government and citizens through the use

of participatory mechanisms for enhanced service responsiveness and accountability" (p. 34). Finally, they argued, "citizen monitoring and other forms of citizen action can help force some measure of accountability" (p. 35).

Gaventa (2002) claimed if arguments for participation and institutional accountability to be meaningful, they must have a foundation in the concept of rights that promotes the idea of citizens as "legitimate claimants" of development, rather than beneficiaries (p. 2).

Gibson et al. (2005) examined the role of a citizen in democratic society and call for a shift in the public participation paradigm. By examining a number of case studies — where citizen participation is being practiced — Gibson et al. came up with a number of factors that contribute to success of the participation process. They found community planning combined with benchmarking and performance monitoring builds trust among residents and keeps residents interested and motivated in further participation. They indicated, "each of these efforts has identified new governance processes in which citizens are improving governmental accountability through their participation" (p. 8).

2.3. Accountability for Finances. One of the most intuitive and obvious forms of administrative accountability is solely concerned with financial accounting—with keeping books and monitoring how money is spent. It is no surprise, then, that the words "accountability," "accountable," "account," and "accounting" have the same Old English, Old French, and Latin roots — "computare", the root of the verb "to compute." And indeed, Eugene Bardach, scholar at the University of California at Berkeley, and Cara Lesser, scholar at the Center for studying health system change, both linked the entire idea of accountability to financial accountability. This is "because financial controls are among the few tools of legislative control of administration" (Behn, 2001, p. 7).

2.4. Accountability for Fairness. Moving on to fairness accountability, Behn (2001) argued that citizens must hold their elected officials and government organizations accountable for more than just financial accountability. Fairness — a well-established norm for democratic governments — is another standard the authors wish us to hold government organizations and their employees accountable for. Specifically, public administrators should be fair to their employees and contractors, to clients of its many programs, in its services to citizens, in the way it distributes taxes, in judicial matters, and more. Public administrators and government should not only be fair, Behn (2001) said — they should be "exceptionally fair" (p. 8).

2.5. Accountability for Performance. Along with the belief that true accountability should include as foundations both accountability for finances and accountability for fairness, Behn (2001) also proposed that government and its employees also have the responsibility to accomplish public purposes. This is known as accountability for performance. Shifting the discussion from accountability for fairness and finances to accountability for performance represents a shift in focus — on how the government does what it does. Accountability for performance is directed at what government actually does. Accountability for performance is, further, consequence directed — citizens are concerned with the consequences of their elected representatives' actions. Citizens are concerned not only with how their public organization pursues its

endeavors, but also that the endeavors themselves represent the values that their society collectively holds.

2.6. Stages of Emergency Management Policy and Citizen Participation Purposes. The success of citizen participation depends upon how appropriate participation strategies are crafted and that the most effective citizen participation strategies are those in which decision-makers connect the strategy to the purpose for participation and the nature of the issue being considered (Walters et al., 2000). Decision makers can have many purposes for involving public: information exchange and legitimization, exchanging public acceptance for influence, community building, deliberation, decision making, venting of emotions, or the resolution of conflicts (Creighton, 1981; Rosener, 1975; Thomas, 1995; Walsh, 1997).

It is important to let participants know the purpose of their participation; if a purpose is not communicated, citizens will infer their own and expectations will thus be skewed, making it difficult for decision-makers to meet them. Moreover, it is difficult to establish the success of an activity if a purpose is not first defined (Kweit & Kweit, 1981; Rosener, 1975). Purposes for including public can be organized, schematically, in a sense, around the stages of the policy development process: (a) identify the problem, (b) define how alternative solutions will be evaluated, (c) come up with alternative solutions, (d) evaluate the alternative solutions with the defined criteria, and (e) recommend an alternative (Bardach, 1996; Dunn, 2007; Kweit & Kweit, 1981; McRae & Whittington, 1997; Patton & Sawicki, 1993). Walters et al. (2000) further defined the purposes for citizen participation in decision making: (a) for assistance in the search for definitions, alternatives, or criteria (discover), (b) to inform public about a problem and a proposed alternative (educate), (c) to measure public opinion (measure), (d) to persuade citizens toward a proposed alternative (persuade), and (e) to comply with legal requirements (legitimize).

According to the above points of view, the following hypotheses are proposed in this study:

H1: There is no significant difference between demographics and the level of citizen participation.

H2: There is no significant difference between demographics and citizens' perception of governments' accountability.

H3: There is no significant difference between the level of citizen participation and citizens' perception of governments' accountability.

3. Research method.

3.1. Theoretical Framework. The theoretical foundation of this study includes citizen participation and benchmarking in public and nonprofit sectors. This research model is shown in Figure 2 and depicts how citizens of different categories and citizen participation may affect organizational accountability.

3.2. Research Design. According to Central Emergency Operating Center of Taiwan, Kaohsiung City and Pingtung County suffered the most serious damage from Typhoon Morakot. Therefore, this study focused on the population in Kaohsiung City and Pingtung County. A telephone survey was conducted and quantitative statistics compiled to create a detailed and intense analysis of the organizational accountability in Taiwanese central and local governments in the emergency management operations in the aftermath of Typhoon Morakot. To facilitate the survey a comput-

er-assisted telephone interview (CATI) of a random digit dialing sample of 1066 citizens of Kaohsiung City and Pingtung County was employed. In addition, this study used the Likert scale to measure the extent of subjects' agreement with each item on the 5-point scale: Strongly Disagree, Disagree, Undecided, Agree, and Strongly Agree. The items are assigned values running from 1 through 5, respectively. This study uses low mean scores to equate with negative attitudes, while using high mean scores to reflect the positive attitudes.

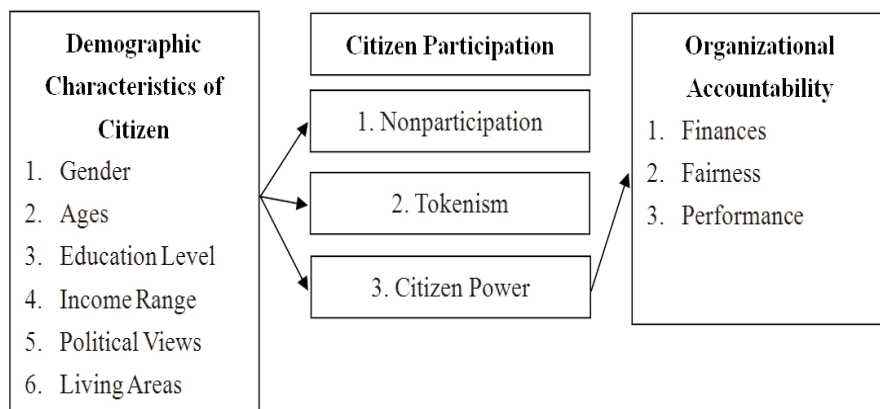


Figure 2. Research model (designed by the researchers)

4. Analysis and discussion.

4.1. *Correlation Among the Research Variables.* The correlations between citizen participation, accountability, and responsiveness are summarized in Table 1. The Pearson's correlations between the research variables are in the predicted directions. Citizen participation is positively ($r = .114$, $p = .000$) correlated with the dependent variables except for responsiveness ($r = .032$, $p = .301$). The correlation between accountability and responsiveness is statistically significant ($r = .235$, $p = .000$).

Table 1. Pearson's Correlations Between Research Variables

		Citizen participation	Accountability	Responsiveness
Citizen participation	Pearson correlation	1		
	Sig. (2-tailed)			
	N	1,066		
Accountability	Pearson correlation	.114**	1	
	Sig. (2-tailed)	.000		
	N	1,066	1,066	
Responsiveness	Pearson correlation	.032	.235**	1
	Sig. (2-tailed)	.301	.000	
	N	1,066	1,066	1,066

Note: **Correlation is significant at the 0.01 level (2-tailed).

4.2. *The Relationship between Demographics and Level of Citizen Participation.* Hypothesis 1 stated there is no significant difference between demographics and level

of citizen participation. With the exception of age, the results showed there was no significant difference between demographics and level of citizen participation. The results of the ANOVA revealed a statistically significant difference $F(4, 1061) = 9.648, p = .000$ between age and citizen participation. The Scheffe's method indicated that level of citizen participation in 20-29 years of age was less than of 30-39, 40-49, 50-59, and 60+ years of age (Table 2). Therefore, Hypothesis 1 is partially supported on the relationship between demographics and the level of citizen participation.

Table 2. Analysis of Variance Summary Table of Levels of Citizen Participation by Age

	N	Mean	SE	Min-max
20-29	144	7.08	.245	3-14
30-39	215	8.32	.213	3-15
40-49	252	8.19	.190	3-15
50-59	247	8.67	.194	3-15
60+	208	9.04	.222	3-15
Total	1,066	8.34	.096	3-15
ANOVA				
F	9.648			
Sig.	.000			
Scheffe	-1.240*, -1.114*, -1.596*, and -1.962*			

Note: * The mean difference is significant at the .05 level.

4.3. The Relationship between Demographics and Citizen's Perception of Governments' Accountability. Hypothesis 2 stated there is no significant difference between demographics and citizens' perception of the governments' accountability. With an exception of education level, the results show no significant difference between demographics and citizens' perception of governments' accountability. The results of the ANOVA revealed a statistically significant difference $F(2, 1063) = 4.476, p = .012$ between education level and accountability. The Scheffe's method indicated that citizens who have a master's degree or higher give a better evaluation for governments' accountability compared to the citizens who have a degree lower than master's (Table 3). Therefore, Hypothesis 2 is partially supported on the relationship between demographics and citizens' perception of the governments' accountability.

Table 3. Analysis of Variance Summary Table of Accountability by Education Level

	N	Mean	SE	Min-max
High school-	524	43.94	.418	12-60
College or university	487	43.89	.407	16-60
Master+	55	47.75	1.131	23-60
Total	1,066	44.11	.284	12-60
ANOVA				
F	4.476			
Sig.	.012			
Scheffe	-3.803* and -3.858*			

Note: * The mean difference is significant at the .05 level.

4.4. The Relationship between Level of Citizen Participation and Citizen's Perception of Governments' Accountability. Hypothesis 3 stated there is no significant

difference between the level of citizen participation and citizens' perception of the governments' accountability. The hypothesis is completely refuted, because the results of the ANOVA revealed a statistical significant difference $F(3, 1062) = 6.937$, $p = .000$ between citizen participation and accountability (Table 4). The Scheffe's method indicated that citizen power level and tokenism level of citizen participation rated a higher accountability than informing and nonparticipation level.

Table 4. Analysis of Variance Summary Table of Accountability by Citizen Participation

	N	Mean	SE	Min-max
Nonparticipation	267	43.04	.596	12-60
Informing	335	42.94	.473	18-60
Tokenism	262	45.57	.550	16-60
Citizen power	202	45.58	.684	18-60
Total	1,066	44.11	.284	12-60
ANOVA				
F	6.937			
Sig.	.000			
Scheffe	-2.535*, -2.547*, -2.629*, and -2.641*			

Note: * The mean difference is significant at the .05 level.

5. Conclusion. This study's findings tie back to Gibson, Lacy, and Dougherty's (2005) theories that citizen participation improves performance and accountability in local government. By providing an understanding of organizational accountability in local and central government from the view of the citizens, this study has brought out the views concerning current levels of satisfaction and dissatisfaction of Taiwanese citizens on the emergency management in the country. It is through timely responses to these views that both the local and central government will be able to make suitable decisions that work towards enhancing citizen satisfaction. Moreover, by identifying the existing relationship between organizational accountability of the central and local government and citizen participation, the results of this study are beneficial because they serve to narrow the information gap existing between Taiwanese citizens and the government, a benefit that will eventually improve the accountability and performance of the government through the increased involvement of citizens.

The findings provide evidence that the system of emergency management employed by Taiwanese government does not garner the kind of citizen perception of effectiveness and accountability that is desired and needed in today's environment. The government's ineffectiveness can be readily seen from the various perceptions of the citizens, who expressed distrust in the level of affectability and accountability of the central government in managing emergencies. It is therefore important for suitable systems to be put in place not just for the central government but for the local government as well.

It is clear that Taiwanese government must work on disaster preparedness. To be leaders in the geographic area regularly impacted by such disasters, the key is to be prepared. Government officials should consistently evaluate and improve plans and strategies for dealing with emergencies. They should consistently ensure that land and buildings are up to code and that people know and understand any and all emergency protocols and plans. Emergency responses need to be organized and clear and simple

because of the level of emotion and potential level of damage that can occur. It is safe to assume that not everyone will be able or willing to engage or participate in the midst of an actual disaster. Citizens can be engaged in emergency management operations but only if communication is clear ahead of time, information is consistent, and trust is built ahead of time.

Arguably most important for any government entity would be to address the general scope of accountability as a foundational part of government responsibility to its citizens. Taiwanese government in particular needs to decide internally what level of accountability is requisite for the administration. Only then can government institutions and officials build trust among their constituencies and ensure that every function of government reflects this level of trust and accountability as situations arise.

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