MIGRATION INTENTION IN THE FIRST DISTRICT OF LEYTE, PHILIPPINES: ONE YEAR AFTER TYPHOON HAIYAN

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ABSTRACT

The first district of Leyte, Philippines was hit by the strongest typhoon in the world, typhoon Haiyan on November 08, 2013. One year after this tragic incident, this study was conducted to determine if the effect of the typhoon has still an influence in the intention to migrate on the people that were affected by the disaster. It was also intended to determine if personal, household and community characteristics are significantly related with the intention to migrate.

Chi-square test showed that there is a significant relation between the effects of typhoon Haiyan and migration intention. Migration intention is also associated with age, sex and civil status but not with educational attainment, occupation, personal and household income. It is not also associated with household size, type of dwelling, presence of migrant in the household, municipality class and area of residence.

More women, married people and the younger generation have the intention to leave. The study further revealed that though more women have the intention to migrate, men have stronger desire to leave. The study recommends for the national government and other government agencies to increase rehabilitation activities, to open job opportunities and offer livelihood assistance to prevent the actual migration of the victims.

Keywords: Migration intention, First District of Leyte, Philippines, Typhoon Haiyan

INTRODUCTION

This study is anchored on the functionalist perspective that a society is composed of interrelated parts, each of which serves a function and contributes to the overall stability of the society. If anything happens to one of these parts, all other parts are affected and the system no longer functions properly. Our society has created institutions and other social structures to help it to survive. These institutions include the family, government, education and the economy among others. If one of these components of society will not function properly, the entire system is affected (Kendall, 2002). Almost all of these institutions were affected and structures were damaged by Typhoon Haiyan. It is interesting to know if the people of the first district of Leyte, Philippines having such devastating experience have intentions to move to other more stable places or just stick to the place and help rebuild it.

The study of the Norwegian Refugee Council(2014) shows that natural disasters displaced more people than war in 2013. According to this study, the largest displacement came from Typhoon Haiyan which displaced an estimated 4.1 million in the Philippines (Richmond, 2014). This displacement was temporary considering that the victims were homeless and

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there was no other option but to look for temporary shelter. There was havoc in the entire community, buildings, facilities and equipment for social services were severely damaged. Almost all services including the banking system were not functional immediately after the disaster. Getting food supplies and medicines were difficult since department stores and drug stores were closed. But one year after the disaster when the entire situation is almost normal, it is interesting to know if victims of this disaster still has the intention to move out of this place.

When America was hit by hurricane Katrina, the entire population of Southern Lousiana has been displaced, a large population of it perhaps permanently (Smith, A. O., 2006). However, the study of Chun – Wing Tse (2011) on " Do Natural Disasters Really Lead to More Migration? Evidence from Indonesia" showed that the three most common types of disasters, earthquake, volcanic eruption, and floods reduce the likelihood for households to move out. Also, a paper published in the preceding of the Natural Academy of Sciences does not find any relationship between flood exposure and long term migration in Bangladesh.

The study of Lee et al (2014) on the "Impact of the Great East Japan Earthquake on Intentions to Relocate", shows that younger villagers, women and unmarried persons indicated a greater likelihood of relocating. Respondents with higher-income households indicated stronger intentions to remain in their homeland. Damage to homes and loss of job or household income did not significantly affect intentions to relocate. However, villagers who suffered loss of personal and family networks declared stronger intentions to relocate after the disaster.

In the study on the impact of the great east Japan earthquake, Lee (2014) used the intention to relocate and not the actual movement of the victims. They argued that in creating recovery policies that consider population mobility, it is crucial for policy makers to understand what drives peoples' intention to relocate following a natural disaster. This paper likewise used migration intention in the First District of Leyte, Philippines instead of the actual migration for this same idea and argument.

Knowing the peoples' mobility intention after a major disaster will help policy makers create policies that will be beneficial for the victims and the place of disaster. The movement of residents outside a community after a major disaster will surely affect the economic activity and the social condition of the community and the country as a whole.

This study is particularly intended to determine the Migration Intention of the people in the first district of Leyte in terms of their personal, household and community characteristics. It is also intended to determine if there are significant relationships between the personal, household, and community characteristics of the people in the first district of Leyte, Philippines and their intention to migrate and if there is a significant association between the effect of Typhoon Haiyan and the intention to migrate of the people in the first district of Leyte, Philippine. Finally, it is intended to determine the reasons why they intend to migrate and give recommendations what the government and the private sectors could do to help rebuild the affected communities.

LOCALE OF THE STUDY

Philippines is a Southeast Asian country facing the Pacific Ocean. It has 17 regions with more than 7,000 islands and a population of 100,979,303 based on the latest survey of the Philippine Statistics Authority. Eastern Visayas is one of these 17 regions consisting of six provinces and Leyte is one of these provinces. Leyte is divided into five congressional districts and one of these is the first district which is the locale of this study. The first district

of Leyte consists of seven municipalities and one highly urbanized city. The seven municipalities are San Miguel, Alangalang, Sta. Fe, Palo, Tolosa, Tanauan and Babatngon. Tacloban is the only highly urbanized and the capital city of Leyte and the center of education, trade and commerce. Palo, one of the municipalities of the first district of Leyte is known since it was in this place where General Douglas Mc Arthur landed when he liberated the Philippines during World War II. The first district lies in the eastern portion of Leyte which faces the Pacific Ocean.

According to the Philippine Statistics Authority, the total number of households in the first district of Leyte based from their 2010 census was 95,861.

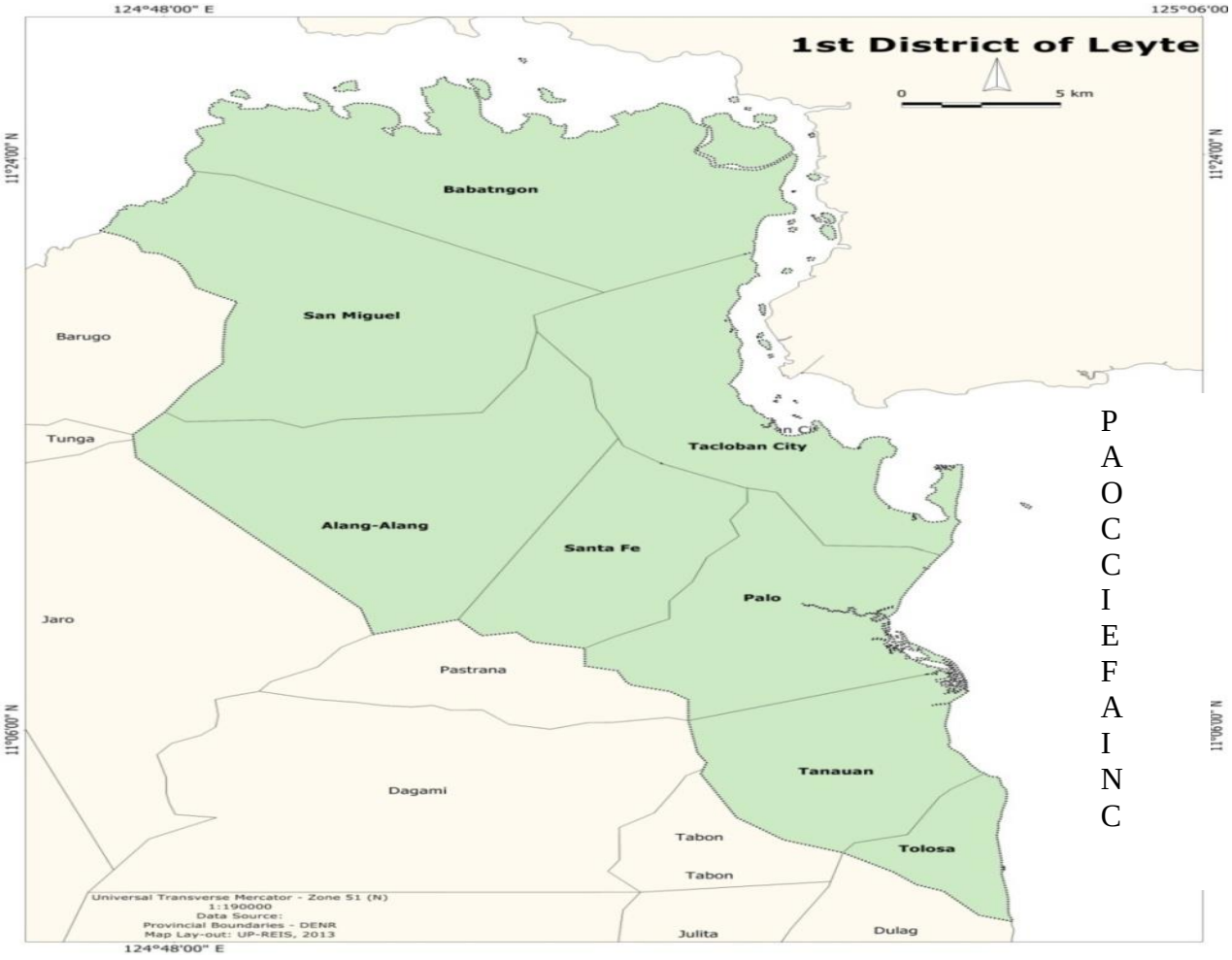

Figure 1: Map of the First District of Leyte (source: UPVTC)

There were 10,004 households in Alangalang, 10,979 households in Tanuan, 5,249 households in Babatngon,3,663 households in Sta. Fe, 3,922 households in Tolosa, 12,911 households in Palo and 45,478 households in Tacloban City.

The first district of Leyte was the one who was directly hit by Typhoon Haiyan causing severe and extreme damage to lives, homes and livelihoods. Tacloban City, and the two municipalities of Palo and Tanauan who were facing the Pacific Ocean (see Figure 1) were also hit by the storm surge resulting to deaths of several thousands of people, homes were washed out and economy was crippled. Peace and order become a problem since even soldiers and local policemen were they themselves victims of this disaster. This incident happened on November 8, 2013. One year after this incident happened, this study was

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conducted to determine the migration intention of people living in the first district of Leyte. This was intended to determine if a major disaster would lead people to decide to migrate one year the disaster when almost everything is back to normal.

METHODOLOGY

The Respondents

The respondents were either the household head, the spouse of the household head or any adult member of the family eighteen years old and above who was present when the survey was conducted. Only one respondent for every household was taken.

Sampling Design

A sample of 398 is needed based from Slovin's Formula at .05 size of error. However, 400 samples were taken for the purpose of this study. Samples were taken using the probability proportionate to size (PPS) sampling technique on a per municipality level. Systematic sampling with a random start was used to select sample from every municipality.

There are seven municipalities and one city in the first district of Leyte. Each of which is considered one strata for the purpose of sampling. To determine the sample size for every municipality using the probability proportionate to size (PPS), the total number of households in the municipality was divided by the total number of households for the first district of Leyte and then multiply the result by 400, the desired sample size. Data on the total number of households per municipality and the total number of households for the first district of Leyte was based from the 2010 NSO Survey on Population. Household size and the corresponding number of sample per municipality is presented in table 1. The sampling interval was computed by dividing the total number of households in the first district of Leyte by 400. Identification of sample respondents were based from the list of households in the first district of Leyte which was furnished by the National Statistics Office.

Table 1. Number of Sample per Municipality

Municipality/City	Households	Sample
Alangalang	10,004	42
Tanuan	10,979	46
Babatngon	5,249	22
San miguel	3,663	15
Sta. Fe	3,655	15
Tolosa	3,922	16
Palo	12,911	54
Tacloban city	45,478	190
Total	**95,861**	**400**

The Variables

The main variable of this study is the intention to migrate, either internal or international. Internal migration intention within the first district of Leyte is included in this study. Respondents were asked if they had intention to migrate and the responses were either Yes or

No. Responses were used to describe their intention to migrate in terms of the independent variables describe in this study. Respondents were also asked to rate their degree of desire or intention to migrate from 0 to 100. A rating of zero means that they have 0 percent or totally no intention to migrate and on the other end that their intention to migrate is 100 percent. A rating near zero means a weaker intention to migrate while a rating near 100 shows a stronger desire or intention to migrate. This is the dependent variable in the construction of the model. Responses for this particular question were used in the construction of the model using Stepwise Multiple Linear Regression Method.

The other major variables considered in the study are (1) personal, (2) household, and (3) community characteristics. The first area of concern which is the "Personal" profile of the respondents identified the following socio-demographic variables: age, sex, civil status, educational attainment, occupation, and income. Variables related to the second area of concern, "Household" characteristics were identified as: household size, household income, presence of migrant in the household, and type of dwelling. There were three variables in the "Community" characteristics and these were classification of municipality, the type of area of residence and the municipality where the study was conducted. The description of the variables is presented in Table 2.

Occupation Any mixed or combination of the first four occupational classes was classified as combined. Respondents who do not belong to any of the first five classes were in the sixth category of "none" or no occupation.

Monthly Income

These were divided into five income groups in the presentation of the profile of the respondents. The bracketing of the income categories was based on the formula suggested by the Philippine Statistics Authority. The formula was taken from the Basic Statistics book of B.L. Agrawal (1994). The formula: $i = (L - S) / (1 + 3.322 \text{ Log } _{10} n)$ which is also equivalent to i = (L – S) / number of classes. This bracketing was used after the adaptation of the income bracket used in the Family Income and Expenditure Survey conducted by the Philippine Statistics Authority was not successful.

Household Monthly Income

The bracketing used was also based from the formula suggested by the Philippine Statistics Authority.

Type of dwelling refers to the type of the house where the respondent is presently living. It was classified as follows: I – if the house is made of light materials like nipa and bamboo or a "bahay kubo"; 2 – if the house is made of wood; 3 - for simple concrete if the house is made of cement and the estimated cost is less than 1 million pesos and 4 – for "high class concrete" if the estimated cost of the house is more than 1 million pesos.

Classification of municipality are based on their annual income. Second class municipalities have annual income ranging from P45 M to P55 M. There are two second class municipalities in the first district of Leyte namely Alangalang and Tanuan. Third class municipality has an annual income ranging from P35 M to P45 M and Palo belong to this municipality class. Fourth class municipality has an annual income ranging from P25 M to P35 M. The two municipalities in the first district of Leyte which belong to the fourth municipality class are Babatngon and San Miguel. Santa Fe and Tolosa are fifth class municipalities with annual income ranging from P15 M to P25 M. Tacloban was classified as a first class city in 2008 but later change status to a highly urbanized city whose annual

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income are P400 M or more. These municipalities were reclassified pursuant to Department Order No. 23-08 dated July 29, 2008 by the Bureau of Local Government Finance Region VIII (NSCB).

Table 2. Description of the Variable

Variable	Description of the variable
Migration Intention Variable 1	With migration intention or without migration intention
Variable 2: degree of desire	0 to 100
Age	Age of the respondents on their last birthday
Sex	Male or female
Educational attainment	Highest educational level completed: did not attend school, elementary school level, high school level, vocational school level, college level, graduate school level
Occupation	Principal activity where they earn income: employee, businessman, professional, others, combined, none
Monthly Income	Income derived from their occupation and from other possible personal sources combined
Civil Status	Single, married, separated, widow/widower
Size of household	Total number of people living in the household and sharing the same food.
Presence of migrant	If there is migrant living in the household: Yes or No
Household monthly income	Total income of household members per month added together excluding the salaries and wages of the household helpers.
Type of dwelling	Bahay kubo, Made of wood, simple concrete, high class concrete
Classification of municipality	Municipalities were reclassified pursuant to Department Order No. 23-08 dated July 29, 2008 by the Bureau of Local Government Finance Region VIII
Area of residence	Rural or Urban

DATA ANALYSIS

The response whether they have or no intention to migrate was used in describing the migration intention in terms of the personal, household and community characteristics using frequency and percentage distributions. The reasons to migrate were also presented in tabular form.

The chi-square test for independence was used to determine if migration intention is associated with personal, household and community characteristics. Chi-square test was also used to determine if there is a significant association between the effects of Typhoon Haiyan and the intention to migrate of the people of the first district of Leyte.

The rating on the degree of desire to migrate which ranges from 0 to 100 was used as the dependent variable to construct the model using the Stepwise Multiple Linear regression Method. SPSS software was used in the construction of the model.

RESULTS AND DISCUSSION

Migration Intention in Terms of Personal Characteristics

Table 3 shows the intention to migrate of the respondents in terms of their personal characteristics namely, age, sex, civil status, educational attainment, occupation, and income . There were 100 who have the intention to migrate out of the 400 respondents that were interviewed. Out of the 100 respondents who have the intention to migrate, 46 belong to the 30 to 44 age category group and 30 are in the 15 to 29 age category bracket. Sixty eight percent of those who have the intention to migrate are females and 78% are married. Eighty eight percent of those who have the intention to migrate are either high school or college level. Forty four percent are jobless and 71% are in the 0 to P5,999 income category.

Further analysis showed that age, sex and civil status are significantly associated with migration intention. While the other personal characteristics such as educational attainment, occupation and personal income were not significantly associated with migration intention. All were tested at .05 level of significance.

This study showed that more women, married people and the younger generation, have the intention to leave one year after Typhoon Haiyan hit the place. This is consistent with the result of the study of Lee (2014) showing that women and young villagers have a greater likelihood to relocate. The result of this study is however inconsistent with the result of Lee"s study showing that unmarried persons have a greater likelihood to relocate after the earthquake.

The younger people are the prime movers to progress and it would be difficult for a community to move forward without them. Farmers hire younger people to help them till their lands and farming would be problematic without them. This younger people without stable source of income are forced to leave after the disaster considering that jobs offered by farmers are still at its low level. The government therefore should create job opportunities or offer livelihood programs to fill the gap and avoid the actual migration of these young people.

Migrant Women are more vulnerable to job abuses and sexual harassment than men. Employers usually take advantage of female workers especially those working abroad as domestic helpers. They are sometimes treated like slaves by their employers.

Married people leaving their homes could create possible family problems. Children of migrant workers usually become victims of illegal drugs and other criminal activities considering that no one takes care and attend to their daily activities. The national government should do something in order to prevent the actual migration of the younger generation, women and married victims of the disaster. The local government officials tried to help their residents but their limited resources prevented them in delivering the services needed by their people considering that they themselves were also victims of this disaster.

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Table 3. Intention to Migrate of the Respondents in Terms of their Personal Characteristics

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Personal Characteristics	Migration Intention					
	Without Intention		With Intention		Total	
	No.	%	No.	%	No.	%
Age						
75-above	9	2.25	0	0.00	9	2.25
60-74	40	10.00	3	0.75	43	10.75
45-59	98	24.50	21	5.25	119	29.75
30-44	102	25.50	46	11.50	148	37.00
15-29	51	12.75	30	7.50	81	20.25
Total	300	75.00	100	25.0	400	100
Sex						
Male	57	14.25	32	8.00	89	22.25
Female	243	60.75	68	17.00	311	77.75
Total	300	75.00	100	25.00	400	100.00
Civil Status						
Single	27	6.75	15	3.75	42	10.50
Married	236	59.00	78	19.50	314	78.50
Separated	6	1.50	4	1.00	10	2.50
Widow/widower	31	7.75	3	0.75	34	8.50
Total	300	75.00	100	25.00	400	100.00
Educational Attainment						
Elementary level	64	16.00	12	3.00	76	19.00
High school level	113	28.5	40	10.00	153	38.25
Vocational level	6	1.50	3	0.75	9	2.25
College level	116	29.00	44	11.00	160	40.00
Graduate level	1	0.25	1	0.25	2	0.50
Total	300	75.00	100	25.00	400	100.00
Occupation						
None	106	26.50	42	10.50	148	37.00
Employee	34	8.50	14	3.50	48	12.00
Businessman	28	7.00	11	2.75	39	9.75
Professional	12	3.00	2	0.50	14	3.50
Farmer, fisherman etc.	82	20.50	22	5.50	104	26.00
Mixed	38	9.50	9	2.25	47	11.75
Total	300	75.00	100	25.00	400	100.0
Income						
24000-above	4	1.00	4	1.00	8	2.00
18,000-23,999	16	4.00	2	0.50	18	4.50
12,000-17999	15	3.75	6	1.50	21	5.25
6,000-11,999	31	7.75	17	4.25	48	12.00
0-5,999	234	58.50	71	17.75	305	76.25
total	300	75.00	100	25.00	400	100.00

Migration Intention in Terms of Household Characteristics

Four household characteristics namely, household size, household income, type of dwelling and presence of migrant in the household were examined and tested to determine if these were associated to migration intention. The result of the study is presented in Table 4. Out of the 400 respondents interviewed, 57.25% belong to the 4 to 6 household size category class and 81.75% belong to the lowest income category class.

Table 4. Intention to Migrate of the Respondents in Terms of their Household Characteristics

Household Characteristics	Migration Intention					
	Without Intention		With Intention		Total	
	No.	%	No.	%	No.	%
Household Size						
13-above	3	0.75	0	0	3	0.75
10-12	9	2.25	3	0.75	12	3.00
7-9	52	13.00	21	5.25	73	18.25
4-6	179	44.75	50	12.50	229	57.25
1-3	57	14.25	26	6.50	83	20.75
Total	300	75.00	100	25.00	400	100.00
Household Income						
67,500-above	4	1.00	3	0.75	7	1.75
45,000-67,4999	8	2.00	2	0.50	10	2.50
22,500-44,999	44	11.00	12	3.00	56	14.00
0-22,499	244	61.00	83	20.75	327	81.75
Total	300	75.00	100	25.00	400	100.00
Type of Dwelling						
Bahay kubo	54	13.50	21	5.25	75	18.75
Made of wood	101	25.25	41	10.25	142	35.50
Simple concrete	101	25.25	33	8.25	134	33.50
High Class Concrete	44	11.00	5	1.25	49	12.25
Total	300	75.00	100	25.00	400	100.00
Occupation						
None	106	26.50	42	10.50	148	37.00
Employee	34	8.50	14	3.50	48	12.00
Businessman	28	7.00	11	2.75	39	9.75
Professional	12	3.00	2	0.50	14	3.50
Farmer, fisherman etc.	82	20.50	22	5.50	104	26.00
Mixed	38	9.50	9	2.25	47	11.75
Total	300	75.00	100	25.00	400	100.0
Presence of migrant in the household						
None	125	31.25	29	7.25	154	38.50
Yes	175	43.75	71	17.75	246	61.50
Total	300	75.00	100	25.00	400	100.00

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There were 246 respondents who have migrants living in the household and 71 have the intention to migrate. The result further shows that people in the first district of Leyte are mobile with 61.5% households have migrants living with them. Test for independence showed that all four variables household size, household income, type of dwelling and presence of migrant are not associated to migration intention.

Migration Intention in Terms of Community Characteristics

Table 5 shows the migration intention of the four hundred respondents in terms of their community characteristics which are the name of the municipality, the municipality class and the area of residence. Test for independence showed that migration intention is associated with the municipality where they live.

Table 5. Intention to Migrate in Terms of Community

Household Characteristics	Migration Intention					
	Without Intention		With Intention		Total	
	No.	%	No.	%	No.	%
Name of Municipality						
Sn. Miguel	14	3.50	1	0.25	15	3.75
Alangalang	39	9.75	3	0.75	42	10.50
Sta. Fe	11	2.75	4	1.00	15	3.75
Palo	35	8.75	19	4.75	54	13.50
Tolosa	9	2.25	7	1.75	16	4.00
Tanauan	34	8.50	12	3.00	46	11.50
Tacloban City	143	35.75	47	11.75	190	47.50
Babatngon	15	3.75	7	1.75	22	5.50
Total	300	75.00	100	25.00	400	100.00
Classification of Municipality						
HUC	143	35.75	47	11.75	190	47.50
Second class	73	18.25	15	3.75	88	22.00
Third class	35	8.75	19	4.75	54	13.50
Fourth class	29	7.25	8	2.00	37	9.25
Fifth class	20	5.00	11	2.75	31	7.75
Total	300	75.00	100	25.00	400	100.00
Type of Dwelling						
Bahay kubo	54	13.50	21	5.25	75	18.75
Made of wood	101	25.25	41	10.25	142	35.50
Simple concrete	101	25.25	33	8.25	134	33.50
High Class Concrete	44	11.00	5	1.25	49	12.25
Total	300	75.00	100	25.00	400	100.00
Area of residence						
Rural	176	44.00	56	14.00	232	58.00
Urban	124	31.00	44	11.00	168	42.00
Total	300	75.00	100	25.00	400	100.00

This could be explained by the fact that different municipalities have different degree of distraction experienced by the respondents during the calamity. People living in the areas directly facing the Pacific Ocean suffer from storm surge which resulted to higher death rate compared to the places which are farther from the ocean. Result further showed that migration intention is not associated with the classification of municipality and it is not also associated with area of residence.

Effect of Typhoon Haiyan on the Intention to Migrate

Out of the 100 respondents who have the intention to migrate, 53 said that their intention to migrate is due to the effects of Typhoon Haiyan while 47 said that their experience regarding the strong typhoon has nothing to do with their intention to migrate. Further analysis showed that there is significant association between the effects of Typhoon Haiyan and the intention to migrate of the people in the first district of Leyte one year after the disaster.

Reasons for Migration

Table 6 shows the reasons why some respondents intend to migrate. Out of 100 respondents who have the intention to migrate, 67% percent said that the reason why they want to migrate is to look for a job and most of their decision was influenced by the effect of the disaster considering that their sources of income were damaged by the typhoon. This is the area that is heavily affected by the disaster and should be looked into by government authorities and institutions in order to avoid people from moving out from a disaster area.

The main livelihood of the people of the first district of Leyte is farming and most of the coconut trees were either cut or uprooted by the strong force of the typhoon and there is almost no production of copra resulting to a severe decrease in the income of the farmers. It would take almost three years before the remaining live coconut that survive during the typhoon to bear fruits and be productive again. The farmers who were dependent on copra have to look for other sources of income. Without local job opportunities, they are forced to look for jobs outside their place of origin in order to feed their families and survive. These victims received relief goods from the government and other organizations, but these were just temporary solution and they also have to do something in order to move on. One of the most influential advocates of the functionalist perspective, Talcott Parsons (cited in Kendall, 2002) stressed that all societies must provide for meeting social needs in order to survive.

Table 6. Frequency and Percentage Distribution on Reasons to migrate

Reasons	No.	%
Look for job	67	67
The place is not good to do business	7	7
Do not own the house/lot	16	16
Look for better place	7	7
Want to return home	3	3
Total	**100**	**100**

Doing business in this disaster area is not so attractive considering that the present buying power of the people is too low. In fact, 7% of those who are intending to migrate are planning to leave because of poor business activities in the area. This is a big portion of the remaining and surviving investors and businessmen in the area. The economy of the first district of Leyte will suffer if these business persons will leave the place. It would be better if the

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government will start and increase their rehabilitation activities so that the people will be given the opportunities to work in the construction of these projects. The salaries that these workers will receive will boost the buying power of the people and will fuel the economic activity of the area

The Migration Intention Model for the First District of Leyte

Table 7 is the summary table of the regression model using the stepwise method. The result of the regression analysis shows that four independent variables, age, sex, presence of migrant and municipality class could be considered predictor variables of the resulting model. The p-values for the constant and these four variables are all less than .05 level indicating that these variables are significant predictors of migration intention.

Table 7. Coefficients Table of the Regression Model

Variable	Unstandardized Coefficients		Standardized Coefficient	t-value	p-value
	B	Std Error	Beta		
(Constant)	45.552	6.591		6.554	<.001
Age	-0.502	0.130	-0.189	-3.877	<.001
Sex	-11.658	4.50	-0.126	-2.591	0.001
Presence of Migrant	8.476	3.835	0.107	2.210	0.028
Municipality Class	11.613	5.495	0.103	2.113	0.035

Adj R^2 = 6.7; F = 8.157; p< 0.001

The model in terms of parameter estimates is expressed as:

$$\hat{Y} = 45.552 - 0.502\text{Age} - 11.658\ \text{Sex} + 8.476\ \text{PM} + 11.613\ \text{MC4}$$

This model could be used to predict the intention to migrate with the expected values of the dependent variable ranging from zero to one hundred. Higher values of the dependent variable mean a stronger intention to migrate. The desire to migrate or migration intention could be predicted using the four variables as the predictor variables. To estimate the migration intention using the above regression model, the actual numeric age value of the person will be substituted in the age variable of the model. Sex will be substituted with a value of zero (0) for male and one (1) for female while PM will be substituted with a value of zero (0) if there is no migrant living in the household and one (1) if there is a migrant living in the household in the model. A value of one (1) will be substituted in MC4 if the person is living in the third class municipality and zero (0) if living in other municipality classes.

The negative coefficient of age indicates that as age increases, migration intention decreases. The model shows that as age increases by 1 year, the intention to migrate decreases by 0.502 points. The model also shows that sex has a coefficient of negative 11.658. Since values of variable sex are substituted by 0 and 1 for male and female respectively, this shows that the intention to migrate of males are 11.658 points higher than females. It should be noted that more female wanted to migrate than male however it is the male who showed a stronger desire to leave. Presence of migrant in the household is also a significant predictor of migration intention. The desire to migrate for those with migrant living in the household is 8.476 points higher compared to households without migrant living in the household. The

model also shows that the desire to migrate is higher by 11.613 points for those living in the third class municipalities compared to those living in other municipality classes.

Table 7 also shows the Beta values for the model. Beta values are the resulting coefficients after standardizing the dependent and all the independent variables in the model. This is also called the standardized coefficients. Standardizing the variables is just converting all units of measurement into one unit. This will show which of the independent variables exerts the strongest influence on the dependent variable. The result shows that age has the strongest influence in migration intention followed by sex, presence of migrant in the household and the municipality class.

The p value of the model which is <.001 indicates that the model is adequate. But taking into account the number of variables in the model and the number of cases the model is based on, the adjusted coefficient of determination of the model is just 6.7 percent. This means that only 6.7 % of the variation in migration intention is explained by the four variables indicating that 93.3 % of the variation cannot be explained by the model. It means that there are a lot more factors that affect migration intention which are not covered in this study. These factors however remain unknown until further study is conducted. It should be noted that this covers only the thirteen variables mentioned in the study.

RECOMMENDATIONS

The focus of the government rehabilitation effort was on food distribution and shelter assistance, with minimal effort on job creation and livelihood programs. The local economic activity was crippled by the disaster and it would be better for the national government to concentrate more on creating jobs and livelihood assistance rather than distributing relief goods and giving money for shelter assistance one year after the disaster. The people themselves could rebuild their homes and rehabilitate the entire community if they have their own and personal resources. This is where the government should come in. They should be reminded once again that “our society has created institutions and other social structures to help it to survive and if one of these components of society will not function properly, the entire system is affected” (Kendall, 2002). Economy is one of the most basic components of the society that should immediately be restored after major disasters and the national government is the best agency to handle this. The undesirable effects of migration after disaster could be avoided if there is successful effort of the national government to rehabilitate the local economy.

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REFERENCES

[1] Agrawal, B.L. (1994). *Basic statistics*. USA: Wiley Eastern Limited.

[2] Ajzen, I., & Fishbein, M. (1980). Understanding attitudes *and predicting social behavior*. Englewood Cliffs, NJ: Prentice Hall.

[3] Asis, M.B. (2006). *The Philippine culture of migration*. Retrieved from *http://migrationinformation.org/USFocus/display.*

[4] Chun, W. T. (2011). *Do natural disasters really lead to more migration? Evidence from Indonesia*. Retrieved from *www.econ.yale.edu.*

[5] De Jong, G.F., Root, B.D., Gardner, R.W., Fawcet, J.T., & Abad, R.G. (n.d.). *Migration intentions and behavior: Decision making in a rural Philippine province*. Retrieved from *http://link.springer.com/article/10.1007%.*

[6] Gravell, T.B., Srinivasan, R., Esipova, N., & Ray, J. (2010). *What makes 700 million adults want to migrate*. Retrieved from *http://www.gallup.com/pull//126065/makes.*

[7] Lee, Y.J., & Hiroaki, S. (2014). Impact of the Great East Japan Earthquake on intentions to relocate. *Journal of Integrated Disaster Risk Management.*

[8] Liao, P. S. (2001). *Effects of community attachment and quality of life on migration intention in rural Pennsylvania and Taiwanese communities*. Retrieved from *http://www.highbeam.com/doc/1G1 - 82066947.html.*

[9] National Academy of Sciences. (2012). *Impact of natural disasters on migration*. Retrieved from *www.fmri.org.*

[10] Norwegian Refugee Council. (2014). *Natural disasters displaced more people than war in 2013*. Retrieved from *www.theguardian.com.*

[11] National Statistical Coordination Board. (2011). *Philippine Statistical Yearbook*. Philippines: National Statistical Coordination Board.

[12] National Statistical Coordination Board. (2011). *Regional social and economic trends, Eastern Visayas region.* Tacloban City: National Statistical Coordination Board, Regional Division VIII.

[13] Richmond, B. (2014). *Natural disasters displaced three times more people than war in 2013*. Retrieved from *www.motherboard.vice.com*

[14] Smith, A. O. (2006). Disasters *and forced migration in the 21st century*. Retrieved from *www.UnderstandingKatrina.ssrc.org*