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Presenter

Determinants of Filipinos Obtaining Insurance Policies in the Philippines

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Maslow's Hierarchy of Needs



Maslow's Hierarchy of Needs

- Basic needs include **physiological** and **safety** needs.



Insurance

- a practice or arrangement by which a company or government agency provides a guarantee of compensation for specified loss, damage, illness, or death in return for payment of a premium



Methodology

Identified Indicators

Regression

Regression model

- Indicators to regress the behavior on obtaining may base on data available, or suggested by related studies.
- Logistic regression model was produced.
- Data used was 2015 Family Income and Expenditures Survey from the PSA.

Scope and Limitation of the Study

- The study aims to capture the behavior and characteristics of Filipino families who may be availing any type of insurance.
- The insurance policies may also include those of required social and health insurance (SSS, GSIS and PhilHealth).
- The data may only capture the behavior of families, and not individual insurers in the families.

Significance of the Study



Insurance industry



Overseeing national government agencies on insurance

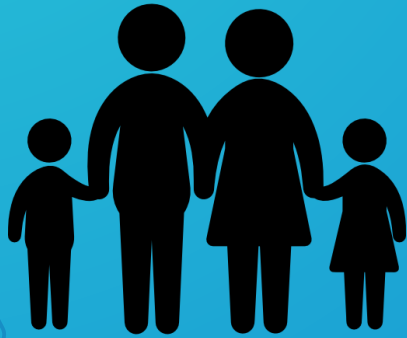


Data users and researchers

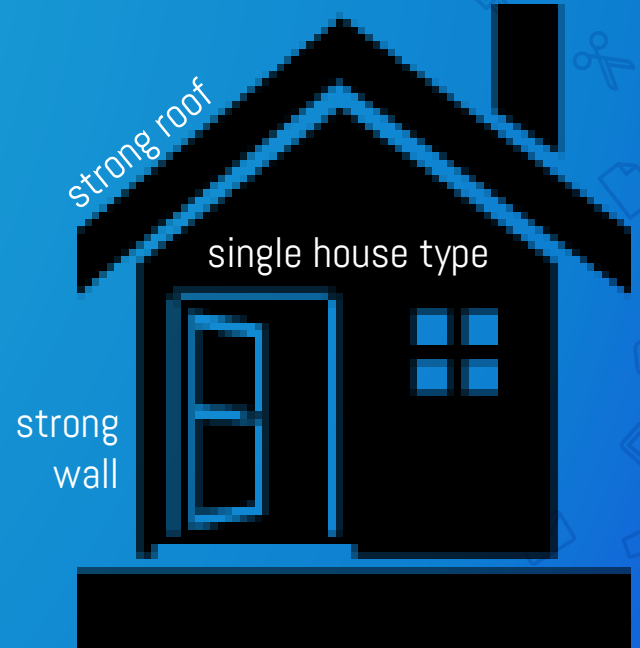
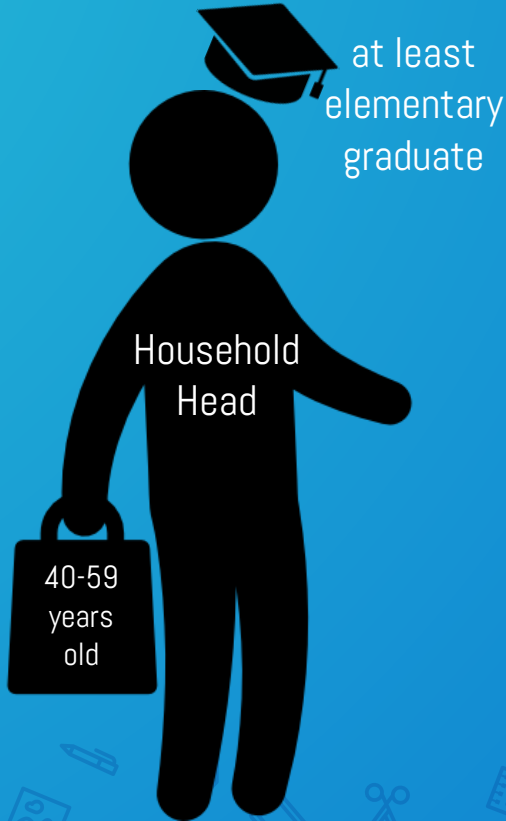


Data source agencies

What is the major profile of most Filipino families based on their demographic and household characteristics?



size of 4.67

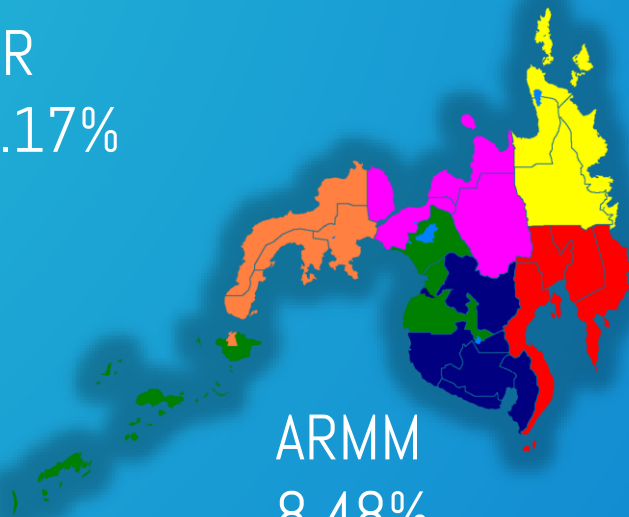


has own use faucet from the community water system

What is the major profile of most Filipinos families who spent on insurance based on their demographic and household characteristics?



NCR
63.17%



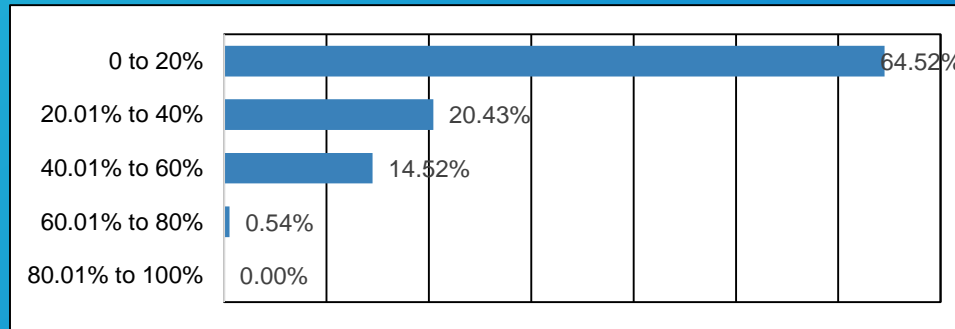
ARMM
8.48%



What are the determinants that a Filipino will obtain an insurance?

Correlation

- Only 28 variables have at least moderate correlation, out of 187 variables taken into consideration.



* 85.56% of which have significant correlation.

What are the determinants that a Filipino will obtain an insurance?

Selection of Variables for Fitting

187
variables

52
variables

Variance Inflation
Factor (VIF)

29
variables

Factor Analysis

What is the best model that determine whether a Filipino with certain profile will obtain insurance?

Logistic Regression Model

- Housing characteristics (presence of electricity and main water supply source, presence of cellphones, computers, oven, motorcycle, refrigerator, television, stereo, CD player and landline, and number of bedrooms)
- Household members' characteristics (total number of family members employed for profit and for pay)
- Household heads' characteristics (occupation, kind of business/industry and highest grade completed)

17
variables

What is the best model that determine whether a Filipino with certain profile will obtain insurance?

- Classification using generated Logistic Regression Model

Logistic model for insurance			
Classified	D	~D	Total
+	4093	1285	5378
-	1990	6018	8008
Total	6083	7303	13386
Classified + if predicted $\Pr(D) \geq .5$ True D defined as insurance != 0			
Sensitivity		$\Pr(+D)$	67.29%
Specificity		$\Pr(-\sim D)$	82.40%
Positive predictive value		$\Pr(D+)$	76.11%
Negative predictive value		$\Pr(\sim D-)$	75.15%
False + rate for true ~D		$\Pr(+\sim D)$	17.60%
False - rate for true D		$\Pr(-D)$	32.71%
False + rate for classified +		$\Pr(\sim D+)$	23.89%
False - rate for classified -		$\Pr(D-)$	24.85%
Correctly classified			75.53%

What is the best model that determine whether a Filipino with certain profile will obtain insurance?

- Comparison with classification of observations using Linear Discriminant Analysis

	Logistic Regression	Linear Discriminant Analysis
Sensitivity	67.29%	69.58%
Specificity	82.40%	83.41%
Correctly Classified	75.53%	77.83%

Recommendations

- Explore on other data sources that includes insurance-related data (e.g. NDHS)
- Dwell further on types of insurance availed by households/families in the Philippines
- Consider merging other variables from other surveys that adhere to FIES (e.g. timeline of conduct, matching of respondents, etc.)

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At the end of the day, the
goals are simple: safety and
security.

Jodi Rell