

# **SOCIAL SCIENCES**



SS - 01

**AGRICULTURAL OUTPUT AND THE STATES OF POVERTY IN THE PHILIPPINES: EVIDENCE FROM SELF-RATED POVERTY DATA**

**Dennis S. Mapa\*, Michael Daniel C. Lucagbo,  
and Heavenly Joy P. Garcia**

School of Statistics, University of the Philippines Diliman, Quezon City  
[csmapa@up.edu.ph](mailto:csmapa@up.edu.ph), [csmapa@yahoo.com](mailto:csmapa@yahoo.com)

The high poverty incidence in the country is a major development concern that needs to be addressed by our policy makers. Official poverty data shows that headcount poverty increased to 26.5% of the total population in 2009 from 26.4% in 2006. The number of poor Filipinos reached 23 million in 2009. Since poverty incidence has dynamic patterns, studies using official poverty data encounter difficulty because of limited number of data points. This study builds econometric models in analyzing the movement of poverty in the country using the quarterly self-rated poverty series of the Social Weather Stations. The first model uses a Markov Switching model to determine the states of poverty. The model assumes two states: *extremely high* and *high* poverty states. An average of 61% of the population considered themselves as poor when the country is in the state of *extremely high poverty*. In times of high poverty, an average of 49.5% of the population considered themselves as poor. The result shows that once the country is in the state of *extremely high poverty*, it stays there for an average of 24 quarters, or six years, before moving out. The paper then used the Logistic Regression model to show what determines the states of poverty. Three variables are considered as important determinants: agricultural output, government spending and underemployment rate. A one-percentage point increase in agricultural output reduces the probability of being in the *extremely high state* of poverty by about 46 percentage points, all things being the same. The study shows that poverty incidence in the country is dynamic and frequent monitoring through self-rated poverty surveys, perhaps at the provincial level, is important in order to assess the effectiveness of the government programs in reducing poverty. The self-rated poverty surveys can complement the official statistics on poverty incidence.

**Keywords:** Markov Switching, Logistic Regression, Self-Rated Poverty

SS - 02

## **DETERMINANTS OF POVERTY IN ELDERLY-HEADED HOUSEHOLDS IN THE PHILIPPINES**

**Dennis S. Mapa\*, Lisa Grace S. Bersales,  
Manuel Leonard F. Albis and John Carlo P. Daquis**

School of Statistics, University of the Philippines Diliman, Quezon City  
[csmapa@up.edu.ph](mailto:csmapa@up.edu.ph), [csmapa@yahoo.com](mailto:csmapa@yahoo.com)

This paper looks at the impact of population dynamics on poverty in elderly-headed households in the Philippines using data from the Family Income and Expenditure Survey (FIES) from 2000 to 2006. The population of the elderly, or those 60 years and above, has increased from 3.2 million in 1990 to 4.6 million in 2000. This group is growing at a rate of 3.6% per annum and estimated to reach 7 million in 2010. Data from the FIES shows that the percentage of the elderly who are poor is increasing since 2003. Moreover, the percentage of elderly-headed household belonging to the poorest 10% of all households has been on the rise since 1997. An econometric model based on the logistic regression shows that the presence of a young dependent (aged 14 years old or below) increases the probability that the elderly-headed household will become poor by about 9 percentage points, controlling for other factors such as income of the household, education, age and gender of the household head, income transfer from abroad and regional-specific characteristics. The results of the econometric model suggest that the high proportion of young dependents create negative effects on the welfare of the elderly-headed household by increasing the probability of that household being poor. From the point of view of policy, addressing the alarming poverty incidence in the country must include measures that will manage the country's burgeoning population and bring down the fertility rate to a level that is conducive to higher income growth.

**Keywords:** elderly, population dynamics, poverty, logistic regression, young dependents



SS - 03

**RISK COMMUNICATION BEHAVIOR TOWARDS  
ENVIRONMENTAL RISKS AMONG UPLAND FARMERS IN  
THE DAMPALIT WATERSHED, LOS BANOS,  
LAGUNA, PHILIPPINES**

**Aileen C. Simondac-Peria<sup>\*1</sup> and Cleofe S. Torres<sup>2</sup>**

<sup>1</sup>College of Forestry and Natural Resources and

<sup>2</sup>College of Development Communication

University of the Philippines Los Baños, Laguna; [asperia@uplb.edu.ph](mailto:asperia@uplb.edu.ph)

This research looked into the perception of environmental risks in relation to risk communication (riskcom), explored the upland farmers' perception of environmental risks, and determined their riskcom behaviors as inputs to decisions and actions to adapt to such risks. Riskcom behavior towards environmental risks were measured by their ability to use communication sources, its truthfulness and credibility, and use of obtained information.

A one-shot interview schedule was administered to randomly selected upland farmers with farms located in the Dampalit watershed. Data were triangulated by focus group discussion, interviews, and secondary documents. Descriptive statistics and Pearson's correlation were used in data analyses.

Results found significant relationships between age and mass media as well as educational attainment in relation to mass media and interpersonal communication sources; annual income, educational attainment, and topography in relation to trust and credibility; and age and educational attainment in relation to utilization of information. The study also revealed that upland farmers rely on a *batingaw* or large bell as an effective early warning device in danger zone areas.

This study concludes that riskcom behavior was influenced by familiarity and dread as environmental risk factors. Familiarity made them to prefer mass media. Dread predisposed them to refer to interpersonal sources.

**Keywords:** risk communication, risk perception, communication behaviour, environmental communication

SS - 04

**FARMERS' ATTITUDES AND KNOWLEDGE LEVEL ON  
ORGANIC FARMING IN REGION 1 AND CORDILLERA  
ADMINISTRATIVE REGION (CAR)**

**Floramante C. Pastor<sup>1</sup>, Noralyn B. Legaspi<sup>1</sup>,  
Maria Angelica O. Salas<sup>1</sup>, Diana A. Pastor<sup>1</sup>, Lea C. Agbigay<sup>1</sup>,  
Marlyn S. Cacatian<sup>1</sup>, Ma. Victoria M. De Padua<sup>2</sup>,  
Clifton R. Llanes<sup>3</sup>, and Amado P. Imper<sup>4</sup>**

<sup>1</sup>Mariano Marcos State University, R&D Directorate and CAS, Batac, Ilocos Norte [mante\\_pastor@yahoo.com](mailto:mante_pastor@yahoo.com); <sup>2</sup>Don Mariano Marcos Memorial State University, Bacnotan, La Union; <sup>3</sup>Benguet State University, La Trinidad, Benguet; <sup>4</sup>Kalinga-Apayao State College, Tabuk, Kalinga

This study mainly focused on the assessment of attitudes and level of knowledge of farmers towards organic farming (OF) and the contributory factors that are assumed to affect these. Two groups of respondents were interviewed: a) NOF or farmers who have not tried OF; and 2) TOF or farmers who have tried OF, either partially or discontinued. T-test was used to analyze the significant difference of NOF and TOF as to attitudes and knowledge. Pearson correlation was used to determine which of the socio-demographic characteristics significantly affect the attitudes and knowledge respondents towards OF.

Results showed that most of the farmers in both regions are aware of OF. However, there are TOF in Region 1 who are unaware. They are practicing organic techniques but unaware that such is organic in nature. Statistics showed that NOF and TOF respondents are significantly different with their attitudes on some attributes of OF. Both groups in two regions are uncertain of the negative and agreeable of the positive attributes of OF but TOF respondents are more optimistic.

Socio-demographics have no affect on the attitudes of both NOF and TOF. Notable demographic factors that have influences on technical knowledge and some aspect of OF are religion, educational attainment, ethnicity, number of years in farming, annual income and farm size.

Notable reasons for non-adoption/discontinuance of OF are economics impact during conversion period like low yield, slow effect, laborious, no sustained government support and low technical knowledge on OF. These can be some possible entry points for promotional activities on organic farming in the country.

**Keywords:** organic, attitudes, knowledge, composting, conversion



SS - 04

**FARMERS' ATTITUDES AND KNOWLEDGE LEVEL ON  
ORGANIC FARMING IN REGION 1 AND CORDILLERA  
ADMINISTRATIVE REGION (CAR)**

**Floramante C. Pastor<sup>1</sup>, Noralyn B. Legaspi<sup>1</sup>,  
Maria Angelica O. Salas<sup>1</sup>, Diana A. Pastor<sup>1</sup>, Lea C. Agbigay<sup>1</sup>,  
Marlyn S. Cacatian<sup>1</sup>, Ma. Victoria M. De Padua<sup>2</sup>,  
Clifton R. Llanes<sup>3</sup>, and Amado P. Imper<sup>4</sup>**

<sup>1</sup>Mariano Marcos State University, R&D Directorate and CAS, Batac, Ilocos Norte [mante\\_pastor@yahoo.com](mailto:mante_pastor@yahoo.com); <sup>2</sup>Don Mariano Marcos Memorial State University, Bacnotan, La Union; <sup>3</sup>Benguet State University, La Trinidad, Benguet; <sup>4</sup>Kalinga-Apayao State College, Tabuk, Kalinga

This study mainly focused on the assessment of attitudes and level of knowledge of farmers towards organic farming (OF) and the contributory factors that are assumed to affect these. Two groups of respondents were interviewed: a) NOF or farmers who have not tried OF; and 2) TOF or farmers who have tried OF, either partially or discontinued. T-test was used to analyze the significant difference of NOF and TOF as to attitudes and knowledge. Pearson correlation was used to determine which of the socio-demographic characteristics significantly affect the attitudes and knowledge respondents towards OF.

Results showed that most of the farmers in both regions are aware of OF. However, there are TOF in Region 1 who are unaware. They are practicing organic techniques but unaware that such is organic in nature. Statistics showed that NOF and TOF respondents are significantly different with their attitudes on some attributes of OF. Both groups in two regions are uncertain of the negative and agreeable of the positive attributes of OF but TOF respondents are more optimistic.

Socio-demographics have no affect on the attitudes of both NOF and TOF. Notable demographic factors that have influences on technical knowledge and some aspect of OF are religion, educational attainment, ethnicity, number of years in farming, annual income and farm size.

Notable reasons for non-adoption/discontinuance of OF are economics impact during conversion period like low yield, slow effect, laborious, no sustained government support and low technical knowledge on OF. These can be some possible entry points for promotional activities on organic farming in the country.

**Keywords:** organic, attitudes, knowledge, composting, conversion

SS - 05

## **ADOPTION OF A TOOL TO MEASURE THE EXTENT OF PRESENCE OF SOCIAL CONSTRUCTIVISM IN HIGH SCHOOL AND COLLEGE PHYSICS CLASSROOMS**

**Sotero O. Malayao Jr., and Dr. Myrna E. Lahoylahoy\***

Department of Science and Mathematics Education  
College of Education, Mindanao State University - Iligan Institute  
of Technology, Tibanga, Iligan City [somaljrb@gmail.com](mailto:somaljrb@gmail.com)

The move towards constructivism in classrooms has been widely initiated although not explicitly named as constructivism. In the early 1990's, DepEd together with DOST initiated programs to foster new approaches in teaching sciences and mathematics. Lately, with the rapid expansion of the capacity of computer, the ICT integration is becoming a widespread phenomenon and many other pedagogical innovations that are inherently or implicitly associated with ICT integration come into clearer focus. All these are manifestations of the immense scope of social constructivist perspectives in the learning process. However, measurement of the presence of the social constructivism is not being given due importance unlike in the neighboring countries. In this study, the Social Constructivist Learning Environment Survey (SCLES) made by Australian educators is being attempted for full adoption in physics classrooms both in high school and college. With the involvement of 1000 college students in MSU-IIT and 1,194 senior students throughout Mindanao, the reliability of SCLES was established. In the original study, the cronbach alpha in 5 different dimensions of SCLES ranged from 0.54.- 0.81 while the present study ranged from 0.55 – 0.72. The present study, however, showed an overall cronbach alpha of 0.82 which was not established in the original study. The study further revealed that at its initial result, the SCLES can be a good measuring tool in investigating the extent of social constructivism in physics classrooms.

**Keywords:** social constructivist, pedagogical innovations, reliability, ICT integration, physics classrooms



SS - 06

**YEAR LEVEL FLUCTUATIONS OF MISCONCEPTIONS  
ON THE DIFFERENT DIMENSIONS OF FORCE  
AMONG PHYSICS MAJORS**

**Sotero O. Malayao Jr., Dr. Myrna E. Lahoylahoy  
Jezyl Mae V. Pinar and Efren B. Vios**

Department of Science and Mathematics Education, College of Education  
Mindanao State University - Iligan Institute of Technology  
Tibanga, Iligan City [somaljrb@gmail.com](mailto:somaljrb@gmail.com)

This study is an attempt to unravel the cognitive structure regarding the concept of force, among physics majors, as it is decomposed into its nine sub-dimensions. The scope of the sample covers both BS and BSEd students represented by year level. The study utilized the Force Concept Inventory (FCI) in which available studies in Philippine set-up involved only, in most cases, its usage as a construct to correlate with other cognitive or affective constructs. The respondents were determined by stratified random sampling and were given the FCI after their classes. By dissecting every dimensions of force, the study yielded very interesting results that are deemed important for curriculum developers; *(i)* that misconceptions does diminish with increasing year level in terms of gross count with the third year having the least average misconception over the fourth year, *(ii)* that there is an interesting though inconsistent fluctuations, in the third year and first year based on average percent of misconceptions, *(iii)* that there is indeed an incoherent structure of knowledge about force based on the inconsistent concentration of misconceptions among the respondents. One big implication of the study is the need to investigate in depth the different dimensions of force by covering bigger demographics in order that a conclusive status can be established

**Keywords:** force; force concept inventory; curriculum developers; misconceptions; incoherent structure.

SS - 07

**EFFECT OF WEB-ENHANCED LEARNING ACTIVITIES ON THE ENGLISH ACHIEVEMENT OF FRESHMEN AT NUEVA VIZCAYA GENERAL COMPREHENSIVE HIGH SCHOOL**

**Katherine Faith M. Bustos<sup>1</sup> and Jane D. Navalta<sup>2</sup>**

<sup>1</sup>Nueva Vizcaya General Comprehensive High School, Bayombong,  
Nueva Vizcaya [katchapet@yahoo.com](mailto:katchapet@yahoo.com)

<sup>2</sup>College of Teacher Education, Nueva Vizcaya State University, Bayombong,  
Nueva Vizcaya [jane\\_d\\_navalta@yahoo.com](mailto:jane_d_navalta@yahoo.com)

The study established the effects of Web-Enhanced Learning Activities (WELA) on the achievement in English of freshmen students of the Nueva Vizcaya General Comprehensive High School (NVGCHS).

The research combined the quantitative approach using quasi-experimental design, with the qualitative approach involving immersion learning among 66 students from two first year classes, 34 under the experimental group and 32 under the control group. Observation, participation in the classroom interaction, and interview were employed. The study covered the third grading period of School Year 2007-2008.

The achievement level of respondents was evaluated based on pretest and posttest with a validated teacher-made test. Data were analyzed using mean, frequency distribution, percentage, and t-test.

While the students gained knowledge in both approaches, those under the WELA obtained higher achievement level in the posttest, significantly outperforming the students in the control group. Moreover, based on data from interview and classroom observation, the following positive behaviors were noted among the students under the WELA: (a) increased interaction among the students, between the students and learning materials, and between the students and the teacher; (b) decreased cases of absenteeism; (c) independent learning; (d) enhanced and structured learning styles; and (e) more defined focus in learning.

Administrators should encourage their teachers to be involved in updating their teaching and learning methods and strategies. Teachers should be more open to new techniques and styles; and join trainings, seminars, and workshops on web-enhanced learning and ICT integration.

**Keywords:** Web-Enhanced Learning Activities (WELA); ICT integration



SS - 08

## THE TEACHER ON THE INTERNET: SELF-EFFICACY BELIEFS, USAGE AND ATTITUDES

**Audrey B. Simon**

Isabela State University – Cabagan Campus  
Garita, Cabagan, Isabela 3328 [audnica@yahoo.com](mailto:audnica@yahoo.com)

This study examined the relationship between and among teachers' self-efficacy beliefs, usage, and attitude towards the Internet with their personal characteristics such as age, number of years in teaching, computer literacy level, and trainings attended.

A descriptive method of research was used in finding answers to the problems of this study while random sampling method was applied to select the 124 teacher participants from nine campuses of the Isabela State University. This study used a four-part questionnaire and a five-point Likert-type scale in gathering and in interpreting the data. The first part was used to collect the teachers' personal characteristics. The second part measured the teachers' Internet self-efficacy. The third part gathered data on the Internet usage of the teachers, and the fourth part measured their attitude towards the Internet. Negatively stated attitude questions were scored in reverse order.

Teacher participants were given one week to complete the questionnaire before the researcher personally retrieved them. The responses were tallied and presented using frequency distribution, weighted mean and percentage distribution. The Pearson Product Moment correlation was used to determine the significant relationships and correlations between and among the variables.

It has been found that: 1) the older the age and the longer a teacher had been in the teaching profession, the less comfortable he or she was in using the Internet; 2) a high computer literacy level and in-service trainings influenced the teachers' frequency of Internet use, high self-efficacy, and positive attitude towards the Internet; 3) teachers frequency of Internet use increased their self-efficacy and attitude, while a highly positive attitude motivated teachers to frequently use the Internet and increased their self-efficacy; and 4) the more problems the teachers encountered the lesser their usage, the lower their self-efficacy, and the more negative their attitudes were.

**Keywords:** internet, internet self-efficacy beliefs, internet usage, internet attitude, computer literacy



**SS - 09**

**TOWARD UNDERSTANDING CORRUPTION:  
CONCEPTS AND PERSPECTIVES OF RURAL COMMUNITY  
LEADERS**

**Nixon V. Agaser\* and Marris V. Reyes**

Department of Psychology, Central Luzon State University,  
Science City of Muñoz, Nueva Ecija [nixonagaser@yahoo.com](mailto:nixonagaser@yahoo.com)

This paper investigates how community leaders think about corruption in Philippine society particularly corruption in government through simple interpretative phenomenological analysis (IPA). Eight rural community leaders (4 Barangay captains and 4 Sanggunian Kabataan chairpersons) participated in this study. Using in-depth interview, questions were focused on the “what” and why corruption persists in Philippine society. Interview texts were classified and interpreted following the basic steps used in IPA. Following bottom up approach, abstractions of meaning were done at two levels; text coding and thematic coding. Analysis reveals that corruption involves four basic interdependent concepts namely; a) stealing government funds; b) abused of power; c) conspiracy of those who holds power, and; d) socio-cultural. In other words, rural community leaders think that corruption is an act of conspiracy of those who holds power to steal government funds. Furthermore, community leaders thought that corruption has socio-cultural roots making it more difficult to solve. Participants also thought that political power gives opportunity for corruption to thrive in government and that corruption will perpetuate if those who are in power are “united” in carrying out corrupt practices. Solution in battling corruption, as indicated by the participants, still rest largely on government leaders. Conceptual and practical implications are discussed.

**Keywords:** community leaders, corruption, interpretative analysis, conspiracy, sociocultural

SS – 10

## **SIGNS OF THE TIMES: THE VIABILITY OF NURSING HOMES AS A COMPLEMENT TO ELDERLY CARE**

**Anah Mae H. Camba, Christine Joy D. Candari, Abigail Ann B. Candelario, Aldin Francis M. Canobas, Isidor F. Cardenas, Florie Anne A. Carlos, and Analin B. Empaynado-Porto\***

University of Santo Tomas, Espana, Manila [abempaynado@mnl.ust.edu.ph](mailto:abempaynado@mnl.ust.edu.ph)

In the Filipino family, certain changes have been evident – one of which is the transition from home care to nursing home care for the elderlies. However, though already practiced by some, the placement of the elderly to nursing homes is still not socially acceptable to many Filipinos.

This study aimed to identify Filipinos current outlook in placing elderlies in nursing homes, and to determine the trends and factors affecting the respondents' answers after using the Changing WInD Tool.

Twenty respondents were chosen through purposive sampling. The following criteria were set: (1) Is in the working age (2) middle to upper class citizens (3) have their own nuclear family and (4) has a living elderly relative. An intervention tool named "Changing WInD (Willingness by Information Dissemination) Tool" was used in interviewing the respondents. The interview was done before "WInD" and after "WInD."

The findings showed that 14/20 respondents were reluctant or has negative reaction in admitting an elderly relative and 16/20 answered no to having themselves placed in a nursing home. However, after the administration of the "Changing WInD Tool", there was a marked change in the answers of the 20 respondents. All these changes were due to the presentation of the tool which proves that information dissemination was enough to elicit a change from within the respondents. Further, three factors that changed the respondents' decision were identified and these were awareness of the following: Aging Filipino population, Availability Nursing Homes in the Philippines and Quality nursing Homes.

Our Filipino culture has long standing roots as to how we should take care of our elderly. Nursing homes are not a means to abandon our elderly, but a place of safety and security; they are not alternative to geriatric care, but a complement to ensuring proper care is rendered to the elderly.

**Keywords:** elderly, home care, nursing care, care for elderly, aging population



**SS – 11**

## **DEVELOPMENT OF AN INTERACTIVE INSTRUCTION SYSTEM FOR SCIENCE AND HEALTH VI**

**Diamer B. Capilitan and Monera Salic-Hairulla\***

MSU-Iligan Institute of Technology, College of Education  
Department of Science and Mathematics Education  
Bonifacio Avenue, Tibanga, Iligan City [diamercapilitan@hotmail.com](mailto:diamercapilitan@hotmail.com)

The objective of this study is to develop an interactive instructional system which is a computer-assisted instruction, as an instructional tool in teaching “Climate of a Place”. This is in response to the low performance of the grade six (VI) pupils in the 2007-2008 National Achievement Test in Science.

In carrying this objective, the researcher utilized the quasi-experimental design utilizing a pre-test and posttest design. The grade six (VI) pupils of Northeast-II Central School in Dalipuga, Iligan City were chosen as the respondents of the study and various reactions and effects towards the use of the instruction system were consolidated. The Developed Interactive Instruction System was evaluated by experts and inservice teachers using a set of rubrics. Revisions on the computer-assisted instructional tool were done based on the experts’ and inservice teachers’ suggestions.

The result of this study showed that the developed interactive instruction system could be used as a good instructional tool to improve the pupils’ performance in teaching “Climate of a Place”. Results in the try-out indicate that the performance of the pupils were significantly higher after using the instruction system. Pupils’ comments on the instruction system were all positive and indicate the same reaction, which is they all liked the methods used and they learned better from the lesson.

**Keywords:** Development, interactive, computer-assisted instruction, instruction system, evaluation, performance



