

Economic, Demographic, and Other Factors Affecting School Participation among Children in Urban and Rural Households: The Case of Pasay and Eastern Samar

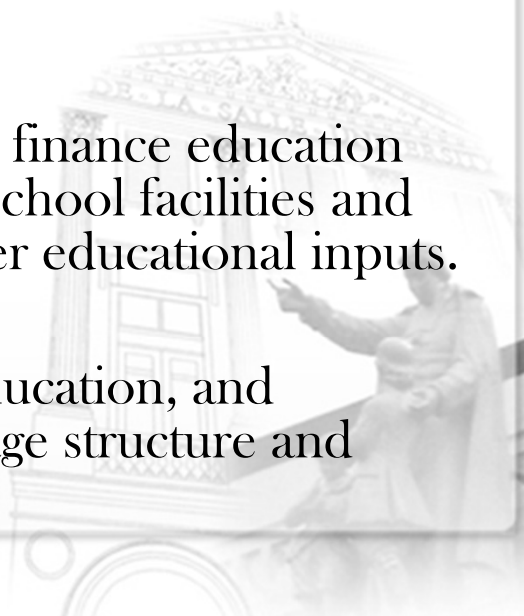
Tereso S. Tullao, Jr., Ph.D. and John Paolo R. Rivera
Economics Department
De La Salle University
Manila, Philippines
04 November 2010



De La Salle University

Introduction

- **Philippines**
 - Millennium Development Goals: Universal access to primary education by 2015
 - Department of Education (DepEd):
 - SY 2008 to 2009: the net enrollment rate is 85 percent.
 - National Statistical Coordination Board (NSCB)
 - the number of Filipino children that do not have access to primary education has increased to 16.8 percent in 2007 from 15.6 percent in 2006
- **Addressing MDG Target on Education**
 - *Supply Factors*
 - ability of the government to provide resources to finance education including the hiring of teachers, construction of school facilities and the provision of books, school supplies, and other educational inputs.
 - *Demand Factors*
 - variables including household income, cost of education, and demographic characteristics of the households (age structure and family characteristics)



Introduction

- Objectives
 - To measure the elementary school participation rate among urban and rural households
 - To identify demographic factors, economic factors, and household characteristics that may influence elementary school participation rate among urban and rural households
 - To test the significance of factors determining elementary school participation rate
 - To draw policy implication that LGUs and NGOs can undertake or intervene in addressing non-participation which can contribute in meeting the MDG.
- Significance
 - answer the MDG on education
 - undertake empirically-based interventions in enhancing school participation rate at the household level.
 - address the supply factors affecting school participation rate since the LGUs and NGOs can identify the relevant demand factors that affect the communities that they served.



Demand for Education

- **Determinants**
 - Trivial Factors (distance of school to homes)
 - Financial Capability (income and wealth)
 - Family Characteristics
- **Human Capital Theory**
- **Models of Education Demand and School Participation**
 - Household Income (domestic and remittances)
 - Employment Status of Household Head
 - Family Size
 - Educational Attainment of Household Head
 - Age of Household Head
 - Availability of Public Services
 - Socioeconomic Development / Urbanization



Methodology

- Data Requirements
 - Community Based Monitoring System (CBMS) Household Dataset for Pasay (2008) and Eastern Samar (2007)

- Model Specification

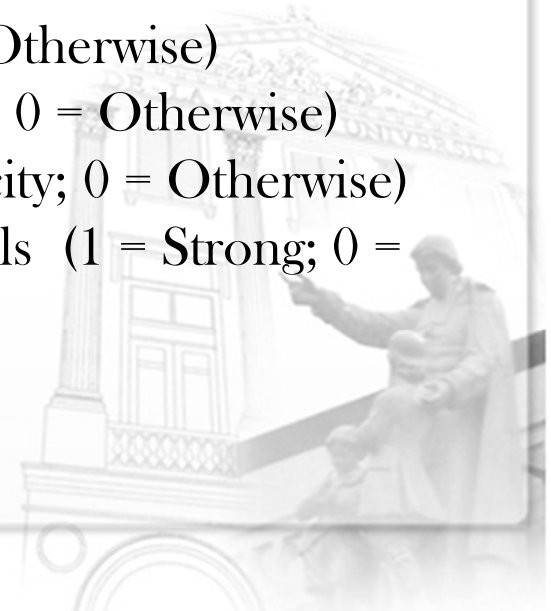
$$SPR_i = f(HI_i, NOFW_i, ESHH_i, HSIZE_i, NELEM612_i, EDUHH_i, AGEHH_i, SHGR_i, DSW_NEAR_i, ELECT_i, TYPMAT_i, URBAN_i)$$

- Estimation Procedure
 - Ordinary Least Squares Regression (OLS)



Methodology

- *SPR* = School Participation Rate
- *HI* = Household Income
- *NOFW* = Number of OFWs in the Household
- *ESHH* = Employment Status of Household Head (Permanent, Temporary, or Seasonal)
- *HSIZE* = Household Size
- *NELEM612* = Household Members Age 6 to 12
- *EDUHH* = Educational Attainment of Household Head
- *AGEHH* = Age of Household Head
- *SHGR* = Experienced State of Hunger (1 = Yes; 0 = Otherwise)
- *DSW_NEAR* = Distance of Water Source (1 = Near; 0 = Otherwise)
- *ELECT* = Availability of Electricity (1 = With Electricity; 0 = Otherwise)
- *TYPMAT* = Strength of House Construction Materials (1 = Strong; 0 = Otherwise for Walls and Roofs)
- *URBAN* = Urbanity (1 = Urban; 0 = Rural)



Results for Pasay City

Variables ($Y_i = SPR_i$)	Estimated Coefficient	Robust Standard Error	$P > t $	Number of Observations	1,095
HI_i	0.0000	0.0000	0.000	F (15, 39,547)	.
$NOFW_i$	0.0156	0.0370	0.673	Prob > F	.
$ES\ PERMANENT_i$	0.0169	0.0189	0.371	R-squared	0.4352
$ES\ SEASONAL_i$	-0.0243	0.0404	0.548	Root MSE	0.2875
$ES\ TEMPORARY_i$	-0.1442	0.0844	0.088		
$H SIZE_i$	-0.0187	0.0095	0.050		
$NELEM612_i$	0.3047	0.0176	0.000		
$EDUHH_i$	-0.0008	0.0016	0.607		
$AGEHH_i$	0.0000	0.0009	0.963		
$SHGR_i$	-0.4789	0.0330	0.000		
$DSW\ NEAR_i$	-0.0052	0.0179	0.771		
$ELECT_i$	0.1655	0.0677	0.015		
$WALLSTRONG_i$	0.0267	0.0248	0.281		
$ROOFSTRONG_i$	-0.0106	0.0196	0.589		
$URBAN_i$	dropped				
Constant	0.3059	0.0970	0.002		



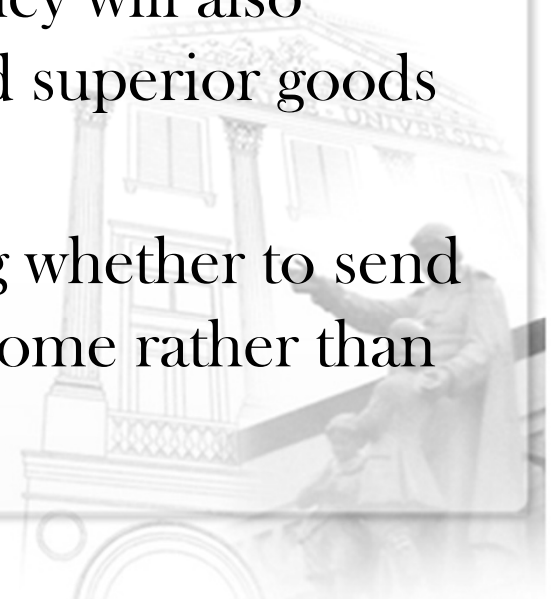
Results for Eastern Samar

Variables ($Y_i = SPR_i$)	Estimated Coefficient	Robust Standard Error	$P > t $	Number of Observations	39,563
HI_i	0.0000	0.0000	0.000	F (15, 39,547)	1,508.87
$NOFW_i$	-0.0085	0.0067	0.203	Prob > F	0.0000
$ES_PERMANENT_i$	0.0315	0.0053	0.000	R-squared	0.4281
$ES_SEASONAL_i$	0.0331	0.0055	0.000	Root MSE	0.2697
$ES_TEMPORARY_i$	0.0186	0.0061	0.002		
$H SIZE_i$	-0.0444	0.0007	0.000		
$NELEM612_i$	0.2699	0.0019	0.000		
$EDUHH_i$	0.0020	0.0002	0.000		
$AGEHH_i$	0.0037	0.0001	0.000		
$SHGR_i$	-0.0130	0.0038	0.001		
DSW_NEAR_i	0.0042	0.0033	0.206		
$ELECT_i$	0.0352	0.0031	0.000		
$WALLSTRONG_i$	0.0072	0.0041	0.083		
$ROOFSTRONG_i$	0.0110	0.0040	0.006		
$URBAN_i$	-0.0034	0.0031	0.279		
Constant	0.3910	0.0109	0.000		



Conclusion and Policy Recommendation

- **General Objective**
 - To explore the extent to which demographic factors, economic factors, and other household characteristics influence elementary school participation rate among urban and rural households
- **Empirical Evidences**
 - As the income of households increases, they will also increase their expenditures on normal and superior goods and services including education
 - Households base their decisions including whether to send their children to school on permanent income rather than transitory income



Conclusion and Policy Recommendation

- Empirical Evidences

- As the family size increases, school participation declines.
 - Need to manage population growth - may adversely affect the human capital formation at the household
- Positive impact of the employment status and educational attainment of the household head to school participation
 - School participation can be assured if the household head is employed and educated parents beget more educated children



Conclusion and Policy Recommendation

- **Policy Recommendation**
 - Intervention can be done using household income as an avenue
 - Intervention can be done through the enhancement and provision of public services such as:
 - food distribution and medical support
 - housing services and employment generation
 - Priority must be placed on addressing population growth
 - **Socioeconomic Development and Urbanization**
 - improves access and proximity to schools
 - improves transportation and communication infrastructures
 - increases the school and labor market opportunities available
 - must be accompanied by the provision of job opportunities that will provide households with permanent employment and permanent income so that substitutability between education and other goods will be mitigated



**Economic, Demographic, and Other Factors
Affecting School Participation among
Children in Urban and Rural Households:
The Case of Pasay and Eastern Samar**

End



De La Salle University

