POLICY BRIEF
POVERTY AND ECONOMIC POLICY RESEARCH NETWORK - COMMUNITY-BASED MONITORING SYSTEM
Volume II, Number 7
ISSN # 2094-3342

THE GEOGRAPHIC PROFILING OF POVERTY AND ACCESSIBILITY

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INTRODUCTION

This study attempts to relate the poverty problem in the Philippines using spatial accessibility measures. Spatial accessibility is the ease with which one could avail of the social services and economic opportunities laid in geographic space.

Using the provinces of Eastern Samar and Siquijor Island as case studies, a Social Composite Index (SCI) value for the household was derived from the 13+1 Community-Based Monitoring System (CBMS) core indicators of poverty, which represents the unmet needs of the household and which was then aggregated at the barangay level. The spatial accessibility values were estimated by measuring how each barangay, specifically households, would avail themselves of the social services (such as schools and hospitals) and economic opportunities in the town center or major economic centers. The ease or difficulty of availing these social services and economic opportunities was estimated using the time variable in order to relate accessibility to the poverty indicators in the barangay. Multiple regression models were developed to relate poverty indicators to spatial accessibility measures and then tested to determine their impact on poverty. The tests showed that expected improvements in accessibility of more elementary schools in Siquijor would redound to a higher SCI or lower poverty levels. The planned merger of hospitals in Eastern Samar, revealed a lower SCI or an increase in poverty levels. Clearly, therefore, the link between poverty and accessibility could be established using CBMS data, and more importantly, could be used to predict the impact of planned social infrastructures on poverty levels.

POLICY RECOMMENDATIONS

The following policy recommendations were drawn up in the context of local governance. These are premised on the fact that local governments and constituencies are vital stakeholders of CBMS considering that public

funds are put up as equity in CBMS implementation. The proposed policies are mainly directed at guiding periodic planning activities of local governments such as the forecasting and programming of social infrastructure and services at the sectoral level. These are also applicable to the development of specific programs and projects by the private sector (e.g., aid agencies, non-government organizations), especially in relation to poverty alleviation and their appropriate site location.

Overall Policy Framework

Optimizing CBMS data would entail harnessing their highest spatial utility to address accessibility conditions that impact on poverty alleviation.

Data and Mapping Situation

CBMS provides a wealth of barangay and household-level data that can be used for poverty analysis and alleviation purposes. There is however a need to reinforce the spatial dimension of the data so that what details are normally lost in the context of tabular presentations can be better understood in a graphical way. These data therefore are rendered more user-friendly to legislators, executives and civil society representatives who are normally on top of project/program implementation at the local level.

A deliberate move to utilize and reinforce the geographical aspect of CBMS findings would entail setting up policy instruments such as a mutually supporting local ordinance and executive order that would support the periodic generation and updating of CBMS data at the local level for mapping and geo-referencing using Global Positioning System (GPS) and Geographic Information System (GIS). The move should explore a cost-effective way of implementing this initiative, such as the capacity development of local planners on practical data management using findings from CBMS and other sources, and the outsourcing of the more capital-intensive GIS requirements.

Spatial analysis using CBMS

Optimal geo-referencing requires systematic analysis of reliable maps. Analytical approaches that could further establish linkages among economic and spatial variables can be applied with a purposive partnership between the local government and qualified institutional experts such as

universities and private sector firms. This would normally require a memorandum of agreement or contract that stipulates partnership conditions (e.g., cost of services and deliverables) for review and approval by the local legislative council on a periodic basis.

Sector-Level Applications

1. Economic

   The most significant indicator of spatial accessibility that is highly correlated to other poverty indicators was access to the major economic centers in terms of travel time. The spatial assignment of markets is therefore a strategic poverty alleviation measure. The planning of market and road infrastructure in space would benefit from a spatially-reinforced application of CBMS and other findings. The local planning and development as well as the local engineering office could be directed by the mayor and the local legislative council to adequately site public markets and road developments in the context of poverty alleviation objectives using reliable spatial data and analysis. This policy initiative is best reflected in local legislations such as ordinances and resolutions, and implemented through supporting executive orders from the office of the mayor.

2. Health

   Accessibility to health facilities was shown by the study to be a significant factor in poverty profiling. The application of CBMS-generated maps and spatial analysis on the health sector would greatly benefit disadvantaged users, especially residents living far from urban centers. This is possible if planning the location of urban and rural health centers as well as the assignment of health personnel are guided by geographically-reinforced CBMS data that show poverty and health-related densities.

3. Education

   Study tests showed that planned improvements in accessibility to elementary as well as high schools would lower poverty levels. This serves to establish the social benefit of institutionalizing the use of CBMS data, maps and spatial analysis in determining the location of schools with the intent of addressing poverty conditions.

Poverty, Gender and Accessibility

The study results showed that regardless of access to schools more males are not in school than females. On the other hand, regardless of access to places of employment (i.e. town centers and major municipal markets), more females of working age are unemployed than males. Children of school age, regardless of gender, should be given equal opportunity to study. Under an agricultural economy, boys of working age tend to be favored than girls. The government, local or national, should provide equal employment or livelihood opportunities to the youth of working age regardless of gender and with due consideration to accessibility.

REFERENCES

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This study was culled from the research conducted by Fillone, Goce-Dakila, and Roxas (2009) entitled The Geographic Profiling of Poverty and Accessibility using data from the Community-Based Monitoring System (CBMS). The CBMS is a project funded by Canada's IDRC.