

Report on Ph.D. Thesis Defense

Ph.D. Candidate	Mawuli Gaddah
Main referee	Alistair Munro
Referees	大山 達雄 Wade D. Pfau Roberto Leon Gonzalez 結城 貴子 (JICA)
Dissertation Title	Microeconomic Analysis of Public Expenditures in Ghana

Summary of the Thesis

This thesis contains six chapters. Matching international trends in the postgraduate training of Economists, the heart of the thesis is three linked chapters written in the style and structure of academic journal articles. The three other chapters contain an introduction, a literature review and a summary of the conclusions and policy implications that provide some further context for the research.

This theme of the thesis is the distributive effect of social expenditures in Ghana. Methodologically it uses a combination of benefit incidence and behavioural approaches based on discrete choice models. Data is drawn from the nationally representative, latest round of the Ghana Living Standards Survey.

The main motives for the research are:

1. While there is no doubt that economic growth is essential for poverty reduction, much recent research has shown that economic growth is only a necessary but not a sufficient condition for poverty reduction. Moreover, economic growth may not make the required impact on poverty when initial inequality is high. Thus there is a need to understand how public expenditure affects the distribution of well-being in developing economies and there is an accompanying need to consider how changes in policy might alter the distribution of benefits.
2. The benefit incidence of public expenditures on health and education have been estimated for Ghana using previous and older national living standards surveys. But there is as yet no systematic and rigorous use of the latest survey, using modern methods of incidence analysis.

In Chapter Three a nested logit model is used to model educational choice by

individual households. In the model households are assumed to pick from one of the three options typically available: no schooling; public schooling and private schooling. Separate models are estimated for the different levels of schooling: pre-school; primary; junior high school; senior high school and tertiary. The models are used to estimate the benefits of public education to different income groups and to simulate the impacts of some policy changes in the way education is delivered. The distributive results are compared to figures obtained using more traditional methods of benefit incidence estimation. This paper is the first to combine modern methods of benefit estimation with the latest version of the Ghana Living Standards Survey.

Chapter Four extends the work on education and considers the choices made by a subset of households - those living in rural areas - for which there is information on the availability and quality of local education.

Chapter Five switches focus to the benefit incidence of public health expenditure in Ghana using the same overall dataset and a discrete choice model.

For education, pre-schooling and primary schooling are the most progressive (i.e. the expenditure is most pro-poor), followed by secondary, and then tertiary. The results show that public education expenditures in rural Ghana are fairly progressive: benefits are less concentrated than household expenditures. Primary schooling is the most progressive, followed by pre-school and junior secondary. Analysis of regional incidence shows that the rate of participating in public schools was lowest in the Savannah areas compared with Coastal and Forest areas. The high participation rates recorded in some regions reflects the presence of many non-eligible users due mainly to late entry and overage attendance. For health care, postnatal and pre-natal services are the most progressive, followed by clinic consultations, which is more progressive than hospital consultations. Children's health care expenditure is more progressive than adults.

The implication of these findings is that, though reallocation of public expenditures in favour of basic education and basic health care is welfare enhancing, subsidies to tertiary institutions that target poorer households will go a long way in improving the distribution of welfare. For Ghana's health sector, the results suggest that a progressive strategy for cost-recovery would be to impose higher charges at hospitals, which are used more by the wealthy, while lowering the cost of care at clinics or basic health care centres, which are used more by the poor.

Presentation and Results: ¹

1. Mr. Gaddah presented an overview of his thesis for about 45 minutes. He concentrated on the methodology and educational expenditure results (Chapter Three), but briefly discussed the context of the thesis and the results of other chapters.
2. The presentation was followed by a series of comments and questions by the examiners and other members of the audience.
3. The Examination Committee met immediately after the presentation, chaired by Professor Oyama. After discussion and scoring the Committee decided that both the contents of the thesis and its public defence were satisfactory for conferring the doctoral degree. It was further agreed that some minor changes in the thesis would improve it. It was, therefore decided that

¹ For personal reasons, Associate Professor Wade Pfau was not able to attend the presentation and committee meeting. He met privately with Mr. Gaddah at a later date to go over the thesis and provide his feedback. He agreed with the rest of the committee that the thesis was satisfactory.

1. Mr. Gaddah would meet with Prof. Oyama to receive further guidance on his recommendations;
2. Revisions recommended by the individual examiners would be made to the dissertation before the final submission.
3. Professor Alistair Munro would be responsible for scrutinising and approving the revisions.

Comments of Committee Members

Dr. Yuki recommended that

1. Table 3.1 be extended to cover the period 2003 - 2008, with additional information on actual expenditures and unit costs added in Table 3.2 (PP: 116 -117).
2. Mr Gaddah should conduct a comparative analysis and marginal incidence by comparing the current study with work from previous waves of the Ghana Living Standards Survey.
3. The issue of reallocation of public primary expenditures and universal secondary education should be discussed.
4. Corrections to spelling and references should be made.

Professor Pfau recommended that,

1. Corrections to spelling and references should be made.
2. There should be some discussion of the long term benefits of human capital investment.
3. There should be some further analysis of outliers in the data set.
4. Poorer households tend to have more children than richer households; which holds for different scaling measures. Also true for absolute expenditures. The mean household size is higher for the poorest quintile than the richest quintile.
5. The issue of “marginal utility of wage” was controlled for by the education of parents which tends to correlate positively with wealth.
6. The issue of cost has been highlighted in this policy simulation.

Professor Oyama recommended that,

1. There should be some changes to the organization and presentation of the study.
2. In particular the objectives of the thesis and individual chapters should be clearly stated.
3. Some of the mathematical derivation should be moved from appendices to main chapters.
4. The research framework should be more clearly outlined in Chapter One.
5. The conclusions of the individual chapters should be more clearly summarized in Chapter Six.

Mr. Gaddah has made the changes recommended by the examination committee members and has given written report of the changes to me. He has sent a copy of the revisions to Chapter One to Professor Oyama. I have gone through the thesis, examining the alterations made and I am now satisfied that he has implemented the recommendations of the examination committee.

Alistair Munro
Professor of Economics,
Dissertation Chair.