

Impact of the Conditional Cash Transfer, the Knowledge and the Traits of Mothers on the Food Consumption in the Households in the Philippines: Evidence from the Randomized Control Trials

(和訳：フィリピン共和国における条件付き現金給付政策および母親の知識と特性が

家庭の食料消費にもたらす影響：ランダム対照化社会試行の結果を基に)

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1. Background & Literature review

Malnutrition affects the base of the human capital including physical, mental and cognitive development negatively. Many children in developing countries have suffered from malnutrition because of insufficient access to foods and shortage of the knowledge about financial allocation and nutrition. In order to solve the issues surrounding the disadvantaged children, the Conditional Cash Transfer (CCT) programs have been launched as one of the social protection policies globally since the 1990s. CCTs offer grants to mothers in poor families on the condition that they satisfy requirements related to childhood development. Some prior literatures show that the CCT recipients are shown to increase the share of food expenditure among the total expenditure (i.e. the Engel coefficient) relative to non-recipients in Latin American countries. (e.g. Attanasio et al., 2012) The literatures attribute these surprising results to the fact mothers are the recipients of the grant, and that women possess different preferences and consumption patterns regarding foods relative to men (e.g. Angelucci & Attanasio, 2013). On the other hand, other literatures suggest that other aspects such as the conditionality influence this result (e.g. Braido et al., 2012).

2. CCT in the Philippines

Owing to the effective results of the CCTs, the Pantawid Pamilyang Pilipino Program (4Ps) started in 2008 in the Philippines and has expanded as a flagship policy nationwide (Chaudhury et al., 2013). One of the special conditionality is for parents (mainly mothers) to participate in the Family Development Sessions (FDS). In the FDS, mothers learn about the growth of the childhood and child-rearing with the community

members. Thus, the 4Ps aims to reduce the poverty and to empower the parental roles in the family development via the transfer of the cash and the knowledge.

3. Objectives

The existing literature provides no evidence on the impact of 4Ps on the Engel coefficient, such as the ones done for other Latin-American countries. In addition, the mechanism on how the CCTs can change the resource allocation among the beneficiaries is still ambiguous. There are still such factors as decision making power based on gender, knowledge possession or personal traits of mothers, which have not been examined but can be expected to affect the resource allocation. Thus, in this thesis, I empirically explicate the effects of 1) the CCT, 2) the provision of the nutrition knowledge and 3) the personal traits of mothers on the Engel coefficient and the daily food behavior by using the household-level data and conducting a randomized control trial (RCT) in the Philippines.

4. Analysis 1: Impact of the CCT on the Engel coefficient

Firstly, I investigate the impact of the 4Ps on the Engel coefficient, the education and medical consumption ratios using the existing RCT data obtained from the World Bank, and estimate the Engel coefficient by the Quadratic Almost Ideal Demand System based on the collective model approach. I employ the OLS, Propensity Score Matching (PSM) & Inverse Propensity Weighted Regression Adjustment (IPWRA) methods for the estimation. Although I expected a positive impact of the treatment on the Engel

coefficient as the Latin American cases, the result was the opposite, i.e., receiving 4Ps grants reduces the food share significantly. In addition, I could not observe systematic effects of the CCT on education and health ratio in the beneficiaries. This result shows that the gender of the grantee may not be decisive for changing allocation in the households in the Philippines.

5. Analysis 2: Impact of the Knowledge and Traits on the Food Consumption

In response to the above findings, I hypothesize that the knowledge and the traits of mothers including non-cognitive personality will affect the bargaining pattern in the CCT beneficiaries. In order to explicate the hypothesis, I set the research framework following FAO guideline, and I investigate the effects of knowledge provision on the changes in the amount of knowledge, the food consumption behavior and the food expenditure and the effect of the decision power and the psychological traits of mothers on the food expenditure.

I conducted a small field experiment supported by the Department of Social and Welfare Development, which is a government office in charge of the 4Ps. In the experiment, two types of fliers about nutrition information were distributed to the target mothers in the CCT beneficiaries. I chose Benguet province in the Philippines as the field site for this survey. The targets were assigned into 2 treatment groups and 1 control group to clarify the differential effects of information provided. In Treatment group A, I provided each mother a flier about nutritious knowledge (e.g. Food pyramid). In Treatment group B, I provided each mother a flier about the connection between food intake and school performance in addition to nutrition knowledge as same as Group A. Two months after the treatment, I conducted a follow-up survey during the FDS. The questionnaire is composed of the annual and monthly consumption, the mini-exam of food knowledge and Big 5 test, and, I have 163 respondents in total. I employ the same theoretical framework and empirical strategy as the Analysis 1 including OLS, PSM & IPWRA methods.

The empirical results show that the information provision indeed affects improving the knowledge among mothers and changing the food habits. In

addition, I find some evidence that the mothers who have a special treat in non-cognitive skills tend to increase the Engel coefficient, and the mothers who receive various information increase monthly food expenditure. Moreover, there are expected results that increasing knowledge will be a powerful method to change the bargaining pattern within household.

6. Policy implications

From my findings through these analyses, I suggest the health and nutrition education to the mothers is essential for changing the allocation and sustaining the child growth. Above all, the nutrition education among mothers as the style of the distribution of the fliers will be positive effects on the child physical growth in spite of low cost intervention. Enhancing capabilities as mothers through receiving and understanding the correct nutrition knowledge is the first step for improving the life outcomes of the children.

7. Future tasks

This original survey was conducted at one region just two months after the implementation. In the future, it would also be of interest to further investigate longer term effects of the treatment for understanding the mechanism of changing food consumption by collecting the data of physiological parameters of children and incorporating the weather effect in the approximate past periods.

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