## 資源環境経済学特別演習 II 議事録 (10 月)

## 2011 年度第<u>5</u>回

報告題名: Education, Health and Basic Needs: Increasing Capability(ies) to Escape Poverty

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日時 10月 6日 午後3時~

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## 報告要旨

Sen (1999) distinguished poverty as income poverty and capability poverty. Income poverty is represented by the lowness of income, while the other concept of poverty is capability poverty. He called poverty as "capability deprivation" and noted that the poor would have a better capability of overcoming the penury. This paper examines the causality of capability variables to income/consumption poverty and provides different understanding of poverty in Indonesia from the view point of capability approach. The variables regarding education, health and food availability (which linked to capability poverty) are analyzed based on the case study of districts in Central Java and Yogyakarta provinces in Indonesia.

The analysis uses panel data. The panel data analysis indicated that some capability variables significantly correlated with consumption poverty. Those capability variables were education (represented by high school completion rate) and health (safe water access and sanitation facility). Conventional understanding has commonly supports the positive relation between income poverty and capability improvement, in this study, the reverse relation was found in the estimated results.

In one year time lag, improvement in safe water access, the availability of sanitation facility and higher high school completion rate significantly decrease consumption poverty. Birth control participation, BCG vaccination and food expenditure of poor *need longer time* to have effect on consumption poverty especially since BCG vaccination is provided in government subsidy. Elementary dropout rate in *short time* could relax parents" expense but significant impact was not observed.

In conclusion, panel data analysis supports Sen"s idea; some variables of capability"s improvements decrease income poverty but longer time lag and larger size number of data are needed for future research. Capability approach provides us a different view in understanding poverty in Indonesia; we need to consider the combination of various deficiencies not only income. Coupling between income deprivation and "the way" of converting income into functioning become more important. However it is not clear whether or not Indonesia government properly considered the coupling between income deprivation and adversity. Coupling between income deprivation (income poor) and adversity (e.g., deficiency of food, nutrition or health) and converting income into functioning to reduce adversity are not clear. Much more in depth empirical studies on how the coupling and conversion were done in the implementation of poverty alleviation policies of Indonesia is needed.

*Key words: capability poverty, income poverty, poverty insecurity, human capital investment, poverty alleviation.* 

## 質疑・応答

Takashino: What the coupling means?

Deffi: Coupling is refer to how government grouping the lack of income and basic needs. For example the deprivation of health access and earning ability (low income) that brought the policy of health insurance for the poor.

Takashino: What would you like to show by slide 17?

Deffi: Slide 17 could give example on coupling problem, where the official poverty number is only 13%, but from the view point of capability poverty, the coupling result shows that poverty is far higher than official number both in coupling for food deficiency and health.

Yonekura: One more, what is the implication of the case of Yogyakarta for your discussion?

Deffi: In my understanding, the Yogyakarta people have more concern on capability approach. Even though the poverty line is lower than other provinces, but the Yogyakarta province has the high human development. By concentrate more on capability improvement, higher income is not really important, that they never feel that they are poor, because they more concentrate about improving education and health, which in the long term; contribute for the improvement for their life. At this time, the capability approach still has no measurement not like income poverty, it is not easy to calculate, but Sen's capability approach is very important. Now, human development index is only one example of capability approach, but capability approach needs more measurement rather than only one index.

Yonekura: As suggestion, more in-depth study is needed regarding government poverty alleviation program especially in Yogyakarta province, especially after 1965 under Soeharto presidency put efforts to develop Gunung Kidul area.

Ishii: Why you chose the safe water access and other as the capability variable? Could you select other variable?

Deffi: Other variable, related to the health, I have the data about the children delivery whether with the help of health worker or not (in the hospital or not in hospital). But, I think these variables are not fit compared with the basic variable. Also data regarding vaccination index for polio and DPT, if I put these variables it will bring to multi-collinearity problem. I chose BCG vaccination; it is free and the first vaccination given to babies, so that people with access to health facility should be able to receive this vaccination.

Takashino: BCG vaccination is very important since UNDP also used it in Human Development Index.

Deffi: Yes it is and also life expectancy.

Yonekura: There are more variables data available. Why did you choose only seven variables? Deffi: Because for example I chose the elementary drop out and high school completion rate variables. I have also middle school completion data but I did not use it. Other two variables I think give more significant difference in the estimation.