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Parental human capital investment and old-age transfers from children: Is it a loan contract or reciprocity for Indonesian families?☆

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Abstract

This paper proposes two alternative models of intergenerational transfers linking parental investment in human capital of children to old-age support. The first model formulates these transfers as a pure loan contract and the second model as self-enforcing reciprocity. Both models predict neutrality of intergenerational redistribution of resources within the family, also known as the "difference in income transfer derivatives property". Two models, however, provide different reasons for the failure of this property, and yield different policy implications for parental human capital investment and provision of old-age support. Specification tests on the Indonesian Family Life Survey data reject the pure loan model in favor of the reciprocity model. The estimated difference in

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income transfer derivatives for this data is found to be significantly higher than the difference estimated by Altonji, Hayashi and Kotlikoff Altonji et al. (1992) [Altonji, J.G., Hayashi, F. and Kotlikoff, L.J. (1992). Is the Extended Family Altruistically Linked? Direct Tests Using Micro Data. The American Economic Review, vol. 82(5): 1177–98.] for the U.S. PSID data.

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1. Introduction

In Becker's model (1974) of resource transfers from parents to children, parents are altruistic towards children but children are selfish. An important implication of this model is that if parents transfer positive amount of resources to their children, publicly provided intergenerational transfer programs that marginally redistribute resources from children to parents are neutralized by an increase of private transfers from parents to children that exactly offset such public transfers. For a given total family income, the distribution of income within family is irrelevant for consumption and transfer decisions taken by individual family members. More specifically, decisions taken by an altruistic household head who makes positive transfers to other members will coincide with decisions taken by family members themselves.

More formally, let E_k be the income of the child, E_p be the income of the parent, and T be the positive transfer from parent to child. Parental altruism will imply the difference in income transfer derivatives property $\frac{\partial T}{\partial E_\mathrm{p}} - \frac{\partial T}{\partial E_\mathrm{k}} = 1$, first derived formally by Cox (1987). Altonji et al. (1997) formally estimated this difference using PSID data in the U.S. and found it to be around 0.13 instead of 1 as predicted by altruism models. Other studies offer mixed evidence on altruistic transfers within the family. Behrman et al. (1982) formulated an alternative model of altruistic transfers in which parents make transfers to children to offset their children's earnings inequality. McGarry and Schoeni (1995) found that parents give more to less well off children and elderly parents, suggesting that such transfers are not motivated by exchange motives. However, Altonji et al. (1992) and Hayashi (1995) found that the distribution of resources within the family affects the distribution of food consumption, rejecting the hypothesis that the extended family is altruistically linked.

To test the exchange motive for transfers, some studies explicitly model transfer of resources from parents to children as exchange of money for non-market services received from children. In Bernheim et al. (1985) bequest is modeled as strategic exchange for children's services, such as visits in old age. Other studies, Cox (1990), Cox and Rank (1992), found that money transfers are correlated with services received such as child care, and interpreted this as evidence of quid-pro-quo exchange in intra-family transfer behavior.

Another possible motive for parental transfer to children that has received little attention in the literature is investment in children's education to receive old-age transfers. In a theoretical model of parental investment in children's education, Becker et al. (1990) extended the quality–quantity model of parental human capital investment to an