Children and Demand: Direct and Non-Direct Effects*

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Abstract. This paper examines the effects of children on demands. We employ a French family expenditure survey that has a number of unusual features to explore the source of the correlation between children and demands. The first sample we use is of older households which has information on completed fertility. The second sample is of younger households for whom we have family background variables. We find that children are not exogenous for some goods. These findings cast doubt on the usual practice of identifying “direct” children effects with the coefficients on the children variables in demand equations.

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JEL Classification: D12, J13

Children affect almost all facets of household economic behavior in the sense that children variables are usually “significant” whenever they are included on the right-hand side of any regression (see Martin Browning, 1992). For example, one of the most robust facts in empirical economics is that food budget shares are higher for households that have children than for those that do not. Almost universally it is inferred from this that children are “food intensive”; that is, children’s preferences\(^1\) give a higher weight to food than do adult preferences. While this is plausible, it need not be the only effect at work in this empirical fact. A child represents an additional household member, and apart from the intensity aspect, its arrival may cause a

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reallocation of the budget because expenditure per capita decreases, because of the existence of economies of scale in the consumption of certain goods, or because of substitutions on the parts of the adults. All of these causes can be thought of as “direct” effects since they operate only when children are present. These are not, however, the only possible sources of a correlation between children and economic behavior. It is quite plausible that there are “non-direct” effects induced by heterogeneity, by state dependence or by intra-household effects.

In section 2 we present an extended example with heterogeneity in the preferences for goods (but not necessarily in the “taste” for children). We show that simply allowing that children are a choice variable (and that standard life-cycle allocation conditions hold) leads to pervasive bias in all parameters in a demand equation. That correlated heterogeneity leads to endogeneity bias is widely accepted; the point of our theoretical analysis below is that there is the same problem even if heterogeneity in tastes over goods is uncorrelated with heterogeneity in the propensity to have children (or the latter is absent). The second indirect effect, due to state dependence, would arise if the presence of young children changes parent’s behavior and these changes have long run reverberations. For example, the data suggests strongly that people reduce restaurant expenditures when they first have children. Even when children have grown old enough to look after themselves, it may be that the “habit” of eating out is much attenuated and parents do not revert to their pre-children behavior (see Reuben Gronau, 1988). Finally, suppose that the birth of a child to a couple changes the division of any assets and rights to future income flows in the event of separation. This may lead to shifts in the current balance of power within the household and to a consequent change in expenditure patterns over and above those due to the direct and non-direct effects already mentioned. If there are such effects then we can no longer identify direct effects from simply including children variables on the right-hand side of the equation of interest.

Whatever the motivation for undertaking an analysis of demand, account should be taken of the fact that households differ in composition. There are at least three reasons why we should condition on household composition. First, we may be interested in the effects of household composition on demands. Second, even if we are not directly interested in the effects of children they are probably correlated with other right-hand side variables (e.g., total expenditure in a demand equation), so that leaving them out would lead to bias in the estimated coefficients of these other variables. Finally, children usually improve the fit considerably and consequently reduce the standard errors on other variables, which might be regarded as a sufficient reason to include them even if they are uncorrelated with other explanatory variables.

Often we are interested in measuring the effect of children on behavior. To be sure, there are those who reject this and who aver that we should treat children just as we do any other “good” and not include them as right-hand side variables (Browning (1992) characterizes this as the “purist” view). For them, since children might adjust to a policy change, the appropriate thing to do would be to estimate reduced forms. For most investigators, however, there is interest in conditional responses. Indeed,